



AltaLink Management Ltd.

Transmission Line 423L

November 27, 2015



Alberta Utilities Commission

Decision 3450-D01-2015
AltaLink Management Ltd.
Transmission Line 423L
Proceeding 3450
Application 1610987

November 27, 2015

Published by 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

Contents

1	Introduction	1
2	Background	2
2.1	Proceeding overview	2
2.2	Notice for the proceeding.....	3
2.3	Hearing.....	5
3	The process for new transmission development in Alberta	5
4	The Commission’s role	6
4.1	Public interest.....	6
5	Issues	8
6	Hearing and procedural motions	8
6.1	The Hainsworth group motion to reschedule hearing	8
6.2	The Hainsworth group motion for extension for filing intervener evidence	9
6.3	The Hainsworth group motion on CP Rail attendance and evidence.....	9
6.4	Partial adjournment of the hearing.....	9
6.5	AltaLink’s motion for a partial adjournment of the hearing	10
7	How the evidence was considered	10
7.1	How the evidence with respect to the full rail parallel route was considered.....	10
7.2	Views of the parties.....	10
7.3	Commission findings	11
8	Expert evidence	12
8.1	Admissibility of expert evidence	12
8.2	The expert evidence tendered in this proceeding.....	14
8.3	Commission findings	16
9	Need	18
10	Consultation	19
10.1	Views of the applicant.....	20
10.2	Views of the parties.....	20
10.3	Commission findings	21
11	Environment	22
11.1	Views of the applicant.....	22
11.1.1	Mitigation measures	23
11.1.2	Route options.....	23
11.1.3	Other environmental approvals	24
11.2	Views of the parties.....	25
11.3	Commission findings	25
12	Noise	26
12.1	Views of the applicant.....	26
12.2	Views of the parties.....	26

12.3	Commission findings	26
13	Property impacts.....	27
13.1	Industrial property value	27
13.1.1	Views of the parties.....	27
13.1.2	Commission findings	30
13.2	Rural property value.....	32
13.2.1	Views of the parties.....	32
13.2.2	Commission findings	32
13.3	Agricultural impacts.....	33
13.3.1	Views of the applicant.....	33
13.3.2	Views of the parties.....	34
13.3.3	Commission findings	34
14	Electrical effects	35
14.1	Electromagnetic interference on the railway.....	35
14.1.1	Views of the parties.....	35
14.1.2	Commission findings	45
14.2	Other electrical effects	46
14.2.1	Views of the parties.....	46
14.2.2	Commission findings	48
15	Costs	49
15.1	Views of the parties.....	49
15.2	Commission findings	51
16	Siting of transmission line 423L.....	51
16.1	Applicant’s route determination process.....	51
16.1.1	Views of the applicant.....	51
16.1.2	Views of the parties.....	52
16.2	Transmission line 423L route comparisons	53
16.2.1	Preferred route.....	55
16.2.2	Alternate route.....	58
16.2.3	No rail parallel route	62
16.2.4	Full rail parallel route.....	63
16.3	Commission findings	64
17	Other components.....	67
17.1.1	Views of the applicant.....	67
17.1.2	Commission findings	67
18	Decision	68
	Appendix A – Proceeding participants	69
	Appendix B – Oral hearing – registered appearances.....	70
	Appendix C – Abbreviations.....	71
	Appendix D – Standing ruling.....	72

Appendix E – The Commission’s ruling on the Hainsworth group motion to reschedule hearing	72
Appendix F – The Commission’s ruling on the Hainsworth group motion for extension for filing intervener evidence	72
Appendix G – The Commission’s ruling on the Hainsworth group motion on CP Rail attendance and evidence.....	72
Appendix H – The Commission’s ruling on AltaLink’s motion for a partial adjournment of the hearing	73
Appendix I – The Commission’s letter regarding hearing process	73

List of tables

Table 1. Serecon industrial report Scenario 1 results	28
Table 2. Serecon industrial report Scenario 2 results	29
Table 3. AltaLink’s estimated project costs	49
Table 4. AltaLink’s comparison of the route options for transmission line 423L	54

List of figures

Figure 1 – AltaLink’s proposed routes for transmission line 423L.....	3
Figure 2 – AltaLink’s proposed routes for transmission line 423L.....	53
Figure 3 – Preferred route, preferred variant route, and landowner suggested route option.....	55
Figure 4 – Alternate route and alternate variant route.....	59

1 Introduction

1. In this decision for Proceeding 3450, the Alberta Utilities Commission must decide whether to approve an application by AltaLink Management Ltd. (AltaLink) to construct and operate a new transmission line in the Lacombe area.

2. AltaLink filed an application with the Commission, pursuant to sections 14, 15 and 21 of the *Hydro and Electric Energy Act*, seeking approval to:

- Construct a new single-circuit 138-kilovolt (kV) transmission line to be designated as 423L (transmission line 423L or the transmission line), from the existing Lacombe 212S substation¹ to the existing Ellis 332S substation.
- Alter the existing transmission line 80AL in the vicinity of the Lacombe 212S substation to accommodate transmission line 423L.
- Alter the existing transmission line 784L near the Ellis 332S substation by relocating transmission line 784L onto double-circuit structures with transmission line 423L for approximately one quarter section.
- Alter the existing Lacombe 212S substation by adding two new 138-kV circuit breakers.
- Alter the existing Ellis 332S substation by adding one new 138-kV circuit breaker.
- Salvage portions of transmission lines 80AL and 784L to accommodate transmission line 423L (collectively, the project).

3. A number of interested parties who own, reside or have an interest in land within the vicinity of transmission line 423L expressed concerns with the project. As a result, the Commission held a public hearing in Red Deer from June 23 to June 25, 2015, and in Calgary on August 20, 21 and 27, 2015.

¹ Previous approval documents referred to the substation as Northeast Lacombe 212S substation, however, the application mainly referred to it as simply Lacombe 212S substation.

2 Background

2.1 Proceeding overview

4. AltaLink previously applied to construct and operate transmission line 423L on June 13, 2013, in Proceeding 2669, as part of its application for the Red Deer area transmission development project.

5. On March 4, 2014, as part of AltaLink's reply evidence prior to the hearing for Proceeding 2669, AltaLink withdrew one of its route options for transmission line 423L as a result of further discussions with Canadian Pacific Railway Limited (CP Rail). Additionally, AltaLink indicated that it had received inconsistent information about its ability to parallel the railway for the southern portion of the alternate route. AltaLink stated that it was continuing discussions with CP Rail to clarify this information.

6. On March 6, 2014, in light of the timing of the withdrawal of a route immediately prior to the hearing and the uncertainty surrounding the alternate route, the Commission issued a letter adjourning the consideration of transmission line 423L.

7. On May 26, 2014, the Commission determined that AltaLink's application for the construction and operation of transmission line 423L should be considered in a separate proceeding. The Commission further stated that any landowner who was granted standing as an intervener in Proceeding 2669 in relation to transmission line 423L would be registered by the Commission in the new proceeding once AltaLink filed the new application.

8. On October 6, 2014, AltaLink submitted its new application, Application 1610897,² for the project.

9. Transmission line 423L is proposed to be approximately 16 kilometres in length and located east of the town of Lacombe. As described above, the transmission line would connect the existing Lacombe 212S substation to the existing Ellis 332S substation. For transmission line 423L, AltaLink proposed a preferred route, an alternate route, a preferred variant route, and a combination of the north alternate route and south preferred route, the latter of which will be referred to as the no rail parallel route. It amended the application on December 18, 2014, to include an additional alternate variant route and a preferred variant route that it titled the landowner suggested route option.

10. In its new application, AltaLink stated that the combination of the preferred north route and alternate south route, referred to as the full rail parallel route, could not be constructed without causing undue risk to the operations of CP Rail. AltaLink was therefore not applying for the full rail parallel route.

² The application was originally filed in the AUC's previous electronic filing system. In January 2015, the Commission implemented the eFiling System. This system resulted in an application number for each of the project components. The new application numbers are 1610897-1, 1610897-2, 1610897-3, 3450-A001 and 3450-A002.

11. The following map shows the proposed route options:

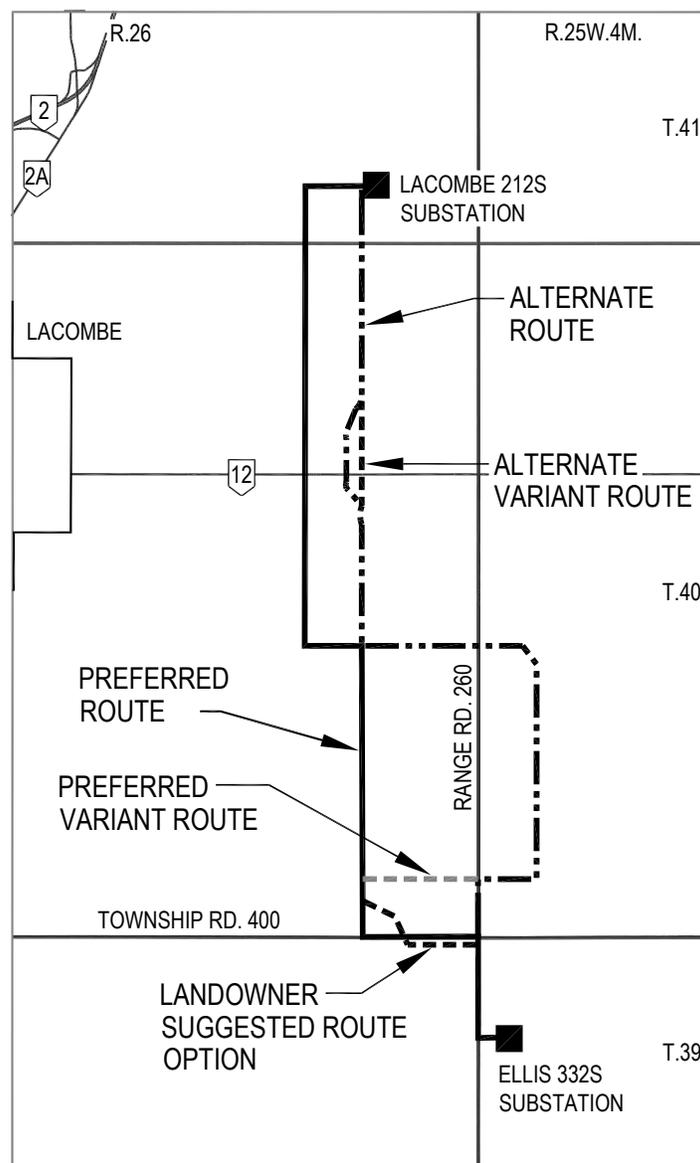


Figure 1 – AltaLink’s proposed routes for transmission line 423L

2.2 Notice for the proceeding

12. In Proceeding 2669, the Commission issued a notice of application for the Red Deer area transmission development project on October 25, 2013. Several submissions were received specifically for the transmission line 423L component of that project. The Commission transferred all submissions with respect to transmission line 423L from Proceeding 2669 to the newly created Proceeding 3450.

13. On November 17, 2014, the Commission issued a notice of application for Proceeding 3450, with a deadline for interested parties to file submissions on or before December 19, 2014. It was sent directly to residents, market participants, agencies and other interested parties in the vicinity of the project and published on the AUC website. The notice of application was also published in the Lacombe Globe on November 20, 2014. It included notice that an information session would be held by AUC staff in Lacombe on December 10, 2014.

14. The Commission issued a notice of application amendment on January 13, 2015, with a deadline for interested parties to file submissions on or before February 5, 2015. It was also sent directly to residents, market participants, agencies and other interested parties in the vicinity of the project and published on the AUC website. The notice of application amendment was published in the Lacombe Globe on January 15, 2015.

15. On February 10, 2015, the Commission issued its ruling on standing in Proceeding 3450. The Commission granted standing to those persons who had demonstrated that they had rights that may be directly and adversely affected by the Commission's decision with respect to the facility application. The Commission's standing ruling is attached to this decision as [Appendix D](#).³

16. The following are the participants registered in the proceeding:

- the Hainsworth group
 - Robert (Bob) and Maureen Pocock
 - Denis and Doreen Hainsworth
 - Jim and Jan Pocock
 - Ronald and Roberta Biel
- the Hughes group
 - David and Marcy Hughes
 - Archie Werner and Clem Werner
 - Darrell and Donna Hicks
 - Elaine and Derek Werner
 - Jacob and Nicole Devrij
- the Wescott Consulting group
 - Iron Rail Business Park Ltd. (Iron Rail Business Park)
 - Arclan Holdings Ltd.
- Viking Projects Ltd. (Viking Projects)
- Lacombe County
- Ray Wiersma
- Donald and Shirley Parker
- Tom Denis
- Llew Werner
- Philip Wierenga

³ Exhibit 3450-X0007, AUC ruling on standing.

17. The Commission also received correspondence from Alberta Parks and Transport Canada regarding the project.

18. On February 19, 2015, the Commission issued a notice of hearing, which advised that the hearing for Proceeding 3450 would commence on May 26, 2015, in Red Deer. The notice of hearing also outlined the process steps leading up to the hearing. The notice of hearing was issued in the same manner as the notice of application amendment and was published in the Lacombe Globe on February 26, 2015.

19. On March 24, 2015, the Commission granted the Hainsworth group's motion to reschedule the hearing, which is discussed in more detail in the Hearing and procedural motions section of this decision. The Commission also issued a notice of hearing amendment on March 24, 2015. It was issued in the same manner as the notice of application amendment and was published in the Lacombe Globe on April 2, 2015. The notice of hearing amendment advised that the hearing would commence on June 23, 2015, at the Radisson Red Deer in Red Deer, Alberta.

20. On June 21, 2015, AltaLink advised that the witness for CP Rail would be unable to attend the hearing due to a medical emergency. In response, counsel for the Hainsworth group submitted that the hearing or a portion of the hearing should be adjourned.

21. On June 21, 2015, the Commission issued a letter stating that the hearing would proceed as scheduled but that the evidence involving electromagnetic interference relating to CP Rail's railway would be heard at a later date.

2.3 Hearing

22. The hearing commenced on June 23, 2015, in Red Deer, Alberta before a Commission panel comprised of Panel Chair Tudor Beattie, Commission Member Neil Jamieson, and Acting Commission Member Ian Harvie, and continued until June 25, 2015.

23. The hearing resumed on August 20, 2015, in Calgary, Alberta to address the issue of electromagnetic interference relating to the railway. It continued on August 21, 2015, and again recommenced August 27, 2015. Parties filed written argument following the close of the oral hearing. The close of record for the proceeding was September 28, 2015, when AltaLink filed its reply argument.

3 The process for new transmission development in Alberta

24. Except in the case of critical transmission infrastructure, two approvals from the Commission are required to build new transmission capacity in Alberta. First, an approval of the need for expansion or enhancement to the Alberta Interconnected Electric System pursuant to Section 34 of the *Electric Utilities Act* is required. Second, a permit to construct and a licence to operate a transmission facility pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act* must be obtained.

25. The Alberta Electric System Operator (AESO) is responsible for preparing a needs identification document (NID) and filing the NID with the Commission for approval. In this

case, the AESO filed a NID for the Red Deer region. On April 10, 2012, the Commission issued Decision 2012-098⁴ approving the need as applied for by the AESO.

26. Facility applications are prepared by the transmission facility owner assigned by the AESO. AltaLink is the transmission facility owner in the service territory in the Lacombe area. The transmission facility owner files the facility application with the Commission for consideration. The Commission may approve or deny the application, or approve the application subject to terms or conditions.

4 The Commission's role

27. The Commission is an independent, quasi-judicial agency of the province of Alberta. As a quasi-judicial body, the Commission is similar in many ways to a court when it holds hearings and makes decisions on applications. Like a court, the Commission bases its decision on the evidence before it and allows interested parties to cross-examine the applicant's witnesses to test that evidence. Other similarities to the judicial process include the power to compel witnesses to attend its hearings and the obligation to provide a written decision with reasons. However, the Commission is not a court. It has no inherent powers. Its powers are set out in legislation.

4.1 Public interest

28. 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 project is in the public interest, having regard to its social and economic effects and the effects of the project on the environment.

29. The Commission's proceedings are conducted to determine an outcome that meets the public interest mandate set out in the legislation discussed below. In the vast majority of its proceedings, the Commission is not limited to considering only the evidence presented to it by the applicant and by parties that may be directly and adversely affected. Indeed, it is the Commission's role to test the application to determine whether approval of that application would be in the public interest.

30. The Commission's mandate, as it applies to all new transmission projects, is to decide whether the approval of a specific transmission project that was designed to meet the need is consistent with the need, and, is in the public interest having regard to its social, economic and environmental effects. At this stage, the public interest standard will generally be met by a route alternative 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.

31. The Commission described its approach when considering new transmission facilities in Decision 2011-436:

The Commission's past practice was to weigh the established benefits of a proposed upgrade, as reflected in a need approval, with the discrete impacts of the project proposed

⁴ Decision 2012-098: Alberta Electric System Operator, Red Deer Region Transmission Development Needs Identification Document, Proceeding 1368, Application 1607507, April 10, 2012.

by the facility applicant. The Commission would then assess whether implementation of the applied-for project would address the previously approved need for the project while at the same time minimizing, or mitigating to an acceptable degree, the potential adverse impacts on Albertans, both on a province-wide basis, and for those Albertans who must bear the burden of having the infrastructure placed on or adjacent to their lands.⁵

32. Regarding the interpretation of the term “public interest”, the Commission is mindful of Decision 2009-028, which states:

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 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.⁶

...

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.⁷

33. The Commission, in Decision 2011-436, stated:

... It is the role of the applicant to demonstrate that approval of its application would be in the public interest, and it is the role of the parties that may be directly and adversely affected by approval of the application to demonstrate how approval or denial of the application does or does not satisfy the public interest. They may do so by bringing

⁵ Decision 2011-436: AltaLink Management Ltd. and EPCOR Distribution & Transmission Inc., Heartland Transmission Project, Proceeding 457, Application 1606609, November 1, 2011, page 33, paragraph 161.

⁶ EUB Decision 2001-33: EPCOR Power Development Corporation and EPCOR Generation Inc., Rosedale Power Plant Unit 11 (RD 11), page 6.

⁷ Decision 2009-028: AltaLink Management Ltd., Transmission Line from Pincher Creek to Lethbridge, Proceeding 19, Application 1521942, pages 6-7, paragraphs 32, 33 and 35.

evidence of the effects of the application on their own private interests and explaining how the public interest may be better served by accommodating their private interests, and they may use the evidence filed by all parties to the proceeding to argue what a better balancing of the public interest might be.⁸

34. The Commission is aware that any of the applied-for routes may have adverse impacts on agricultural operations, residential development, residents and the environment. However, the question before the Commission is whether these impacts, with the appropriate mitigation measures, serve to promote the public interest.

5 Issues

35. The Commission considers that the application and interventions raise the following primary issues:

- Is the application consistent with the need for transmission facilities approved in Decision 2012-098?
- How should the Commission treat the evidence with respect to the full rail parallel route?
- Is approval of the application in the public interest pursuant to Section 17 of the *Alberta Utilities Commission Act*?
- Does AltaLink's application comply with the requirements of Rule 007: *Applications for Power Plants, Substations, Transmission Lines, and Industrial System Designations*?

6 Hearing and procedural motions

6.1 The Hainsworth group motion to reschedule hearing

36. By letter dated February 26, 2015, the Commission received a motion from the Hainsworth group requesting an adjournment of the oral hearing that was scheduled to commence on May 26, 2015, until July or August 2015.

37. The Hainsworth group sought an adjournment to avoid the time when its members, some of whom are farmers, would be busy with spring seeding and spraying. The letter also indicated that this issue was previously raised in Proceeding 2669 and, at that time, the Commission had committed to make best efforts to take the Hainsworth group's schedules into account when rescheduling the hearing.

38. The Commission issued a ruling on March 24, 2015, on the Hainsworth group's motion and revised the process schedule and hearing date for the proceeding to June 23, 2015.

⁸ Decision 2011-436: AltaLink Management Ltd. and EPCOR Distribution & Transmission Inc., Heartland Transmission Project, Proceeding 457, Application 1606609, November 1, 2011, page 14, paragraph 74.

39. In its March 24, 2015 ruling, the Commission found that an adjournment and rescheduling of the process steps preceding the hearing was appropriate. The Commission's ruling is attached as [Appendix E](#).⁹

6.2 The Hainsworth group motion for extension for filing intervener evidence

40. On April 21, 2015, the Commission received a request from Mr. Fitch, counsel for the Hainsworth group, requesting a brief extension to file intervener evidence from Thursday, April 23, 2015, to Monday, April 27, 2015. The Hainsworth group sought the extension to accommodate its counsel.

41. The Commission granted the Hainsworth group's request on April 22, 2015. The Commission, in its ruling, found that the extension request as proposed by the Hainsworth group was permissible due to the length of the delay, AltaLink's consent to the request, and that no further amendment to the process schedule was requested. The Commission's ruling is attached as [Appendix F](#).¹⁰

6.3 The Hainsworth group motion on CP Rail attendance and evidence

42. On June 12, 2015, the Commission received a motion from the Hainsworth group requesting that the Commission strike in its entirety AltaLink's reply evidence to a report submitted by the Hainsworth group prepared by Safe Engineering Services & Technologies Ltd. (SES Technologies). In the alternative, the Hainsworth group sought to strike certain paragraphs of that reply evidence, and submitted that, as a further alternative, the Commission should issue a notice to compel a representative from CP Rail to attend the public hearing.

43. AltaLink responded to the Hainsworth group's motion and stated that it would be willing to seat a representative from CP Rail as part of its witness panel.

44. For the reasons described in its ruling, the Commission found that it was unnecessary to strike all or a portion of AltaLink's reply evidence given that AltaLink was willing to include a CP Rail employee on its witness panel. The Commission's ruling is attached as [Appendix G](#).¹¹

6.4 Partial adjournment of the hearing

45. On June 21, 2015, the Commission received correspondence from AltaLink indicating that Mr. Ayers, the witness from CP Rail, would not be available to attend the hearing due to a medical emergency.

46. In response, counsel for the Hainsworth group indicated via email to counsel that a full or partial adjournment of the hearing would be required.

47. On June 21, 2015, the Commission issued a letter indicating that the hearing would proceed as scheduled. However, the evidence of Mr. Ayers (CP Rail) and Dr. Dawalibi (SES Technologies) would be heard at a later date to be scheduled.

⁹ Exhibit 3450-X0024, AUC ruling on adjournment and rescheduling of process steps.

¹⁰ Exhibit 3450-X0035, Ruling minor adjustment to process schedule - Proceeding 3450.

¹¹ Exhibit 3450-X0113, Ruling on Hainsworth Group motion filed on June 12, 2015.

6.5 AltaLink's motion for a partial adjournment of the hearing

48. On August 21, 2015, during the hearing, AltaLink requested an adjournment, on the basis that, among other things, new information was introduced in direct evidence by a witness for the Hainsworth group. On August 25, 2015, the Commission granted the adjournment, in part, and held that reply evidence would be heard on August 27, 2015, in the Commission's Calgary hearing room and extended the deadline for argument and reply to September 21, 2015 and September 28, 2015, respectively. The Commission's ruling is attached as [Appendix H](#).¹²

7 How the evidence was considered

49. In reaching the determinations set out in this decision, the Commission considered all relevant materials comprising the record of this proceeding, including the evidence and submissions provided by each party. References in this decision to specific parts of the record are intended to assist the reader in understanding the Commission's reasoning relating to a particular matter and should not be taken as an indication that the Commission did not consider all relevant portions of the record as it relates to that matter.

7.1 How the evidence with respect to the full rail parallel route was considered

50. One of the primary issues in this proceeding is whether the Commission should deny the application as filed and direct AltaLink to file an application for transmission line 423L to be routed along the full rail parallel route. Some parties to the proceeding argued that approval of the applied-for routes were not in the public interest because of the viability of the full rail parallel route. The full rail parallel route is not a route option before the Commission in this proceeding. The remaining portions of this section address how the Commission considered the submissions of the parties with respect to the full rail parallel route.

7.2 Views of the parties

51. AltaLink contended that because the applied-for routes are in the public interest there is no need to direct an application for the full rail parallel route. It argued that the Commission's jurisdiction is to be the regulator of AltaLink as it is governed by the *Hydro and Electric Energy Act*, the *Electric Utilities Act*, and the *Alberta Utilities Commission Act*.

52. AltaLink argued that the Commission must separate its consideration of the application from the possible mitigation measures that may be required to implement a full rail parallel route. AltaLink argued that the Commission does not have the jurisdiction to direct CP Rail to impose any particular mitigation measure to accommodate the full rail parallel route.

53. AltaLink also contended that should the Commission direct AltaLink to apply for the full rail parallel route it would be effectively requiring AltaLink to seek Canada Transportation Agency approval.

¹² Exhibit 3450-X0199, AUC Letter to Parties re Hearing Continuation.

54. The Hainsworth group submitted that the Commission should consider the full rail parallel route.¹³ Specifically, the Hainsworth group suggested:

First, that the Commission find as fact that the full rail parallel is preferable to both the Preferred Route and the Alternate Route with respect to residential, agricultural and related impacts. By paralleling the CP rail line for most of its length, the Full Parallel Route will not impact any residences within 150 metres of the transmission line and will minimize both residential and agricultural impacts.¹⁴

55. Second, the Hainsworth group requested that the Commission:

... find that in light of the conflicting evidence on [electromagnetic interference] and mitigation of [electromagnetic interference], CP and AltaLink work together to determine how [electromagnetic interference] for the Full Parallel Route could be most satisfactorily mitigated using measures other than insulating joints, and report back to the Commission and interveners within six months.¹⁵

7.3 Commission findings

56. Section 19 of the *Hydro and Electric Energy Act* entitled “Power of Commission re applications” states that the Commission may “grant the approval, permit, licence or amendment subject to any terms and conditions that it prescribes or may deny the application.”

57. The Commission’s objective is to determine whether the application as filed is in the public interest and, if not, what changes could be ordered by the Commission to most effectively balance the various public interest factors it must consider using its own expertise to consider the evidence it has before it.¹⁶

58. The *Hydro and Electric Energy Act* permits the Commission to order changes in the location of a transmission line; prescribe the location and route of the transmission line as precisely it considers suitable; prescribe the location of the right-of-way of the transmission line and the relationship of its boundaries to the transmission line or any part of the transmission line.

59. As described above, AltaLink is not seeking approval of the full rail parallel route. The interveners, on the other hand, advocated strongly that approval of the full rail parallel route is in the public interest having regard to its comparatively lower residential effects.

60. Because AltaLink has not applied for the full rail parallel route, the Commission cannot approve that route in this decision.

61. When considering the evidence before it, should the Commission find that the application as filed is not in the public interest, it may deny the application and direct AltaLink to apply for transmission line 423L in a specific location, including along the full rail parallel route which would be located primarily on private lands adjacent to CP Rail’s right-of-way.

¹³ Exhibit 3450-X0041, Submissions of the Hainsworth Group.

¹⁴ Exhibit 3450-X0218, Written Closing Argument of the Hainsworth Group, page 8.

¹⁵ Exhibit 3450-X0218, Written Closing Argument of the Hainsworth Group, page 8.

¹⁶ Decision 2011-436: AltaLink Management Ltd. and EPCOR Distribution & Transmission Inc., Heartland Transmission Project, Proceeding 457, Application 1606609, November 1, 2011, page 14, paragraph 76.

62. The Commission's predecessor, the Alberta Energy and Utilities Board's (EUB or the Board) in Decision 2007-037, discussed potential routing options and stated the following:

The Board considers that the onus is on ATCO Electric to demonstrate that its applied for route is superior or stands out as the preferred route, given the various competing factors, as compared to other potential routes. The onus is not on interveners to clearly demonstrate a superior alternative. However, even if a "no other best route" or "no clearly demonstrated superior alternative" test was to be used, the Board is not persuaded, based on the evidence presented, that these thresholds have been met. Similarly, the evidence on record relating to the other potential routes is not sufficient for the Board to assess whether or not the various potential routes are even 'pretty much the same.'¹⁷

63. In the circumstances of the application before it, the Commission has evidence regarding the impacts of the full rail parallel route as compared to other conceptual routes because the two segments that comprise the full rail parallel route have been applied for by AltaLink in this proceeding. For example, the Commission is aware of stakeholders' views about each route segment that comprises the full rail parallel route because all have been consulted as part of the application process. Similarly, the Commission is aware of the full rail parallel route's environmental effects. The Commission has sufficient evidence before it to make a meaningful comparison between the applied-for routes and the full rail parallel route. If the Commission, as a result of its analysis of the route options presented at the hearing, determines that the full rail parallel route is superior to the routes proposed by AltaLink, the Commission may deny the application and refer it back to AltaLink with directions for it to further explore the full rail parallel route in a future application. Given the circumstances present in this application and the record of this proceeding, the Commission is of the view that should the full rail parallel route be a superior alternative to any of the applied-for routes, it may exercise its discretion under Section 19 of the *Hydro and Electric Energy Act* and deny the application before it and direct AltaLink to apply for the full rail parallel route.

64. The Commission also considers that should a new application for the full rail parallel route be applied for, any potentially directly and adversely affected stakeholder, including CP Rail, may intervene in that proceeding.

65. The Commission understands that based on the evidence of AltaLink, Canada Transportation Agency approval may be required if the full rail parallel route was applied for and subsequently approved.

8 Expert evidence

8.1 Admissibility of expert evidence

66. Expert evidence is opinion evidence on a scientific, technical or otherwise specialized matter provided by a person with specialized knowledge, experience or training. The Supreme Court of Canada succinctly explained the role of an expert witness in *R. v. Howard* when it stated "Experts assist the trier of fact in reaching a conclusion by applying a particular

¹⁷ EUB Decision 2007-037: ATCO Electric Ltd., Construct Updike Substation 886S and 144-kV Transmission Line 7L34, Application 1483074, May 8, 2007, page 3.

scientific skill not shared by the judge or the jury to a set of facts and then by expressing an opinion as to what conclusions may be drawn as a result.”¹⁸

67. The Supreme Court of Canada set out the test for admissibility of expert evidence in *R. v Mohan*.¹⁹ To call expert evidence, a party must demonstrate that the evidence is relevant, necessary to assist the decision maker, and is not subject to an exclusionary rule.²⁰

68. The Commission commented on the weighing of expert evidence in Decision 2011-436:²¹

... When deciding what weight to give to the evidence provided by an expert witness, an important factor the Commission will consider is whether the expert witness provided an independent or objective opinion. The role and duties of an expert witness was considered in an English case known as *The Ikarian Reefer*.²² That case and its implications were extensively discussed in *1159465 Alberta Ltd. v. Adwood Manufacturing Ltd.*, a recent decision of the Alberta Court of Queen’s Bench. The court summarized in part the duties and obligations of an expert witness, as described in *the Ikarian Reefer*, as follows:

1. Expert evidence presented to the Court should be and should be seen to be the independent product of the expert uninfluenced as to form or content by the exigencies of litigation...
2. An expert witness should provide independent assistance to the Court by way of objective unbiased opinion in relation to matters within his expertise... An expert witness in the High Court should never assume the role of advocate... [Emphasis added in the court’s decision.]²³

69. In the event that the Commission finds that an expert’s evidence extends beyond the limits of his or her expertise, the Commission will take the approach outlined in Decision 2012-303:

...evidence provided by [an expert] in areas where he was clearly not qualified to opine, will be given the weight of a lay witness rather than the weight of a properly qualified expert in these areas. Where that evidence diverges from the evidence of a properly qualified expert witness, the evidence of the qualified expert witness will be preferred.²⁴

70. Another important factor when considering expert evidence is the expert’s independence and objectivity. On April 30, 2015, the Supreme Court of Canada issued a judgement

¹⁸ *R. v. Howard*, [1989] 1 SCR 1337.

¹⁹ *R. v. Mohan*, [1994] 2 SCR 9.

²⁰ *Ibid.*

²¹ Decision 2011-436: AltaLink Management Ltd. and EPCOR Distribution & Transmission Inc., Heartland Transmission Project, Proceeding 457, Application 1606609, November 1, 2011, page 17, paragraph 89.

²² *National Justice Compania S.A. v. Prudential Assurance Co. Ltd. (Ikarian Reefer)*, [1993] 2 *Lloyds Rep.* 68 (Comm. Ct. Q.B. Div.) approved [1995] 1 *Lloyds Re.* 455 (C.A.).

²³ *1159465 Alberta Ltd. v. Adwood Manufacturing Ltd.* [2010] ABQB 133 at paragraph 2.11.

²⁴ Decision 2012-303: ATCO Electric Ltd. – Eastern Alberta Transmission Line Project, Proceeding 1069, Applications 1607153 and 1607736, November 15, 2012, page 27, paragraph 128.

White Burgess Langille Inman v. Abbott and Haliburton Co., 2015²⁵ that directly addressed expert evidence and its relationship between independence, admissibility and weight:

Underlying the various formulations of the duty are three related concepts: impartiality, independence and absence of bias. The expert's opinion must be impartial in the sense that it reflects an objective assessment of the questions at hand. It must be independent in the sense that it is the product of the expert's independent judgment, uninfluenced by who has retained him or her or the outcome of the litigation. It must be unbiased in the sense that it does not unfairly favour one party's position over another. The acid test is whether the expert's opinion would not change regardless of which party retained him or her.²⁶

71. The Commission has adopted the approach described above when weighing the expert evidence tendered in this proceeding.

8.2 The expert evidence tendered in this proceeding

72. By letter dated, June 15, 2015, the Commission advised the parties that it had dispensed with the need to qualify expert witnesses and that it would not be necessary for counsel to request that their respective witnesses be qualified as an "expert" witness with regard to their pre-filed written evidence or testimony at the oral hearing.²⁷ The Commission instructed the parties to file the curriculum vitae for their respective witnesses in order for the Commission to be able to assess the weight attributable to the relevant evidence and opposing counsel may question witnesses' qualifications and credibility.

73. The Commission also indicated in its letter that cost claims submitted by eligible intervenor parties for consultants' fees are not dependent upon those consultants being formally qualified as expert witnesses. A copy of the Commission's letter is attached as [Appendix I](#).²⁸

74. AltaLink, Viking Projects, the Wescott Consulting group and the Hainsworth group each hired consultants to provide expert evidence in support of their respective positions.

75. AltaLink's consultant witnesses were Don Hoover, Serecon Valuations Inc.; Dr. Gabor Mezei, Exponent, Inc.; Mark Van Wyk, CH2M;²⁹ and Larry Hampton, CP Rail.

76. AltaLink submitted that the Commission should give little weight to the opinion evidence of the interveners' experts because those experts lacked the necessary expertise in the field outlined in their reports.

77. Rod English appeared as an expert witness for both Viking Projects and the Wescott Consulting group. Dr. Farid Dawalibi from SES Technologies Ltd. was retained as an expert witness by the Hainsworth group.

²⁵ *White Burgess Langille Inman v. Abbott and Haliburton Co.*, 2015 SCC 23.

²⁶ 2015 SCC 23 at paragraph 342.

²⁷ Exhibit 3450-X0088, AUC letter - Proceeding 3450 hearing process.

²⁸ Exhibit 3450-X0088, AUC letter - Proceeding 3450 hearing process.

²⁹ Exhibit 3450-X0133, AML Direct Evidence - Mark Van Wyk stated that on April 4, 2014, CH2M acquired TERA. Mark Van Wyk stated he was responsible for TERA's involvement in the Project and his responsibilities continued under the CH2M banner.

78. Mr. English gave evidence on the impact that the transmission line would have on industrial properties. He also opined on property value and indicated that he had previous experience in the development of industrial property. He stated that the proposed location of the transmission line would eliminate a number of specific types of customers.³⁰

79. AltaLink noted that Mr. English commented upon impacts to property value but did not conduct an analysis of factors that may affect property value. AltaLink submitted that Mr. English is not an appraiser and therefore, the evidence presented by Mr. Hoover with respect to property impacts should be preferred.

80. Mr. Wescott, who gave evidence on behalf of the Wescott Consulting group, expressed a view about property value impacts that he stated he received from a realtor who was also a principal of the Iron Rail Business Park. The realtor did not appear at the hearing.

81. AltaLink submitted that the Commission should not rely on the opinion of Mr. Wescott with respect to the project's impact on property values. AltaLink stated that anecdotal evidence provided by unqualified individuals is inadequate to rebut the conclusions of an appraiser's report. AltaLink submitted that Mr. Wescott did not provide clear or sufficient evidence of the impact to the value or the marketability of an industrial property from a 138-kV transmission line adjacent to, or along, the boundary of an industrial property.

82. With respect to Dr. Dawalibi, AltaLink's core criticism related to Dr. Dawalibi's lack of practical experience with the CP Rail railway. Specifically, AltaLink submitted:

... concern with the design, installation and implementation of mitigation measures and the extent to which those mitigation measures would be compatible with or impact CP's operations, including its signalling systems. Evidence of this sort is within the purview of the railway, not of a consultant whose expertise is in estimating voltages that might arise in different circumstances. It is CP and Mr. Hampton, not Dr. Dawalibi, that are the experts in the operation of a railway mitigation and impacts on railway signalling. The views of Dr. Dawalibi cannot be taken to undermine the credibility of evidence on issues outside of the area of his expertise.³¹

83. The Hainsworth group questioned the weight that the Commission should give Mr. Hampton's evidence and explained its three main concerns related to his evidence.

84. The first related to Mr. Hampton's involvement in the project. The Hainsworth group submitted that the Commission should place little weight on Mr. Hampton's evidence on electromagnetic interference from the proposed AltaLink transmission line on CP Rail's railway, because Mr. Hampton had very little involvement with the project prior to the hearing. Mr. Hampton did not prepare either version of the CP Rail study nor did he attend any meetings with AltaLink regarding the project prior to the commencement of the hearing.

85. The second concern was Mr. Hampton's expertise in electromagnetic interference. The Hainsworth group submitted that Mr. Hampton, by his own admission, is not an expert in electromagnetic interference and that his qualifications were "woefully inadequate".³²

³⁰ Transcript, Volume 3, page 528, lines 16 to 20.

³¹ Exhibit 3450-X0220, AML Reply Argument, page 13, paragraph 68.

³² Exhibit 3450-X0218, Written Closing Argument of the Hainsworth Group, page 12, paragraph 32.

86. Finally, the Hainsworth group argued that the Commission should put little weight on Mr. Hampton's evidence because it was "obvious that ... [Mr. Hampton] had been prepared and coached by AltaLink to testify in a manner that was consistent with and supported AltaLink's application. There was absolutely nothing independent or impartial about it."³³

87. AltaLink argued that Mr. Hampton was forthright in giving evidence and was frank with the Commission and acknowledged that he had a limited role in the project prior to being called upon to testify. AltaLink further submitted that the evidence of Mr. Hampton was not manipulated by AltaLink and that Mr. Hampton acknowledged where his views differed from those of AltaLink.

88. No other party to the proceeding made submissions relating to AltaLink's consultants.

8.3 Commission findings

89. The Commission heard expert opinion evidence on a number of subjects related to the project.

90. The Commission is satisfied that each of the experts who gave evidence in the proceeding was able and willing to carry out his or her respective duty to provide the Commission with fair and objective evidence. Accordingly, the Commission finds that all of the expert evidence filed met the threshold for admissibility from the perspective of independence.

91. The Commission finds that the witnesses listed below provided evidence that was consistent with their expertise and in a relatively objective manner. These experts demonstrated considerable knowledge of the issues raised in the hearing and demonstrated some flexibility in the views and positions that they presented to the Commission. The Commission found these witnesses to be credible and, subject to the exceptions discussed later in these findings, their evidence to be useful:

- Don Hoover
- Gabor Mezei
- Mark Van Wyk
- Farid Dawalibi

92. Many of the witnesses who appeared at the proceeding can effectively be described as corporate witnesses. These witnesses included officers and employees of AltaLink, Rob Wilson, president of Viking Projects, and Mr. Wescott. The evidence of these witnesses included evidence relating to explanatory evidence, and technical evidence. The Commission described its approach to assessing evidence from corporate witnesses in Decision 2011-436 as follows:

In the Commission's view, the policy and explanatory evidence provided by a corporate witness is akin to ordinary evidence provided by a lay witness. It is essentially an explanation or recitation of facts. Technical evidence, on the other hand, is essentially expert evidence provided by a corporate witness. The Commission evaluates the evidence provided by the applicants' corporate witnesses in the same way it evaluates the evidence provided by the other lay and expert witnesses who participated in the hearing. The Commission will first consider the nature of the evidence provided i.e., does it deal with

³³ Exhibit 3450-X0218, Written Closing Argument of the Hainsworth Group, page 12, paragraph 33.

facts or opinion? If the evidence addresses a specialized or technical subject matter the Commission will then consider whether the corporate witness has demonstrated that he or she has the necessary skill, knowledge and experience to provide an opinion on the subject matter. Finally, the Commission will consider whether or to what degree the policy evidence, factual evidence or technical evidence was influenced by the witness' position as an employee of the applicant. The Commission will assess all of these factors when considering the weight to give to the evidence provided by a corporate witness.³⁴

93. The Commission has taken the same approach to the assessment of corporate evidence in this proceeding.

94. The Commission's assessment of Mr. Hampton's evidence was premised on the same principles as the assessment of the corporate evidence described above. The Commission notes that AltaLink did not proffer Mr. Hampton as an independent expert on electromagnetic interference but rather as a witness from CP Rail. As such, the Commission finds that Mr. Hampton can be effectively described as a corporate witness. The nature of the evidence itself is an important consideration. The core of Mr. Hampton's evidence was his knowledge of CP Rail's business practices, and CP Rail's assessment of risk, as well as imposition of certain mitigation measures.

95. Mr. Hampton, by virtue of his position as Director of Signals & Communication Design with CP Rail, had extensive knowledge about CP Rail's operations. Further, the Commission found Mr. Hampton to be forthcoming when describing his experience on the technical aspects of electromagnetic interference. For assessment of the risk to CP Rail's operations, Mr. Hampton relied on the reports produced by Mr. Ayers, who reports to him at CP Rail. Because the analysis on the levels of electromagnetic interference was prepared by Mr. Ayers, who had completed electromagnetic interference studies in the past,³⁵ the concerns relating to Mr. Hampton's lack of experience with electromagnetic interference raised by the Hainsworth group are somewhat diminished. The Commission finds that because of Mr. Hampton's experience and knowledge of railway mitigation, he was well qualified to provide the evidence that he did.

96. Further, the Commission determines that some of AltaLink's corporate witnesses, including Mr. Mundy and Mr. Mildeberger, had relevant expertise in the area of electromagnetic interference. These witnesses were able to provide detailed evidence regarding technical matters that was useful to the Commission in understanding the transmission line's potential effects on the railway. This was not a case in which the Commission was faced with only a single expert for one party providing evidence.

97. Also, as noted by AltaLink in argument, CP Rail has a duty to carry out its business in a responsible manner. The Commission accepts that as an employee of CP Rail, Mr. Hampton appreciated this duty and preformed his job in good faith.

98. In the Commission's view, Mr. Hampton's professional obligations ameliorate one of the potential dangers associated with expert evidence that can arise due to a lack of independence. As stated above, the Commission found that Mr. Hampton was forthcoming regarding CP Rail's preferences, and in some cases Mr. Hampton disagreed with AltaLink. In the Commission's

³⁴ Decision 2011-436: AltaLink Management Ltd. and EPCOR Distribution & Transmission Inc., Heartland Transmission Project, Proceeding 457, Application 1606609, November 1, 2011, page 17, paragraph 93.

³⁵ Transcript, Volume 4, page 574, line 23.

view, Mr. Hampton's inclusion on the AltaLink witness panel and conduct during the hearing does not suggest that his evidence was tainted by a conflict of interest, as argued by the Hainsworth group.

99. With respect to Mr. Wescott, it is clear to the Commission that he has taken considerable interest in the issue of property value and the marketability of industrial properties. However, Mr. Wescott lacks the necessary skills, experience and training to opine on the interpretation of the project on property values. Consequently, the Commission gave little weight to this aspect of his evidence.

100. With respect to Mr. English, the Commission accepts that he holds a substation journeyman ticket and has experience working in the vicinity of transmission lines as well as experience in the oil and gas industry. The Commission accepts that Mr. English had the necessary expertise to provide clarity to the Commission regarding the practical implications of pipeline operations and other operations near a transmission line. Like Mr. Wescott, Mr. English also commented on the desirability and marketability of industrial lots in terms of property value. While the Commission recognizes that Mr. English has some experience as an industrial land developer, the Commission is not satisfied that he has the necessary skills, experience and training to comment on the project's potential impacts on property values. Thus, it has given this portion of Mr. English's evidence little weight.

101. The weight of the consultants' evidence presented in the proceeding is discussed in greater detail in the relevant sections of this decision.

9 Need

102. On April 10, 2012, the Commission issued Decision 2012-098 and Approval U2012-187,³⁶ approving the need to expand and enhance the transmission system in the Red Deer area as applied for by the AESO.

103. The Commission approved facilities in Decision 2014-219³⁷ to meet a portion of the need identified in Decision 2012-098.

104. The application for approval of transmission line 423L project is one of the remaining portions of the Red Deer area transmission development project. Approval U2012-187 outlines the transmission line 423L component as follows:

Stage one to be initiated immediately:

...

- d) Construct a new 138-kV transmission line from the N.E. Lacombe 212S substation to Ellis 332S substation. Install switchgear equipment at N.E. Lacombe 212S and Ellis 332S substations to terminate the new transmission line.³⁸

³⁶ Needs Identification Document Approval U2012-187 (Errata), Proceeding 1368, Application 1607507, June 19, 2012.

³⁷ Decision 2014-219: AltaLink Management Ltd., Red Deer Area Transmission Development, Proceeding 2669, Application 1609677, July 29, 2014.

³⁸ Needs Identification Document Approval U2012-187 (Errata), Proceeding 1368, Application 1607507, June 19, 2012, page 1.

105. No party to the proceeding questioned whether AltaLink's application met the need identified by the AESO and approved in Decision 2012-098 and Approval U2012-187.

106. The Commission finds that the project is consistent with and meets the need approved in Decision 2012-098 and Approval U2012-187.

10 Consultation

107. The AUC prescribes consultation requirements for applicants in Rule 007.

108. Rule 007, Appendix A, Participant Involvement Program Requirements, requires applicants for transmission line projects to include a description of their participant involvement program in their application. Rule 007 specifies that a participant involvement program must be conducted before an application is filed, and should include the distribution of a project-specific information package, responses to questions and concerns raised by potentially affected persons and a discussion of options, alternatives and mitigation measures. The applicant is expected to ensure that information is conveyed in an understandable manner to the public and that the project is discussed with the widest possibly impacted audience, as early as practical.

109. The applicant should gather feedback and suggestions with respect to the project through the participant involvement program. This information, to the extent possible, should be used to modify the project to reduce impacts on parties whose rights may be directly and adversely affected. The applicant is required to make all reasonable attempts to contact potentially affected persons to discuss the project and address any questions or concerns.

110. The participant involvement program includes both a public notification and a personal consultation component. Rule 007 states that for transmission line developments, the applicant must notify all occupants, residents and landowners within 800 metres of the edge of the proposed right-of-way of the transmission line and conduct personal consultation with occupants, residents or landowners on or directly adjacent to the proposed right-of-way.

111. The EUB expressed the importance of conducting an effective notification and consultation program before an application is filed. In EUB Decision 2008-006,³⁹ the Board stated that "... the program should include responding to questions and concerns, discussing options, providing alternatives and potential mitigation measures, and seeking confirmation that potentially affected parties do not object." The Board went on to state that it "... expects applicants to be sensitive to timing constraints the public may have especially when dealing with landowners engaged in agricultural endeavours."

112. Also, in Decision 2011-329, the Commission discussed the role of interveners and applicants in the consultation process when it stated as follows:

The Commission considers that consultation is a two-way street. The applicant has a duty to consult with landowners and residents in the vicinity of the project in accordance with AUC Rule 007, and make reasonable efforts to ensure that all those, whose rights may be directly and adversely affected by a proposed development, are informed of the

³⁹ EUB Decision 2008-006: Montana Alberta Tie Ltd. 230-kV International Merchant Power Line Lethbridge Alberta to Great Falls Montana, Applications 1475724, 1458443 and 1492150, January 31, 2008, page 36.

application, and have an opportunity to voice their concerns and to be heard. Landowners and residents are entitled to consultation; however, as a practical matter, landowners and residents must make their concerns known to the applicant so that they may be discussed and addressed. ...⁴⁰

10.1 Views of the applicant

113. AltaLink's participant involvement program began in July of 2011 and included notifying 135 landowners, occupants and residents and consulting with 75 landowners. In addition, AltaLink also notified 28 agencies, industry representatives and other interested parties. The program was originally a part of the Red Deer area transmission development project participation involvement program, which included other projects in the Red Deer area.

114. AltaLink held six open houses relating to the Red Deer area transmission development in July and August of 2011, including one in Lacombe on July 28, 2011. A second round of open houses were held in January and February 2012, including one in Lacombe on February 9, 2012.

115. AltaLink submitted that its participant involvement program consisted of two rounds of consultation followed by multiple updates. Each round consisted of notifying stakeholders, and consultation with landowners, occupants and residents directly on or adjacent to project components. AltaLink also opened a project office in Red Deer to provide additional opportunities for stakeholders to learn about the project and provide feedback.

116. AltaLink submitted that the consultation process was iterative and that as it learned more about the potential impacts of the project, it made changes to the project and then notified stakeholders of these changes. AltaLink identified the elimination of the full rail parallel route due to concerns expressed by CP Rail and the introduction of the alternate variant route and the landowner suggested route option as examples of this process.

117. AltaLink stated that its participant involvement program was extensive and comprehensive and was carried out in accordance with Rule 007. AltaLink submitted that the limited number of concerns raised by interveners regarding the participant involvement program is evidence of its success.

10.2 Views of the parties

118. Derek Werner, a member of the Hughes group, testified that he felt AltaLink did not properly consult with his family and that, outside of a few emails, they were not properly informed. He stated that he felt AltaLink was bullying property owners and that it did not care about any of their concerns.⁴¹

119. The Wescott Consulting group submitted that while AltaLink was effective in disseminating information, it was not particularly effective at receiving information.⁴²

⁴⁰ Decision 2011-329, NaturEner Energy Canada Inc., 162-MW Wild Rose 2 Wind Power Plant and Associated Eagle Butte Substation, Proceeding 625, Application 1606143, August 2, 2011, page 30, paragraphs 169-170.

⁴¹ Transcript, Volume 2, page 328, line 4.

⁴² Exhibit 3450-X0219, Argument, page 2.

120. In argument, Viking Projects stated:

AltaLink in its cross-examination and submission has suggested that Viking Projects failed to advise AltaLink of its intention to use the lot for modular fabrication and implied that Viking Projects should have delayed construction until AFTER a decision was rendered. Those positions are unreasonable and fail to appreciate that the expertise and knowledge to understand and anticipate the impacts of 138 kv line is AltaLink's. The onus should not be on a landowner to fully anticipate the impacts of 138 kv line on their use and enjoyment of their property.⁴³

121. Viking Projects also submitted that AltaLink failed to take the opportunity during meetings and during the hearing to fully appreciate and understand the implications of the project on oil and gas service companies and, in particular, the implications of the proposed alternate variant route.

10.3 Commission findings

122. The Commission considers a consultation program effective if it meets Rule 007 requirements and has allowed interveners to understand the project and its implications for them, and to meaningfully convey to the applicant their concerns about the project. The Commission also expects an applicant to take into account those concerns raised by interveners and to incorporate them into the route design to the extent practical.

123. The Commission finds that the participant involvement program undertaken by AltaLink meets the requirements of Rule 007. The Commission is of the view that the participant involvement program was sufficient to communicate to potentially affected parties the nature and details of the project and some of the potential impacts to those parties. The Commission is also satisfied that the participant involvement program provided potentially affected parties the opportunity to ask questions and express their concerns.

124. The evidence demonstrated that AltaLink provided means for potentially affected stakeholders to make further inquiries. The open houses and publicly distributed information contained clear contact information, and those individuals who were required to be consulted personally also had contact information to reach AltaLink if they had additional questions or concerns.

125. The Commission recognizes that some of AltaLink's amended route options were proposed as a result of landowner consultation. The Commission finds that this demonstrated that AltaLink was willing to listen to landowner concerns and amend its application where it deemed it to be appropriate. The Commission finds that AltaLink's selection of route options shows that some stakeholders' views were incorporated into the applied-for routes.

126. In the Commission's view, an effective consultation program may not resolve all stakeholder concerns. The perceptions of the applicant and some interveners about the quality and effectiveness of the public consultation can sometimes be very different. The concerns raised by Mr. Werner are indicative of a situation where an individual stakeholder may feel that the consultation effort, as it pertained to their interests specifically, was insufficient or superficial. This merely reflects the fact that the parties do not agree and is not the fault of the applicant nor the intervener.

⁴³ Exhibit 3450-X0215, VikingProjectArgument.Sept21.15-0381, page 4.

127. As stated above, the Commission views consultation as a two-way street. The discussions relating to project-specific impacts is a responsibility shared by both parties. As such, the Commission is of the view that the failure to articulate impacts does not alone indicate that AltaLink's consultation with Viking Projects was insufficient. Rather, the Commission has reviewed the evidence related to the consultation that took place between Viking Projects and AltaLink and finds that there was sufficient opportunity for both parties to discuss concerns and project-related impacts. In this circumstance, both parties could have communicated better with each other and perhaps reduced the perception by Viking Projects that more fulsome information pertaining to the transmission line should have been provided. Nevertheless, the Commission finds that AltaLink made efforts to hear the concerns raised by Viking Projects and that Viking Projects had adequate consultation from AltaLink, despite its submission that fulsome consultation was lacking.

11 Environment

11.1 Views of the applicant

128. AltaLink assessed the potential effects of transmission line 423L on the environment. Consistent with its past practice, AltaLink stated that it implemented a staged approach to integrate environmental considerations into the project's development, design and construction. AltaLink's environmental approach included retaining CH2M to assist AltaLink in the route development process and to conduct environmental evaluations of the routes that were proposed in its application. Mr. Van Wyk testified at the hearing on behalf of CH2M regarding the project's environmental effects.

129. CH2M prepared an environmental evaluation report⁴⁴ for the project. The environmental evaluation report described the environmental setting of the project area including terrain and soils, vegetation, hydrogeology, wetlands, watercourses and wildlife; discussed the potential adverse effects of the project on these environmental components; and identified mitigation measures that would eliminate or reduce these potential effects. Although primarily based on desktop information, the environmental evaluation report was supplemented by the completion of several other environmental field surveys and studies for the project, including a wetland evaluation report,⁴⁵ an early season⁴⁶ and late season vegetation survey report,⁴⁷ a weed survey report⁴⁸ and a wildlife survey report.⁴⁹ These supplemental reports either identified additional recommended mitigation measures or confirmed that the mitigation measures already itemized in AltaLink's Environmental Specifications and Requirements (ESR) document were adequate.

⁴⁴ Exhibit 3450-X0097, AML RDATE 423L Appendix M-3 - Environmental Evaluation Errata.

⁴⁵ Exhibit 0023.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix M – Environmental Evaluation, M-4, Wetland Evaluation Report, page 168.

⁴⁶ Exhibit 0023.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix M – Environmental Evaluation, M-5 Early Season Vegetation Survey Report, page 195.

⁴⁷ Exhibit 0023.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix M – Environmental Evaluation, M-5 Late Season Vegetation Survey Report, page 329.

⁴⁸ Exhibit 0023.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix M – Environmental Evaluation, M-7 Weed Survey Report, page 260.

⁴⁹ Exhibit 0023.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix M – Environmental Evaluation, M-8 Wildlife Survey Report, page 299.

11.1.1 Mitigation measures

130. The ESR described the environmental protection mitigation measures and plans to be applied prior to, during, and following construction of the project to reduce the environmental effects of the project.⁵⁰ Pre-disturbance assessments of vegetation, wetlands and wildlife resources were completed in 2013 and 2014, and the results of these pre-disturbance assessments were incorporated into the ESR. AltaLink stated that CH2M also reviewed the ESR and provided feedback for the development of certain project-specific mitigation measures that have been incorporated into the ESR. AltaLink stated that prior to construction, the ESR would be updated to reflect the conditions of any subsequent regulatory approvals obtained for the project.

131. AltaLink would require its engineering and construction contractor to develop a construction environmental management plan for the project prior to the start of construction that meets the requirements itemized in the ESR. AltaLink stated that construction would not commence until it reviewed the construction environmental management plan and accepted it.

132. AltaLink stated that prior to construction, the project's engineering and construction contractor would develop a post-construction reclamation plan. The post-construction reclamation plan would describe: areas of disturbance that would be re-contoured, erosion and sediment control methods, topsoil salvage and replacement, and re-vegetation. AltaLink submitted that some portions of access trails required for access during operation and maintenance activities would be exempted from this post-construction reclamation.

133. AltaLink stated that it would complete environmental monitoring and reporting during construction to verify that specific mitigation measures identified in the environmental alignment sheets, ESR and construction environmental management plan are being followed and are effective. AltaLink also stated that long-term monitoring during operation of the project would be conducted via various plans and standard operating procedures, including an avian protection plan, and standard operating procedures for vegetation management, waste handling and disposal, polychlorinated biphenyls, also known PCBs, and oil management.

134. To reduce bird collisions and mortalities during operation of transmission line 423L, AltaLink stated that it would install bird markers in accordance with AltaLink's Engineering Standard *AL-LIN-70010 Installing Bird Markers on New Transmission Lines* (2012). This standard specifies the use of bird flight diverters and firefly diverters at 10-metre spacing. AltaLink stated that its most recent study concluded that bird markers appear to be an effective mitigation. In the event a bird collision issue is discovered or reported on the proposed transmission line, AltaLink stated that it would conduct an incident investigation to identify follow-up and/or mitigation to prevent reoccurrence, and work co-operatively with wildlife staff at Alberta Environment and Parks as appropriate.

11.1.2 Route options

135. AltaLink submitted that CH2M assisted in the route development process which enabled AltaLink to identify, understand and avoid potential environmental impacts of the project. CH2M provided AltaLink with its expert opinion on which of the routes was preferable from an environmental perspective. The alternate routes would cross the least amount of potential lands

⁵⁰ Exhibit 0023.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix M – Environmental Evaluation, M-1 Environmental Specifications and Requirements, page 1.

with native vegetation and wildlife habitat and therefore have slightly less impacts as compared to the other routes. However, no route was strongly preferred based on CH2M's assessment.

136. CH2M completed an environmental review letter dated July 21, 2014, regarding the removal of the full rail parallel route from consideration. CH2M concluded that the removal of this route option was satisfactory from an environmental perspective as long as when an applied-for route is constructed, the mitigation measures identified in the project's ESR are implemented.

137. CH2M also completed an environmental review for the December 2014 route amendments.⁵¹

138. CH2M reviewed the alternate variant route and determined that the alternate route would be nominally preferred from an environmental perspective when compared to the alternate variant route.

139. Regarding the landowner suggested route option, CH2M was of the opinion that the preferred route was favourable from an environmental perspective because it would be primarily located within a road allowance, and therefore it would have the least impact on native vegetation and potential rare plant habitat, and cross the least amount of wetland and wildlife habitat.

140. In conducting its analysis, CH2M anticipated that potential environmental impacts associated with all proposed route options would be minimized, provided that appropriate mitigation and supplemental studies are implemented.

141. CH2M submitted that all route options were considered to be environmentally satisfactory assuming that the mitigation measures identified in the ESR are implemented and all of the relevant regulatory requirements mentioned in the ESR are complied with. CH2M determined that no route is strongly favoured from an environmental perspective.

11.1.3 Other environmental approvals

142. Alberta Parks (now Alberta Environment and Parks) responded to the Commission's notice for the project and stated that the project would not occur within or near any park boundaries. Also, AltaLink consulted with Alberta Environment and Parks and this agency indicated that it had no concerns with the project.

143. AltaLink submitted that the project will comply with the applicable sections of the *Environmental Protection Guidelines for Transmission Lines* document, the *Alberta Environmental Protection and Enhancement Act*, the *Water Act*, the *Agricultural Pests Act*, the *Weed Control Act*, the *Wildlife Act*, and the *Canada Migratory Birds Convention Act*, the *Fisheries Act* and the *Species at Risk Act*.

144. AltaLink consulted with the Department of Fisheries and Oceans Canada (DFO) on the project, and was advised that the DFO had no concerns so long as AltaLink complied with the Measures to Avoid Causing Harm to Fish and Fish Habitat and other *Fisheries Act* requirements.

⁵¹ Exhibit 3450-X0105, AML RDATE 423L Amendment - Appendix C Environmental Evaluations Errata.

145. AltaLink also consulted with Alberta Culture and Tourism on the project. AltaLink stated that it obtained approval under the *Historical Resources Act* for the project on August 30, 2011. On April 12, 2013, AltaLink provided follow-up information on updated route options, and obtained clearance/approval in respect of these updates on May 10, 2013. AltaLink stated that it would halt construction and consult with Alberta Culture and Tourism immediately if any historical or cultural resources were discovered during construction.

11.2 Views of the parties

146. Several stakeholders expressed general concerns over the environmental impacts of the project during construction. Specific environmental concerns expressed by stakeholders included: the removal or trimming of shelterbelts on or near stakeholder's lands; the introduction and spread of weeds on stakeholder's lands during construction; and avian collisions and mortalities during operation of the transmission line.

147. The Hughes group submitted that the preferred route would have less environmental impacts because it would cross less wetlands than the alternate route.

11.3 Commission findings

148. AltaLink's evidence indicated that the project is located on road allowances and land that is used primarily for agriculture purposes. The Commission accepts the work conducted by CH2M and considers it sufficient given the nature of the project lands. Further, the Commission accepts the conclusion reached by CH2M that the potential environmental impacts would be of a limited nature and that with the appropriate mitigation measures implemented, all route options are satisfactory from an environmental perspective.

149. The Commission understands that AltaLink is subject to and will comply with relevant sections of the Alberta *Environmental Protection and Enhancement Act*, the *Environmental Protection Guidelines for Transmission Lines*, and other relevant statutes, regulations, rules and guidelines listed in the facility application.

150. The Commission expects that prior to construction, AltaLink will complete any additional wildlife, vegetation, wetland, aquatic resources, and soil surveys and studies to the satisfaction of Alberta Environment and Parks, and implement any additional mitigation measures that are recommended based on the results.

151. AltaLink has prepared a draft ESR and has proposed the implementation of many mitigation measures for environmental impacts. The Commission accepts AltaLink's representations in the application and related evidence that it will implement those mitigation measures in good faith and to the extent practical. The Commission recognizes AltaLink's statements that following the completion of the remaining environmental studies and surveys, should the project be approved, it will finalize the development of the ESR and provide the final version to its construction contractor prior to construction.

152. The Commission notes that AltaLink will finalize the development of, and implement as needed, additional environmental protection plans to minimize adverse effects and to ensure prompt and successful reclamation after construction.

153. The Commission finds that no expert evidence regarding environmental effects was presented that contradicted the evidence presented by AltaLink. The Commission is of the

opinion that all applied-for routes are viable from an environmental impact and biophysical perspective.

154. The Commission accepts the evidence provided by CH2M on behalf of AltaLink and finds that the environmental effects of the routes are similar and that they do not strongly favour any route. While CH2M has indicated that some routes may be slightly preferred in terms of environmental effects, the Commission finds that the differences are not significant.

155. Overall, the Commission finds that with the diligent application of the proposed mitigation and monitoring measures put forward by AltaLink, the environmental effects from construction and operation of the project will be adequately mitigated. Accordingly, the Commission finds that the project is in the public interest from an environmental perspective.

12 Noise

12.1 Views of the applicant

156. AltaLink stated that a noise impact assessment was not completed for the proposed alterations to the Lacombe 212S substation and the Ellis 332S substation because no continuous audible noise sources were being proposed as part of the project.⁵²

157. AltaLink stated that the audible noise levels from transmission line 423L are expected to be less than five dBA L_{eq} immediately under the transmission line in fair-weather conditions. AltaLink stated that the assumed nighttime ambient sound level in a rural area is 35 dBA and the contribution from the line would result in predicted sound levels well below 40 dBA.⁵³

158. AltaLink further submitted that the difference in sound level at the edge of the right-of-way would be negligible and would meet the Rule 012: *Noise Control* permissible sound level in rural areas under fair-weather conditions.⁵⁴

12.2 Views of the parties

159. Members of the Hughes group expressed concerns about the potential noise from transmission line 423L. Archie Werner and Clem Werner submitted that the distribution line near their residence already makes noise and expressed concerns that an additional line would increase the noise levels. Darrel and Donna Hicks also raised concerns about noise from the transmission line.

12.3 Commission findings

160. The Commission accepts that the project meets the requirements of Rule 012 based on the evidence submitted by AltaLink.

161. The Commission accepts that no continuous noise emitting components are being added to the Lacombe 212S substation or the Ellis 332S substation. Further, the Commission accepts

⁵² Exhibit 3450-X0095, AML RDATE 423L Application Errata Blackline, page 133, paragraph 546.

⁵³ Exhibit 3450-X0095, AML RDATE 423L Application Errata Blackline, page 132, paragraph 536 and 537.

⁵⁴ Exhibit 0024.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix O –Electric and Magnetic Fields, Appendix 0-1, pages 7-8, paragraphs 17-18.

that the predicted noise levels for transmission line 423L would be below the nighttime permissible sound level of 40 dBA L_{eq} at the edges of the right-of-way.

162. Rule 012 specifies the noise levels for rural areas at the nearest residences. The permissible sound levels are 40 dBA L_{eq} for nighttime and 50 dBA L_{eq} for daytime. Given the predictions submitted in the application, the Commission finds that audible sounds produced by the project will be well below the permissible sound levels for rural areas as required by Rule 012.

163. The Commission finds that the project will comply with Rule 012.

13 Property impacts

13.1 Industrial property value

13.1.1 Views of the parties

164. Iron Rail Business Park is an industrial business park under development near Highway 12 and Range Road 261. Iron Rail Business Park submitted concerns that there would be a property value impact on the lots in its industrial business park, should the proposed alternate route or the alternate variant route be constructed. The Wescott Consulting group, on behalf of the Iron Rail Business Park, submitted that Phase 1 of the park consists of 14 lots and would experience a decrease in market value directly related to the proximity of transmission line 423L. The Wescott Consulting group also submitted that the future Phase 2 development of the park would be adversely impacted in terms of desirability and market value, and would require a redesign of the future development.⁵⁵

165. The Wescott Consulting group, on behalf of the Iron Rail Business Park, argued that AltaLink had failed to take into account the visual impacts to the Iron Rail Business Park in its application. It stated that it had spent considerable effort and money to bury existing distribution lines and imposed landscape requirements to ensure an aesthetically pleasing development. The Wescott Consulting group argued that the transmission line would have a negative visual impact along with safety concerns and possible interference with industrial activities, and that this would result in a negative impact on property value.

166. The Wescott Consulting group hired Mr. English who gave evidence that the potential of contact with a transmission line could make some lots undesirable for certain industries, adding that “encroachment of the right-of-way onto the lot itself is obvious in affecting value of the lot. You cannot build within certain distances of the right-of-way.”⁵⁶

167. In argument, AltaLink was critical of what it described as opinion evidence from Mr. English. AltaLink argued that Mr. English is not an appraiser, has not conducted an appraisal investigation of the impact of the presence of rights-of-way adjacent to industrial lots, and as such, offered anecdotal lay opinion evidence, rather than expert opinion evidence.⁵⁷

⁵⁵ Exhibit 3450-X0039, Wescott Submission, pages 4-5.

⁵⁶ Exhibit 3450-X0036, Intervenor submission, Tab 8: Expert Opinion, Rod English, Substation Journeyman, pages 14-15.

⁵⁷ Exhibit 3450-X0211, AML 423L Argument Part 1, page 69, paragraph 226.

168. In response to the concerns expressed about industrial property value, AltaLink hired Serecon Valuations Inc. (Serecon). Mr. Hoover appeared on behalf of Serecon on AltaLink's witness panel at the hearing. AltaLink re-iterated that Mr. Hoover maintained that the market for industrial lots is made up of many different types of individuals and argued that as between the evidence of Mr. English and Mr. Hoover, the evidence of Mr. Hoover is to be preferred.⁵⁸ This is discussed further in the Expert evidence section of this decision.

169. AltaLink submitted a report by Serecon titled Impact of 138 kV Transmission Lines on Market Value of Industrial Properties⁵⁹ (the Serecon industrial report). The Serecon industrial report conducted an analysis of the effect of a 138-kV transmission line on industrial property values. The Serecon industrial report drew upon analyses of two separate property scenarios in southern Alberta and concluded that, although there is limited evidence, the evidence "provides a clear indication" that 138-kV transmission lines have no impact on the market value of industrial lots.⁶⁰ The following is a summary of the two scenarios studied in the Serecon industrial report.

170. Scenario 1 in the Serecon industrial report identified several parcels of land in the Warner Industrial Park east of Okotoks for analysis. Parcels II and III had an encroaching right-of-way for a 138-kV transmission line along the western edge of the property, while Parcel I did not. Parcels I, II, and III were each sold to different arm's length buyers since August 2012.⁶¹ The Serecon industrial report used a time adjusted price per acre⁶² to devise a comparison of the sale price per acre between properties that have a transmission line overhead and those that do not.

171. The following table outlines the results of Scenario 1:⁶³

Table 1. Serecon industrial report Scenario 1 results

Parcel	Legal location	Line overhead	Sale date	Parcel size (acres)	Sale price/acre	Time adjusted \$/acre
I	Plan 131255; 3; 16	No	21-Jan-2015	4.33	\$291,500	\$291,500
II	Plan 131255; 3; 17	Yes	12-Feb-2014	5.49	\$277,053	\$292,292
III	Plan 1211552; 3; 14	Yes	7-Aug-2012	5.83	\$257,290	\$293,311

172. The Serecon industrial report concluded that, when compared to Parcel I, the 138-kV line in Scenario 1 had no impact on market values of parcels II and III.

173. The Wescott Consulting group submitted that the Warner Industrial Park had two significant factors that differentiated it from the Iron Rail Business Park. The Wescott Consulting group stated that for the Warner Industrial Park, overhead transmission and distribution lines, including a 240-kV line to the east, already dominated the landscape. Additionally, the

⁵⁸ Exhibit 3450-X0211, AML 423L Argument Part 1, page 69, paragraph 226.

⁵⁹ Exhibit 3450-X0083, AML Reply Evidence - Appendix A Serecon Impact of 138 kV Transmission Line.

⁶⁰ Exhibit 3450-X0083, AML Reply Evidence - Appendix A Serecon Impact of 138 kV Transmission Line, page 1.

⁶¹ Transcript, Volume 2, pages 248-249.

⁶² The time adjustment used in the Serecon Report is 0.5% per month and is based on a comparison between the sales of parcels I and IV (neither of which had a line overhead). Parcel IV is immediately east of Parcel I and sold in October 2013 for \$272,500/acre.

⁶³ Exhibit 3450-X0083, AML Reply Evidence - Appendix A Serecon Impact of 138 kV Transmission Line, page 2.

Wescott Consulting group stated that an overhead distribution line acted as a buffer between the 138-kV transmission line and the useable portion of the industrial lots in question.⁶⁴

174. Scenario 2 of the Serecon industrial report identified the sale of two properties beside each other in the Brier Industrial Estates in Medicine Hat. Parcel A had a 138-kV transmission line on its eastern boundary, which imposed a right-of-way on the property. Parcel B did not have a 138-kV transmission line adjacent to or on it. There were no structures on Parcel A and the property was encumbered by the transmission line's conductors only. Both parcels A and B were purchased by the same party.

175. The Serecon industrial report stated that it identified an arm's length resale in Brier Industrial Estates to calculate a time factor adjustment (+0.38 per cent/month) and generated the time adjusted values per acre for each parcel below:⁶⁵

Table 2. Serecon industrial report Scenario 2 results

Parcel	Legal location	Line overhead	Sale date	Parcel size (acres)	Time adjusted \$/acre
A	Plan 0012613, Block 14, Lot 1	Yes	17-Apr-2013	3.29	\$161,095
B	Plan 0112841, Block 14, Lot 3	No	6-Aug-2014	1.84	\$180,000

176. Serecon submitted that although there was a difference between the time adjusted prices per acre of the two parcels, which perhaps suggested that there was a property value impact on Parcel A due to the transmission line, Serecon contacted the purchaser of the two parcels, who "was adamant that the transmission line had no impact on the purchase price for the first parcel [Parcel A]."⁶⁶ Serecon also submitted that the sale price for Parcel A may have been on the low side of market value. Consequently, Serecon concluded that the transmission line on Parcel A did not negatively affect its property value.

177. In argument, the Wescott Consulting group re-emphasized that transmission line 423L would negatively impact both market value and the marketability of the development. The Wescott Consulting group also argued that there would be a segment of prospective purchasers whose concerns about living and working in close proximity to a transmission line would affect the decision making in deciding whether or not to purchase the property.⁶⁷

178. The Wescott Consulting group noted that AltaLink had indicated one such instance in its consultation, where an owner of a lot in the Parkview Industrial Development⁶⁸ had expressed concerns about purchasing a second lot because of the uncertainty of impacts from the transmission line.⁶⁹ Wescott Consulting group submitted that the transmission line would result in restrictions in land use, additional operating costs associated with specialized training costs

⁶⁴ Exhibit 3450-X0219, Argument, page 11.

⁶⁵ Exhibit 3450-X0083, AML Reply Evidence - Appendix A Serecon Impact of 138 kV Transmission Line, page 3.

⁶⁶ Exhibit 3450-X0083, AML Reply Evidence - Appendix A Serecon Impact of 138 kV Transmission Line, page 4.

⁶⁷ Exhibit 3450-X0219, Argument, pages 4 and 14.

⁶⁸ Parkview industrial development was the previous name for the Iron Rail Business Park.

⁶⁹ Exhibit 3450-X0219, Argument, page 15.

and materials, increased liabilities, and additional visual impacts which it stated would result in a negative impact to the marketability and the market value of the industrial park.⁷⁰

179. Mr. Hoover testified that the market contains many types of individuals and that just because a particular purchaser perceives a transmission line as a disincentive to purchase, does not mean that the transmission line will affect the market for that parcel.⁷¹ AltaLink submitted that this principle had been demonstrated by the fact that Mr. Wescott advised that a purchaser had changed his mind to purchase a lot adjacent to the proposed transmission line as opposed to a lot he had originally purchased in a different area of the Iron Rail Business Park.⁷²

180. In response to concerns over potential visual impacts, AltaLink confirmed that monopole structures would be used for the project and that it would work with landowners and developers to try to reduce visual impacts where practicable. Furthermore, AltaLink submitted that the view of the transmission line would be consistent with the views available in an industrial park where the primary purchasers of lots are expected to be oil and gas service companies whose operations often include pipeyards and industrial heavy machinery training sites.⁷³ AltaLink also pointed out that Viking Projects planned to use cranes that have a reach of 131 feet and a vertical height of 111 feet. AltaLink indicated that the cranes would be taller than the proposed transmission line 423L structures and stated that this is an example of a visual impact from a business located within the Iron Rail Business Park.⁷⁴

181. Iron Rail Business Park raised concerns with respect to the alternate route along Range Road 261. Viking Projects also expressed concerns over the alternate variant route, submitting that the routing is proposed to be one metre from its property, with a right-of-way extending nine metres along its property that would interfere with its proposed site plan to maximize the use of its lot.

182. AltaLink explained that the use of the land in the right-of-way in the Iron Rail Business Park would likely be limited because there would be municipally imposed restrictions on development of the parcels adjacent to the western side of Range Road 261. AltaLink explained that it would require right-of-way adjacent to the Range Road 261 road allowance and the developer and owners of the parcels in the future phase of development would have some additional restrictions placed on their use of the lands within the right-of-way. AltaLink stated that it would compensate landowners for the amount of the right-of-way taken, and these owners could continue to put the right-of-way area to some use.⁷⁵

13.1.2 Commission findings

183. In this section, the Commission must determine whether the project may have an impact on the property value of industrial parcels adjacent to the transmission line.

184. The Commission appreciates that AltaLink retained Serecon to conduct a review of the impact of transmission lines on industrial properties. However, the Commission finds, for the

⁷⁰ Exhibit 3450-X0219, Argument, page 16.

⁷¹ Exhibit 3450-X0211, AML 423L Argument Part 1, page 41-42, paragraph 117.

⁷² Exhibit 3450-X0211, AML 423L Argument Part 1, page 42, paragraph 118.

⁷³ Exhibit 3450-X0109, AltaLink reply evidence (errata), page 17, paragraph 91.

⁷⁴ Exhibit 3450-X0211, AML 423L Argument Part 1, page 33, paragraph 88.

⁷⁵ Exhibit 3450-X0109, AltaLink reply evidence (errata), pages 10-11, paragraphs 55-56.

reasons that follow, that the Serecon industrial report does not contain a sufficient sample size to yield cogent evidence or draw any broad conclusions on the potential industrial property value impact of the project.

185. With respect to the Werner Industrial Park in Scenario 1 of the Serecon industrial report, the Commission agrees with the Wescott Consulting group that the Iron Rail Business Park has features and characteristics that are different from the Warner Industrial Park and that these features and characteristics may lead to different results regarding impacts on industrial property values.

186. In Scenario 2 of the Serecon industrial report, the compared properties were purchased by the same party. The Commission finds that this example relies on anecdotal evidence from the purchaser, which fails to provide any definitive evidence to support the report's conclusion that 138-kV transmission lines have no impact on the market value of industrial lots. Accordingly, the Commission has placed little weight on the Brier Industrial Estates example contained in the Serecon industrial report. The Commission does, however, believe that this serves as an example of the subjectivity of purchasers.

187. In Decision 2012-303, the Commission stated that:

The Commission finds that the potential impact of a transmission line upon property value has an aspect of subjectivity. What may be a disincentive to one purchaser may not be a disincentive to a different purchaser.⁷⁶

188. In line with the above approach, the Commission observes that there are many different types of businesses that can operate in an industrial park, and they may experience different types and levels of impact as a result of being in close proximity to a transmission line. The Commission notes that one of the lot owners in the Iron Rail Business Park chose to move to a lot that has the potential to be adjacent to the transmission line. As such, the Commission considers evidence with respect to potential purchasers of lots to be speculative.

189. With respect to concern about visual impacts, the Commission finds that visual impacts are subjective. The Wescott Consulting group did not introduce any specific evidence to indicate that the transmission line will cause a negative impact on industrial property value as a result of visual impacts. The Commission agrees that the view of a 138-kV transmission line with monopole structures is consistent with the visual aesthetics of an industrial park. The Commission accepts and will rely upon the submissions from AltaLink that it will work with landowners and developers to try to reduce visual impacts where practicable. The Commission finds that there is not sufficient evidence to demonstrate that there will be an impact to the property value of lots within the Iron Rail Business Park from visual impacts.

190. The Commission has not been presented with sufficient cogent evidence in this proceeding to demonstrate that the project will result in an adverse impact on industrial property values and finds that any limitations on future businesses who may be prospective purchasers is too speculative to be considered.

⁷⁶ Decision 2012-303: ATCO Electric Ltd., Eastern Alberta Transmission Line Project, Proceeding 1069, Applications 1607153 and 1607736, page 76, November 15, 2012, paragraph 359.

13.2 Rural property value

13.2.1 Views of the parties

191. AltaLink provided a report from Serecon entitled 138 kV Transmission Lines And Rural Property Values.⁷⁷ In this report, Serecon attempted to quantify the effects of a 138-kV transmission line on rural property values by performing a paired sales analysis and regression analysis. Serecon stated that the results of the paired sales analysis indicated that bareland properties as a whole had a negative 1.06 per cent impact and improved properties had a positive 1.05 per cent impact. Serecon found neither of these results to be statistically significant at a 95 per cent confidence level. In the case of the regression analysis, Serecon submitted that the presence of a 138-kV transmission line was statistically insignificant.

192. Overall, Serecon concluded that its paired sales analysis and regression analysis indicated that 138-kV transmission lines located on or within 10 metres of rural subject properties have no statistically significant impact on the properties' market values.

193. Some interveners, including Darrel and Donna Hicks, Archie Werner and Clem Werner, and Llew Werner, raised concerns about the impact the transmission line would have on their property values.

194. Serecon reviewed the properties of these individuals on behalf of AltaLink and submitted that none of the properties had characteristics that would suggest a different conclusion from what was found in its report.⁷⁸

13.2.2 Commission findings

195. The Commission finds that interveners expressed general concerns and did not provide any specific, substantial evidence targeted to this proceeding to demonstrate that there would be an effect to rural property values.

196. The Commission notes that AltaLink filed the same report on rural property values in Proceeding 2669. In Decision 2014-219 for Proceeding 2669, the Commission placed little weight on this report as it did not contain contemporary data or information relating to the specific project evaluated in the Proceeding 2669.⁷⁹ The concerns expressed by the Commission in Proceeding 2669 pertaining to the Serecon report on rural property values remain in this proceeding. As such, the Commission has placed little weight on the 138 kV Transmission Lines And Rural Property Values report from Serecon.

197. The Commission finds there was not sufficient evidence pertaining to specific rural properties that might be affected in this proceeding to suggest that the project would have an impact on rural property value.

⁷⁷ Exhibit 0025.00.AML-3450, AML Red Deer Area Transmission Development 423L Application - Appendix P – Landowner Impacts, 138 KV Transmission Lines And Rural Property Values.

⁷⁸ Exhibit 3450-X0110, AML Reply Evidence Errata Blackline, paragraph 38, page 8, paragraph 42, page 8, and paragraph 208, page 39.

⁷⁹ Decision 2014-219: AltaLink Management Ltd., Red Deer Area Transmission Development, Proceeding 2669, Application 1609677, July 29, 2014, page 25, paragraphs 148-151.

13.3 Agricultural impacts

198. The agricultural impacts section discusses potential general agricultural impacts of the project that are common to all potential routes. Route specific impacts are discussed in the Siting of transmission line 423L section of the decision.

13.3.1 Views of the applicant

199. AltaLink retained Serecon to prepare a report detailing the potential agricultural impacts of transmission lines. The report also provides potential mitigation measures for these impacts.⁸⁰

200. AltaLink submitted that the transmission line has the potential to cause agricultural impacts when farmers operate equipment around structures due to inefficiencies associated with missed areas and overlapping. AltaLink stated that it attempted to avoid these effects by proposing routes within road allowances, or to minimize them by locating structures on quarter lines or parallel to existing linear infrastructure.⁸¹

201. AltaLink indicated that the transmission line can also cause an impact by limiting the height of equipment that is able to pass under the line. However, AltaLink submitted that the transmission line was designed to meet requirements for safe clearances for agricultural equipment.

202. AltaLink submitted that the removal of shelterbelts can also lead to agricultural impacts because shelterbelts can help to protect agricultural lands from erosion and crops from wind damage and stated that it considered this when siting the project.

203. AltaLink stated that there is the potential for agricultural impacts during construction and maintenance such as compaction of soil, inability of landowners to access farmland, and erosions caused by the movement and presence of equipment or crews. AltaLink stated that locating a transmission line in a road allowance would help to minimize these impacts as structures could be accessed via an existing road.

204. AltaLink submitted the majority of the potential agricultural impacts are either avoided or minimized because the routes are located almost entirely on public road allowances or parallel to existing linear infrastructure.⁸²

205. At the hearing, AltaLink stated that Alberta Agricultural and Rural Development had updated its clubroot infestation map to indicate that Lacombe County now had more than 50 fields infested with clubroot. As a result, AltaLink would not sample for clubroot and instead would adjust its procedures and mitigations measures on the assumption that all fields were high risk.

206. AltaLink filed its Clubroot Mitigation Procedure⁸³ on the record of the proceeding which outlined the procedures that it and its contractors would undertake to reduce the risk of spreading

⁸⁰ Exhibit 0025.00.AML-3450, Potential Agricultural Impacts From High Voltage Overhead Transmission Lines, page 1.

⁸¹ Exhibit 3450-X0211, AML 423L Argument Part 1, page 34, paragraph 91.

⁸² Exhibit 3450-X0095, Application Errata, page 112, paragraph 498.

⁸³ Exhibit 0025.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix P – Landowner Impacts, AltaLink Clubroot Mitigation Procedure, pages 44-50.

clubroot. AltaLink submitted that the primary mitigation is to not transport soil from one potentially affected field to another. AltaLink stated there are multiple cleaning options that it may utilize to clean equipment including high-pressure cleaning, high-pressure steam, and pressure washing with water. AltaLink stated that it would ensure that the appropriate equipment would be available and that the cleaning required in the circumstances would be done.

207. AltaLink also submitted that in light of the worsening problem of clubroot in Alberta, it would review its clubroot mitigation procedures and would work with landowners, as part of its review.

13.3.2 Views of the parties

208. The Hainsworth group expressed strong concerns about the potential for the project to spread clubroot and that all proposed routes would pass through townships with confirmed clubroot. The Hainsworth group stated that AltaLink was unable to provide details about equipment cleaning procedures and training and information for work crews.

209. The Hainsworth group stated that should the transmission line be built on agricultural land, there would be an enhanced chance of introducing clubroot during construction⁸⁴ and maintenance.⁸⁵

210. Other parties to the proceeding submitted route-specific concerns associated with the agricultural impacts of the project. These include preferences between routes on their lands and specific structure placements. As mentioned above, these route-specific impacts are discussed in the Siting of transmission line 423L section of the decision.

13.3.3 Commission findings

211. The Commission finds that AltaLink has outlined the potential agricultural impacts of the transmission line and that AltaLink's attempts to mitigate or minimize these impacts are reasonable.

212. The Commission recognizes that clubroot is a serious concern for landowners in the area. The Commission notes that AltaLink has identified the project area as high risk and that it has committed to implement mitigation measures consistent with that level of risk.⁸⁶

213. AltaLink gave the Commission assurances, under oath, during the hearing that AltaLink will work with landowners to mitigate the spread of clubroot. Mr. Turriff, on behalf of AltaLink, stated the following:

And a little bit of context is any of the mitigations that we're referring to as cleaning prior to start of any construction, we will be working with the municipalities, we'll be working with the local landowners, the municipal agricultural landman to refine the cleaning options, what is applicable to the timing of the year and to the specific landowner.

So that will be all incorporated before we even set foot on the construction right-of-way.⁸⁷

⁸⁴ Exhibit 3450-X0041, Submissions of the Hainsworth Group, page 6.

⁸⁵ Transcript, Volume 2, page 293, lines 14-19.

⁸⁶ Transcript, Volume 1, page 46, lines 3-7, and Transcript, Volume 1, page 84, lines 7-10.

⁸⁷ Transcript, Volume 1, page 86, lines 12-21.

214. The Commission will rely upon AltaLink's commitment regarding its approach and procedures to mitigate the spread of clubroot, and the Commission finds these measures appropriate. The Commission expects AltaLink to be conscientious to the potential for significant impacts that the spread of clubroot can cause and expects AltaLink and its contractors to be extremely diligent in the application of its clubroot mitigation procedures during the construction, operation, and maintenance of the project.

215. The Commission will further consider the project's agricultural impacts in the Siting of transmission line 423L section of the decision.

14 Electrical effects

14.1 Electromagnetic interference on the railway

216. The northern segment of the preferred route and the southern segment of the alternate route would parallel CP Rail's railway just outside of the railway right-of-way. This railway is referred to as the Brechter subdivision. The preferred route would parallel the railway right-of-way and tracks for approximately four kilometres and the alternate route would parallel for approximately five and a half kilometres.⁸⁸

217. AltaLink submitted that the preferred route, alternate route and no rail parallel route would be acceptable to CP Rail.

218. AltaLink previously withdrew the full rail parallel route after additional consultation and concerns expressed by CP Rail. The full rail parallel route would parallel the Brechter subdivision right-of-way and tracks for approximately nine and a half kilometres. AltaLink did not apply for the full rail parallel route as part of this application.

14.1.1 Views of the parties

14.1.1.1 CP Rail report and evidence

219. In support of its application, AltaLink submitted a report conducted by CP Rail entitled Electromagnetic Compatibility Study Red Deer Transmission – Brechter Sub⁸⁹ (the CP Rail report). CP Rail stated that the purpose of the CP Rail report was to analyze different routing alternatives to determine the extent of the electromagnetic interference and potential mitigation.

220. The CP Rail report detailed the results of a study of electromagnetic interference from the transmission line on the railway and used a modelling program called Right-of-Way, developed

⁸⁸ Note that the distances were approximately stated as nine kilometres parallel for the preferred route and five and a half kilometres for the alternate route. In sections of the application, such as in Exhibit 3450-X0095, AML RDATD 423L Application Errata Blackline, page 74, Table 4-1 - New 423L, Lacombe 212S Substation to Ellis 332S Substation Route Comparative Analysis, it was also stated as 4.6 kilometres parallel for the preferred route and 5.6 kilometres for the alternate route.

⁸⁹ Exhibit 0020.00.AML-3450, AML Red Deer Area Transmission Development 423L Application - Appendix J – Agency Correspondence, Appendix J-2 Electromagnetic Compatibility Study Red Deer Transmission – Brechter Sub – May 28, 2014. A previous version of the CP Rail report was also submitted in Exhibit 3450-X0030, AML-HAINSWORTH GROUP-2015MAR12-001 Attachment, Electromagnetic Compatibility Study Red Deer Transmission – Brechter Sub.

by SES Technologies. The original CP Rail report was dated December 16, 2013,⁹⁰ and did not consider the alternate route. As a result, AltaLink requested that CP Rail update the report to include the alternate route. CP Rail completed this new report in May 2014.⁹¹

221. The CP Rail report found that the alternate and preferred routes were both undesirable to CP Rail's operations but that these routes were acceptable if mitigation measures were implemented. However, CP Rail preferred the no rail parallel route. CP Rail explained that this route would allow both CP Rail and AltaLink to operate without restrictions or without any measures put into place to mitigate the electromagnetic interference on the railway caused by the proposed transmission line.

222. If either the preferred route or alternate route were selected, the CP Rail report recommended the installation of insulated joints every 700 metres for the duration of the parallel of the railway and the transmission line as a mitigation measure.

223. CP Rail stated that in completing the study, it followed the industry practice limits of:

- 25-volt peak rail to ground for personnel safety under normal, steady-state conditions
- 450 to 650 volt peak rail to ground for personnel safety under short duration fault conditions, though this limit depends heavily on site soil and ballast conditions
- 50-volt peak rail from any point on the system to any other point on the system, this includes across any insulated joints
- five volts peak rail to rail for system safety⁹²

224. CP Rail explained that installing an insulated joint would involve removing a section of the railway so that there are two rail ends and then filling the narrow gap between the two rail ends with an insulator. This insulator is then bolted onto both sides of the rail, and a bonding material may be added to further electrically isolate the joint. CP Rail stated that the insulated joints would limit the steady-state voltage and fault voltages to safe levels.⁹³

225. AltaLink further explained that the amount of voltage induced onto the rails depends heavily on the length of the exposure to a nearby transmission line. The longer the track circuit,

⁹⁰ Exhibit 3450-X0030, AML-HAINSWORTH GROUP-2015MAR12-001 Attachment, Electromagnetic Compatibility Study Red Deer Transmission – Brechter Sub – December 16, 2013.

⁹¹ Exhibit 0020.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix J - Agency Correspondence, Appendix J-2 Electromagnetic Compatibility Study Red Deer Transmission – Brechter Sub – May 28, 2014, page 3.

⁹² Exhibit 3450-X0030, AML-HAINSWORTH GROUP-2015MAR12-001 Attachment, Electromagnetic Compatibility Study Red Deer Transmission – Brechter Sub, pages 6- 7. CP Rail stated that these limits are listed in the “Principles and Practices for Inductive Coordination of Electric Supply and Railroad Communication/Signal Systems” (EPRI Blue Book) and in Institute of Electrical and Electronics Engineers (IEEE) standards, such as IEEE 776, IEEE 1137, and IEEE 80.

⁹³ Exhibit 3450-X0030, AML-HAINSWORTH GROUP-2015MAR12-001 Attachment, Electromagnetic Compatibility Study Red Deer Transmission – Brechter Sub, page 12. CP Rail stated that the levels would be to significantly less than the 25 volt maximum rail to ground or 50 volt maximum from point to point. CP Rail also stated that the insulated joints would also keep transient condition [fault] voltages to less than 480 volts, which it stated was the maximum for 2 ohm per 1000 foot ballast.

the greater the voltage that would occur on the track. Segmenting the rail track by inserting insulated joints would electrically isolate each segment of the rail, thereby reducing the electrical length of the segments that is in parallel with the transmission line. This, in turn, would reduce the amount of induced voltage on each segment with respect to ground.

226. The CP Rail report concluded that the full rail parallel route would be unacceptable because, among other things the number of insulated joints and the distance required to mitigate the electrical effects of the transmission line would cause undue risk to CP Rail's operations.⁹⁴ CP Rail also explained that insulated joints would weaken the track structure.⁹⁵

227. The CP Rail report stated that the model used in the report should be verified against the actual installation and any future changes to industry acceptable limits.

228. Larry Hampton, Director of Signals and Communication for CP Rail, sat as a witness on the AltaLink panel during the electromagnetic interference portion of the hearing. Mr. Hampton stated that CP Rail favoured the preferred route to the alternate route. He testified that the alternate route was "much less desirable" than the preferred route because of the greater length of parallel.⁹⁶

229. Mr. Hampton testified that in places where CP Rail's railway parallels transmission lines, it experienced problems such as equipment damage, which has caused significant delays to train traffic, even where mitigation methods are present.⁹⁷

230. Mr. Hampton explained that when insulated joints are used as part of a signal system, they are generally inspected every six months. In that situation, if there was a failure by an insulated joint it would show up in the signal system. CP Rail stated that because the insulated joints in this case would not be part of a signal system, there would not be immediate signs of a failure, and as a result, Mr. Hampton suggested that CP Rail would have to inspect the joints more frequently. Mr. Hampton stated that if the project went ahead, the exact frequency of inspections would still need to be evaluated. However, he suspected that inspections would be required at least once every three months.⁹⁸ He added that the railway in this area is not accessible via a road and that in order to conduct maintenance and inspections on insulated joints or any other types of mitigation measures installed, it would have to access the railway using high rail equipment, which would have to be coordinated with train schedules.

14.1.1.2 SES Technologies report

231. The Hainsworth group hired Dr. Farid Dawalibi from SES Technologies. SES Technologies submitted a report entitled SES Technologies Report – AltaLink 423L Project⁹⁹ (the SES Technologies report). The SES Technologies report reviewed the CP Rail report and provided Dr. Dawalibi's suggestions for possible railway mitigation for the project

⁹⁴ Exhibit 0020.00.AML-3450, AML Red Deer Area Transmission Development 423L Application - Appendix J – Agency Correspondence, Appendix J-2 Electromagnetic Compatibility Study Red Deer Transmission – Brechter Sub – May 28, 2014, page 14.

⁹⁵ Exhibit 3450-X0094, AML RDATE 423L Application Errata, page 73, paragraph 307.

⁹⁶ Transcript, Volume 4, page 521, lines 5-6.

⁹⁷ Transcript, Volume 4, pages 593-594.

⁹⁸ Transcript, Volume 4, pages 733-734, lines 21-23.

⁹⁹ Exhibit 3450-X0040, SES Technologies Report – AltaLink 423L Project.

area. SES Technologies developed the Right-Of-Way-Pro software package used by CP Rail in the CP Rail report modelling.

232. SES Technologies stated that the analysis carried out in the CP Rail report was validated by comparing computed results performed using two different analytical methods (Right-Of-Way-Pro and Multifields software packages). SES Technologies stated that it was able to generate results comparable and consistent with those obtained in the CP Rail report using identical transmission line configuration, rail track path, soil structure model as well as other data and assumptions. The SES Technologies report modelled steady-state conditions for the project, but did not model fault conditions.

233. Generally, SES Technologies stated that when using the mitigation methods available, it did not expect any issues in achieving 25-volts peak rail to ground for the full rail parallel route.¹⁰⁰

14.1.1.3 Assumptions of the CP Rail report

234. The parties submitted contrary evidence regarding the assumptions included in the CP Rail report. The parties' respective views on matters are discussed in the following section.

235. SES Technologies opposed some of the assumptions in the CP Rail report, in particular the amount of track modelled, the failure to include conductivity in the fault model, and the soil resistivity used.

236. The SES Technologies report stated that the CP Rail report omitted the contribution of the east and west portions of its rail tracks on the north and south ends of transmission line 423L, and thus CP Rail presented a truncated rail model. SES Technologies stated that the CP Rail report model was inadequate to represent a realistic and pertinent assessment of the electromagnetic interference levels on the railway tracks. SES Technologies argued that the CP Rail truncated rail model led CP Rail to overestimate the ground potential rise along its tracks in the CP Rail report. SES Technologies submitted that the CP Rail report model failed to account for the gradual dissipation of electric energy along the rails that were not included.

237. AltaLink stated that CP Rail had intentionally introduced a discontinuity in the model at the south end of the 423L parallel region because CP Rail does not own the rail to the south. CP Rail stated that it was not prepared to allow unnecessary risk to another facility owner's operations by allowing interference to dissipate into another rail operator's tracks. CP Rail was also not prepared to assume that a neighbouring rail owner's track would remain available for the purpose of dissipation of induced voltage. At the hearing, AltaLink stated that it completed further consultation with the owner of the railway immediately south of CP Rail's railway, Dow Chemical. AltaLink discovered that an insulated joint already existed on Dow Chemical's portion of the railway in the SE 30-39-25-W4M.

238. AltaLink stated that CP Rail advised that a discontinuity was introduced at the north end of the parallel region because CP Rail was not prepared to allow induced voltages to extend onto the northern section of its tracks. CP Rail explained that this would restrict the future changes to, and maintenance of, tracks within and beyond the 423L parallel for distances of 15 to 20 kilometres because maintenance and signalling plans for the other portions of the tracks might introduce discontinuities that would change the dissipation effects. CP Rail advised AltaLink that

¹⁰⁰ Exhibit 3450-X0060, Hainsworth Group IR Responses (1 through 5) to AUC, 4 c), page 9.

this restriction would not be acceptable. CP Rail added that a switch exists 800 metres from where the transmission line begins to parallel the railway in the north. CP Rail stated that depending on the orientation of the switch, there may be a discontinuity on one of the rails. This would mean that both rails may not dissipate electromagnetic interference equally at all times. CP Rail added that there is a signalling system on the track near Lacombe that would be interfered with if the electromagnetic interference was allowed to dissipate beyond the parallel.¹⁰¹

239. SES Technologies also called into question the accuracy of the CP Rail report by submitting that CP Rail made an omission in performing its analysis. According to SES Technologies, the CP Rail report did not include conductive interference in its fault studies. SES Technologies submitted that assuming a uniform soil model, as the CP Rail report had done, is acceptable during steady-state conditions but that fault studies should be carried out only once field soil resistivities along the transmission line are determined. Dr. Dawalibi testified that the failure to include conductivity was a serious omission and the use of an assumed soil resistivity was unjustified.¹⁰²

240. Dr. Dawalibi testified that conductivity can be a serious contributor to electromagnetic interference. Dr. Dawalibi stated and modelled that, particularly when there is top soil with low resistivity, conductive coupling is the principle contributor to the touch voltage.¹⁰³

241. The Hainsworth group submitted that AltaLink and CP Rail's justification for not including conduction was because of the high resistivity of the ballast. The Hainsworth group argued that this would ignore the potentially serious safety issue of a person standing on the soil, rather than the ballast, and coming into contact with the rails or something in contact with the rails.

242. Mr. Hampton testified that this situation may be possible if someone were to lie down on the ground stretching out, such that one foot would be on the soil and a fingertip would be on the rail, at the time of a fault. AltaLink replied that the circumstances would be very unlikely and that CP Rail's assumption was reasonable.

243. The CP Rail report stated that the soil resistivity value used in its study was a conservative value intended to yield worst-case results. AltaLink submitted that CP Rail was not intending to achieve the most accurate result but that because safety is at issue, it was reasonable for CP Rail to be conservative. Nonetheless, AltaLink defended the assumed soil resistivity values CP Rail used for fault analysis and stated that the soil resistivity value used did not introduce a high degree of uncertainty.

244. AltaLink explained that a fault condition would create three mechanisms for current to flow to rail tracks. These conditions are capacitive, conduction and inductive coupling. AltaLink stated that capacitive coupling is weak and generally disregarded for this type of analysis. AltaLink stated that conduction is the direct flow of electric current through a pathway such as the soil and rail ballast and that inductive coupling is from the transmission line to the rails via magnetic fields.

¹⁰¹ Transcript, Volume 4, page 561, lines 1-10.

¹⁰² Exhibit 3450-X0183, Direct Evidence of Dr. Farid Dawalibi of SES Technologies Ltd., page 2.

¹⁰³ Exhibit 3450-X0183, Direct Evidence of Dr. Farid Dawalibi of SES Technologies Ltd., page 3.

245. AltaLink submitted that inductive coupling is the dominant factor in a fault situation when a high resistance is present. AltaLink submitted that the railway's ballast, which would have a resistivity similar to crushed stone which is in the range of 3,000 ohm-metre, would serve as that high resistance. AltaLink submitted that because of this, it was reasonable for CP Rail to not include conductive interference in its report.¹⁰⁴

246. AltaLink submitted that the inductive path is unaffected by soil conditions and ballast resistivity. AltaLink stated that since the inductive path is the dominant path, the assumption of 100 ohm-metre soil resistivity would have little effect on the model used in the CP Rail report.

247. Further, AltaLink submitted that the resistivity of the rail ballast is a magnitude of order higher than the resistivity of the soil. AltaLink submitted that the soil ballast resistivity would therefore have a much greater impact on the amount of voltage conducted.

248. AltaLink measured the soil resistivity at the Lacombe and Ellis substations, conducted additional studies comparing the estimated and measured soil resistivity, and determined that the increased accuracy of the measured soil resistivity did not result in a material change to the calculated fault levels.

249. AltaLink stated that the CP Rail report fault results were for inductive only electromagnetic interference and used assumed 100 ohm-metre soil resistivity. AltaLink stated that because of these approximations the CP Rail report modelled voltage was:

- 25 per cent lower due to not including conductivity, and
- 15 per cent higher due to the 100 ohm-metre assumption compared to the measured resistivity

250. AltaLink stated that the two approximations would tend to cancel each other. CP Rail advised that the results of the CP Rail report for fault conditions would not be changed by these approximations to the degree that the CP Rail report conclusions would be changed.

14.1.1.4 Mitigation measures

251. A number of mitigation measures that may be used to help mitigate induced voltages on the railway were discussed by the parties.

252. CP Rail's preferred mitigation method was to increase separation distance between the railway and a transmission line. AltaLink stated that the proposed routes, or portions of the proposed routes, that have a minimum of one quarter section of separation are acceptable to, and preferred by, CP Rail. If the no rail parallel route were selected, CP Rail stated that this separation would allow both CP Rail and AltaLink to operate without restrictions or without mitigation measures put in place to contain the interference.

253. In cases where mitigation measures are required, CP Rail's only acceptable mitigation method would be to install insulated joints as discussed above.

¹⁰⁴ Exhibit 3450-X0109, AML Reply Evidence Errata, pages 30-32, paragraphs 146-157.

254. The SES Technologies report stated that there are other mitigation measures that could further reduce electromagnetic interference and that would not require any modifications to the rail tracks. SES Technologies stated that these mitigation measures would be much less intrusive than inserting insulated joints.

255. The Hainsworth group submitted that CP Rail's only justification for selecting insulated joints was that it had used them in the past. The Hainsworth group argued that CP Rail did not give any serious consideration to other mitigation measures. The Hainsworth group submitted that CP Rail's rejection of the full rail parallel route was based primarily on the impacts of the insulated joints.¹⁰⁵

256. The Hainsworth group indicated that insulated joints have well known limitations. It stated that these limitations include failure to block conductive coupling through the soil and issues when rolling stock straddles the joints and acts as a conductor across the joint. The Hainsworth group also stated that insulated joints have significant maintenance issues.¹⁰⁶ Dr. Dawalibi testified that the use of insulated joints may be dangerous and expressed concern about the use of insulated joints with the purpose of mitigation without any additional type of mitigation to protect against failure of the insulated joints or the possibility of a stress voltage across insulated joints.¹⁰⁷ The Hainsworth group submitted that CP Rail had acknowledged these issues and stated that insulated joints are something that CP Rail does not like to have.¹⁰⁸

257. In assessing potential mitigation measures, direct grounding of the railway as a mitigation technique was not acceptable to CP Rail as it would only be effective for tracks that contain no signalling equipment. CP Rail indicated that direct grounding could not be used in this case because it would interfere with the operation of existing active crossings and would prevent the addition of future signalling.

258. The SES Technologies report proposed transposition of the conductors of transmission line 423L to reduce electrical effects on the railway. A transposition of the conductors would involve switching the orientation of the conductors along the transmission line structure. The SES Technologies report suggested a transposition of the conductors at two locations along the full rail parallel route.

259. The SES Technologies report also suggested constructing a continuous counterpoise along the parallel railway and transmission line sections. The continuous counterpoise would be a buried copper wire connected to ground at various locations along the route. SES Technologies modelled a scenario that used two transpositions and a transmission line counterpoise buried one metre deep. This scenario resulted in the maximum ground potential rise to be slightly over 25 volts under steady-state conditions which was just above the acceptable limit. SES Technologies suggested using a different rail ballast model in the calculations and stated that if the different ballast model were used instead, this scenario would result in a rail to ground potential rise below the required 25 volts under steady-state conditions.

¹⁰⁵ Exhibit 3450-X0218, Written Closing Argument of the Hainsworth Group, page 22, paragraph 74.

¹⁰⁶ Exhibit 3450-X0218, Written Closing Argument of the Hainsworth Group, page 36, paragraph 133.

¹⁰⁷ Transcript, Volume 5, page 860, lines 5-9.

¹⁰⁸ Exhibit 3450-X0218, Written Closing Argument of the Hainsworth Group, page 37, paragraph 134.

260. SES Technologies stressed that it identified what could be done and the mitigation measures listed were not meant to represent final optimized mitigation measures as such mitigation measures would need to be tailored to the project.

261. In response to information requests, SES Technologies also modelled another type of mitigation measure that it referred to as a gradient control wire. Dr. Dawalibi explained that the gradient control wire would be buried in a trench on the CP Rail right-of-way, and would be regularly connected to the rails via impedance bonds or surge arrestors.

262. SES Technologies modelled a scenario with two transpositions, a transmission line counterpoise buried one metre deep and a gradient control wire buried along the rail tracks. SES Technologies stated that this model resulted in ground potential rise values below 25 volts under steady-state conditions.

263. AltaLink and CP Rail stated that there would be potential issues with the mitigation measures proposed by SES Technologies.

264. CP Rail advised that using transposition of the conductors as a mitigation method would limit its flexibility to locate insulated joints now and in the future. AltaLink stated that when transposition of the conductors is combined with insulated joints, the effectiveness would depend on the location of insulated joints relative to the location of transpositions. AltaLink also stressed that transposition of the conductors would not mitigate the voltage levels in a fault condition, which it stated would be the limiting factor for assessing the risk to the railway for transmission line 423L. AltaLink estimated that two phase transposition structures would have an incremental cost of approximately \$340,000.¹⁰⁹

265. AltaLink also outlined its concerns with the counterpoise mitigation method. A counterpoise would require trenching, which AltaLink had not discussed with landowners. AltaLink stated this would introduce more soil disturbance. In addition, AltaLink stated that installation of a counterpoise at road crossings would require directional drilling and associated approvals from the road use authority. AltaLink submitted that SES Technologies' conclusions about the effectiveness of counterpoise mitigation are not supported by analysis of fault conditions. CP Rail advised AltaLink that a buried counterpoise is not a typical mitigation used by itself or AltaLink and therefore it had concerns with having to implement new internal policies. CP Rail also expressed concern that it would not have control over the counterpoise as it would be located on AltaLink's right-of-way rather than the railway right-of-way and would therefore have to rely on an external party for future maintenance to ensure that the counterpoise wire does not become damaged or corroded. AltaLink estimated that the cost for a counterpoise conductor underground in the transmission line 423L right-of-way would be approximately \$52,000/kilometre, not including construction damages and landowner compensation.¹¹⁰

266. With respect to the gradient control wire mitigation method, CP Rail advised AltaLink that there would be a risk that the wire could be damaged in future when construction, such as a culvert replacement, track re-ballasting or a track change occurs. CP Rail explained that it does not use gradient control wire conductors, as they are not needed for any railway purpose. CP Rail

¹⁰⁹ Exhibit 3450-X0109, AML Reply Evidence Errata, pages 38-39, paragraphs 173-175 and Exhibit 3450-X0109, AML Reply Evidence Errata, page 24, paragraph 110.

¹¹⁰ Exhibit 3450-X0109, AML Reply Evidence Errata, pages 39-40, paragraphs 179-18 and Exhibit 3450-X0109, AML Reply Evidence Errata, page 24, paragraph 110.

expressed concerns to AltaLink with its ability to maintain a gradient control wire in the future.¹¹¹ AltaLink expected cost for labour and materials for a gradient control wire to be approximately the same as for a buried counterpoise, but would require additional costs to attach the wire to the rails via surge arrestors or impedance bonds. AltaLink did not attempt to estimate these additional costs.¹¹²

267. AltaLink submitted that CP Rail had not used impedance bonds for this purpose, was not familiar with the specific models or operations issues, and was not prepared to implement this mitigation. AltaLink submitted that the use of impedance bonds for this purpose would require a low resistance ground that it estimated would cost \$50,000 to \$250,000 for each low resistance ground.¹¹³

268. AltaLink submitted that Dr. Dawalibi's suggestion to use surge arrestors instead of impedance bonds would not be effective to mitigate steady-state voltage levels. Mr. Hampton testified that surge arrestors are not designed to fire during steady-state conditions and that a gradient control wire connected to the rails with surge arrestors would essentially not be connected to the rail during steady-state conditions. Mr. Hampton added that this method was not identified in the Electrical Power Research Institute (EPRI) handbook as a mitigation method, would require more maintenance than insulated joints, and would introduce a safety risk at active crossings systems in the event of a failed surge arrestor.¹¹⁴

269. AltaLink stated that the installation of two transpositions and a counterpoise, which includes labour and material costs, and associated potential land damages, would be approximately \$1.1 million. This is based on a counterpoise of 12.9 kilometres long.¹¹⁵

270. AltaLink stated that for two transpositions, a counterpoise and a gradient control wire, labour and material costs would be approximately \$1.6 million, plus the cost of multiple impedance bonds or surge arrestors.¹¹⁶

271. AltaLink stated that a contingency amount of \$400,000 was included in the project cost estimate for electromagnetic interference related mitigations. It stated that the installation cost of insulated joints is \$12,500 per pair of joints, not including the cost of ongoing maintenance.¹¹⁷

272. CP Rail indicated that it had concerns with the application of the combined mitigation methods. CP Rail stated that it had not used several methods presented by SES Technologies for the purpose of mitigation of electromagnetic interference. CP Rail indicated it was concerned that as the number of mitigations applied increases, so does the complexity and the risk that future maintenance may not be able to keep these mitigations operating properly.

273. In his direct evidence, Dr. Dawalibi modelled a phase to ground fault condition at the transmission line structure near point A25 and presented two scenarios. One scenario presented was with no mitigation and the other was with a mitigation wire installed. Dr. Dawalibi

¹¹¹ Exhibit 3450-X0109, AML Reply Evidence Errata, page 41, paragraphs 192-194.

¹¹² Exhibit 3450-X0109, AML Reply Evidence Errata, page 24, paragraph 110.

¹¹³ Exhibit 3450-X0109, AML Reply Evidence Errata, page 40, paragraph 188.

¹¹⁴ Exhibit 3450-X0211, AML 423L Argument Part 1, page 95, paragraphs 323-325.

¹¹⁵ Exhibit 3450-X0109, AML Reply Evidence Errata, page 24, paragraph 111.

¹¹⁶ Exhibit 3450-X0109, AML Reply Evidence Errata, page 24, paragraph 111.

¹¹⁷ Exhibit 3450-X0109, AML Reply Evidence Errata, page 24, footnote 86.

submitted that the mitigation wire reduces the voltage to below the industry practice limits. Dr. Dawalibi modelled the same mitigation wire under steady-state conditions to demonstrate that it would also work in that situation.

274. AltaLink submitted that Dr. Dawalibi had modelled the fault at a tower structure that is 160 metres from the railway, which would be farther away from any other point along the parallel section of the full rail parallel route. It indicated that this was the least conservative scenario. AltaLink submitted that there was no evidence to demonstrate the effectiveness of the mitigation at any location where the transmission line would be closer to the railway tracks, including the worst-case scenario, where the railway tracks would be 16 metres from the transmission line.¹¹⁸

275. AltaLink stressed that SES Technologies has not demonstrated that any mitigation measure would reduce electromagnetic interference to a safe level under both fault and steady-state conditions.¹¹⁹

276. Dr. Dawalibi testified that he has not experienced a situation where SES Technologies was unable to provide a satisfactory mitigation. He stated that he believed this case is “rather simple [electromagnetic interference] co-location”¹²⁰ and that he has seen much more complex cases. He added that he believed the impacts of paralleling the railway could be mitigated regardless of the route chosen.

277. The Hainsworth group acknowledged that whether the results from the CP Rail report or from the SES Technologies report were considered, mitigation of some description would be required.¹²¹ The Hainsworth group submitted that the most effective and economical mitigation measure can only be determined once accurate studies have been completed.¹²²

14.1.1.5 Other issues

278. The Hainsworth group members stated that only one or two trains per day, each of approximately twelve cars long, use the railway.

279. In reply, CP Rail stated that if this were a main line, it would not even allow the four kilometre or five and a half kilometre parallels that it has accepted in the case of transmission line 423L.

280. The Hainsworth group submitted that the SES Technologies report showed that the full rail parallel route would not create excessive electromagnetic interference when compared to the preferred route and alternate route. Therefore, the full rail parallel route can, and should, be approved by the Commission.¹²³

281. AltaLink submitted that it is CP Rail that would have to bear the future risks and maintenance burden imposed by allowing the transmission line to parallel its railway. AltaLink further submitted that CP Rail is the only party with experience owning and operating a railway

¹¹⁸ Exhibit 3450-X0211, AML 423L Argument Part 1, page 99, paragraph 340.

¹¹⁹ Exhibit 3450-X0211, AML 423L Argument Part 1, page 103, paragraph 350.

¹²⁰ Exhibit 3450-X0218, Written Closing Argument of the Hainsworth Group, page 23, paragraph 75.

¹²¹ Exhibit 3450-X0218, Written Closing Argument of the Hainsworth Group, page 34, paragraph 121.

¹²² Exhibit 3450-X0218, Written Closing Argument of the Hainsworth Group, page 23, paragraph 76.

¹²³ Exhibit 3450-X0041, Submissions of the Hainsworth Group, page 6, paragraph 20.

and therefore the only party with the expertise required to assess the types of mitigation measures, length of parallel and the level of risk that is acceptable.

282. AltaLink stated that in light of the growing public policy emphasis on railway safety, the Commission should be reluctant to question the level of risk that CP Rail is willing to accept.

14.1.2 Commission findings

283. The Commission heard detailed evidence from CP Rail and SES Technologies with respect to the potential impacts to the railway.

284. The Commission understands that AltaLink commissioned CP Rail to conduct the CP Rail report to determine the extent of the electromagnetic interference and potential mitigation. The Commission notes that by filing the CP Rail report on the record of the proceeding, AltaLink attempted to explain why it chose not to apply for the full rail parallel route. The Commission also heard evidence with respect to meetings held between AltaLink and CP Rail. The Commission finds that AltaLink took reasonable steps to better understand CP Rail's objection regarding the full rail parallel route.

285. The CP Rail report included modelling showing the electromagnetic interference that may impact the railway. The Commission finds that the CP Rail report modelling, including the assumptions used in the modelling, were reasonable in the circumstances. The Commission notes that the CP Rail report modelling would be verified against actual measurements should any of the routes be constructed.

286. After having reviewed the CP Rail report, the Commission finds that this report was sufficient to indicate that CP Rail would experience electromagnetic interference as a result of paralleling the transmission line. The Commission further finds that if the preferred route, alternate route or full rail parallel route were approved, some form of mitigation would be required.

287. The CP Rail report, SES Technologies report, and Mr. Hampton's testimony provided evidence that the transmission line paralleling the railway may impact the railway. Based on this evidence, the Commission finds that there may be adverse impacts on CP Rail's business operations should the Commission approve either the preferred route or alternate route. These impacts include modifications to safety and maintenance procedures. Further, the Commission agrees with AltaLink and CP Rail that these impacts would likely be more severe should AltaLink construct the full rail parallel route.

288. With respect to the evidence brought forward regarding alternative mitigation measures, the Commission encourages AltaLink to continue to work with railway owners to explore all practical and acceptable mitigation alternatives for future applications with proposed transmission lines paralleling railway lines. The Commission makes no finding regarding the reasonableness of CP Rail's decision only to use insulated joints and to reject other mitigation measures. The Commission agrees with AltaLink that CP Rail has the necessary experience and expertise to understand the impacts and effectiveness of different mitigation types because CP Rail operates the railway.

289. The Commission finds that regardless of the mitigation measures used, the evidence on the record of the proceeding is that any of the proposed lengths of parallel will cause some impacts on CP Rail's operations.

290. In summary, the Commission has considered the relevant technical evidence submitted by AltaLink and by the interveners. The Commission recognizes that the added risks and the ability of these mitigation measures to be reliable are valid concerns. The Commission finds that the evidence demonstrated that paralleling the railway, in particular for the length of the full rail parallel route, would result in impacts to CP Rail. These impacts should be weighed against the other types of impacts of the various routes, in order to determine the superior route for transmission line 423L.

14.2 Other electrical effects

14.2.1 Views of the parties

291. AltaLink retained Exponent Inc., which prepared a February 2014 report entitled Status Report on Electric and Magnetic Field Health Research 2010-2013¹²⁴ and a September 2011 report entitled Research Developments Since the 2007 WHO Review of Extremely Low Frequency Electric and Magnetic Fields & Health.¹²⁵ The reports concluded that there is no evidence to suggest that extremely low frequency electric and magnetic fields are a cause of any long-term effects to humans, plants, or animal health. AltaLink noted that the World Health Organization, Health Canada and other agencies have also reviewed extremely low frequency electric and magnetic field research and have come to the same conclusion.¹²⁶

292. AltaLink stated that it used the Corona and Field Effects program to model the expected levels of electric and magnetic field levels for the proposed transmission line 423L. AltaLink submitted that at the edge of the right-of-way for transmission line 423L, the electric field would be approximately one kilovolt/metre and the magnetic field would be approximately eight milligauss.¹²⁷ AltaLink submitted that all calculated electric and magnetic field levels for the project outside of the right-of-way or road allowance are much lower than the international guidelines developed by the International Commission on Non-Ionizing Radiation Protection and International Committee on Electromagnetic Safety for electric and magnetic fields for general public and occupational exposure.¹²⁸

293. AltaLink submitted that no interveners challenged the conclusion of the Exponent Inc. reports or provided expert evidence relating to the health effects of electric and magnetic fields. However, some interveners raised general concerns with the potential health effects of electric and magnetic fields in the project.

294. Viking Projects testified that it had many electrical concerns with the operation of its facilities in close proximity to the alternate variant route. Mr. Wilson testified about the impacts that the transmission line would have on Viking Projects. Mr. Wilson submitted that Viking Projects would not have purchased the lot if the alternate variant route of transmission

¹²⁴ Exhibit 0024.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix O – Electric and Magnetic Fields, Appendix O-2, Status Report on Electric and Magnetic Field Health Research 2010-2013, pages 16-73.

¹²⁵ Exhibit 0024.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix O – Electric and Magnetic Fields, Appendix O-3, Research Developments Since the 2007 WHO Review of Extremely Low Frequency Electric and Magnetic Fields & Health, pages 74-448.

¹²⁶ Exhibit 3450-X0095, AML RDATD 423L Application Errata Blackline, page 132, paragraphs 533-534.

¹²⁷ Exhibit 0024.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix O – Electric and Magnetic Fields, Appendix O-1, Electrical Effects, pages 13-14.

¹²⁸ Exhibit 0024.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix O – Electric and Magnetic Fields, Appendix O-1, Electrical Effects, pages 4-6.

line 423L was already constructed. He stated that the transmission line would negatively impact Viking Projects' plans to expand its modular division and to use the site as a training facility.

295. Viking Projects expressed concern about operating machinery in close proximity to a transmission line. It submitted that if a worker were to accidentally hit the line or the structures, it could result in death or serious life-threatening injury. Viking Projects stated that its employees would be required to follow special safety procedures on a daily basis and that in order to account for the additional risk the transmission line would impose, Viking Projects would have to increase direct safety supervision resulting in additional costs and decreased productivity. Viking Projects submitted that this would impact its competitiveness to bid on projects. Viking Projects also expressed concerns about the potential for the transmission line to induce a charge in pipes and other equipment that could result in a shock to its workers.

296. Viking Projects and the Wescott Consulting group retained Rod English to assess the effects of the alternate routes on the Iron Rail Business Park.

297. Mr. English stated that the potential for equipment to come into contact with the transmission line would make the lots adjacent to the line undesirable to a number of industries such as pipe handling, cranes and steel erection. He stated that ideally equipment should stay away from the power line area and that continued use of the area by cranes or for welding pipe should be discouraged. He also noted that the stringing of pipe parallel to the power line would require procedures to demagnetize the pipe and precautions should be taken to avoid inductive shock.

298. Mr. Mundy testified on behalf of AltaLink regarding nuisance shocks induced by a transmission line. He stated that multiple factors influence the amount of charge that is induced on an object, including length of parallel between the object and a transmission line, as well as the distance of separation between the object and a transmission line. Mr. Mundy also stated that the amount of insulation that a person wears, such as rubber boots or leather gloves, would affect whether they would experience a nuisance shock.

299. In response to Viking Projects' concerns, Mr. Mundy testified that while 60 feet may be a long piece of pipe, it is not a long distance of parallel in comparison with a fence, which can parallel a transmission line for an entire quarter section. He stated that AltaLink would typically ground a barbed wire fence once every 100 metres, which would be adequate to ensure there is no hazard. Based on AltaLink's experience and modelling, it did not expect that a hazard would be created, even if four 60-foot pipes were welded together. Mr. Mundy submitted that the pipe would likely be at least nine metres from the transmission line due to the right-of-way, and would bleed off voltage since it would either be held off the ground by some structure or would lay directly on the ground.¹²⁹

300. AltaLink also stated that with respect to nuisance shocks, metal objects near the transmission line would be assessed and grounded where appropriate. AltaLink explained that the magnetic field produced by the transmission line would be too weak to affect welding, and no demagnetizing procedures would be required on pipe strung in parallel to the project.

¹²⁹ Transcript, Volume 1, pages 141-143, lines 19-15.

301. AltaLink stated with respect to shocks due to contact with the transmission line, it is the responsibility of landowners and their agents to ensure worker safety around transmission lines, and to ensure that the limits of approach defined by the Alberta Electric Utility Code is maintained at all times.¹³⁰

302. Denis and Doreen Hainsworth, members of the Hainsworth group, expressed concerns about the project's potential to interfere with communications such as broadband internet. AltaLink conveyed that it would ensure that the project is within applicable radio interference guidelines and would work with stakeholders on a case-by-case basis to apply mitigations for induction effects.

14.2.2 Commission findings

303. The Commission finds that AltaLink provided expert evidence on the topic of the health effects of electric and magnetic fields that was uncontroverted by any other experts. The Commission finds that the results of AltaLink's computer modelling of the electric and magnetic field levels associated with transmission line 423L to be credible. The Commission notes that the predicted levels at the edge of the right-of-way are well below the International Commission on Non-Ionizing Radiation Protection exposure guidelines for the general public of 4.2 kilovolts/metre for electric fields and 2,000 milligauss for magnetic fields.

304. In addition, the Commission considers the following conclusion in the Exponent, Inc. report persuasive:

The numerous national and international scientific agencies that have reviewed this research have not concluded that exposure to ELF [extremely low frequency] EMF [electric and magnetic fields] is a cause of any long-term adverse health effect.¹³¹

305. The Commission considers important the conclusion of Health Canada that exposure to electric and magnetic fields from transmission lines is not a demonstrated cause of any long-term adverse effect to human or animal health. Health Canada states that:

At present, there are no Canadian government guidelines for exposure to EMFs [electric and magnetic fields] at ELF [extremely low frequency]. Health Canada does not consider guidelines for the Canadian public necessary because the scientific evidence is not strong enough to conclude that exposures cause health problems for the public.

Some national and international organizations have published health based exposure guidelines for EMFs at ELF. However, these guidelines are not based on a consideration of risks related to cancer. Rather, the point of the guidelines is to make sure that exposures to EMFs do not cause electric currents or fields in the body that are stronger than the ones produced naturally by the brain, nerves and heart. EMF exposures in Canadian homes, schools and offices are far below these guidelines (Health Canada, 2010).¹³²

¹³⁰ Exhibit 3450-X0211, AML 423L Argument Part 1, page 30, paragraphs 73-74.

¹³¹ Exhibit 0024.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix O – Electric and Magnetic Fields, Appendix O-3, Research Developments Since the 2007 WHO Review of Extremely Low Frequency Electric and Magnetic Fields & Health, pages 87.

¹³² Exhibit 0024.00.AML-3450, AML Red Deer Area Transmission Development 423L Application – Appendix O – Electric and Magnetic Fields, Appendix O-3, Research Developments Since the 2007 WHO Review of Extremely Low Frequency Electric and Magnetic Fields & Health, pages 108-109.

306. With regard to electric effects on Viking Projects, the Commission finds for the reasons that follow that due to Viking Projects' proximity to the proposed alternate variant route, there is the potential for impacts on its operations. The Commission acknowledges that the operation of large equipment in close proximity to a transmission line has the potential to be a hazard. The Commission accepts the evidence that increased training procedures and safety equipment would be required which would in turn impact Viking Projects.

307. However, the Commission is satisfied that induction of electric current onto pipes or equipment owned by Viking Projects is not expected to be hazardous. The Commission notes that the strength and number of nuisance shocks are likely to be minimal given the length of parallel of the pipes to the transmission line, the separation distance expected, and possible mitigation methods such as the use of work gloves. The Commission expects AltaLink to investigate any complaints about nuisance shocks and to provide advice and work with parties regarding the implementation of any mitigation measures.

308. The Commission finds that within the Iron Rail Business Park, only Viking Projects has demonstrated that its activities have the potential to be impacted by the electrical effects of the proposed transmission line. The Commission finds that impacts from electric effects associated with the transmission line are dependent on the types of activities that occur and the activities' proximity to the transmission line. There could be many types of activities and businesses present in an industrial park that would not be affected by the transmission line. The Commission considers the discussion of adverse impacts to future residents of the Iron Rail Business Park to be speculative in nature and therefore has given this evidence little weight. The Commission also takes into account that there are transmission lines present in industrial business parks in Alberta and throughout the world. The Commission finds that the evidence presented does not demonstrate that there will be any effect to the Iron Rail Business Park, other than Viking Projects, due to electrical effects.

309. The Commission will further consider the project's electrical effects on Viking Projects in the Siting of transmission line 423L section of this decision.

15 Costs

15.1 Views of the parties

The following table is a summary of AltaLink's estimated project costs for each route of transmission line 423L:¹³³

Table 3. AltaLink's estimated project costs

	Preferred route	Preferred variant route	Landowner suggested route option	No rail parallel route	Alternate route	Alternate variant route
Cost (\$Millions)	46.6	46.6	46.8	41.8	45.7	45.0

310. The above table outlines the project costs, including the alterations to transmission lines 784L and 80AL, Lacombe 212S substation and Ellis 332S substation. AltaLink provided cost estimates for the project to an accuracy of +20 per cent/-10 per cent.

¹³³ Exhibit 3450-X0102, AML RDATE 423L Application Amendment Errata, page 5.

311. AltaLink stated that if the Commission were to approve the alternate route, the alternate variant route or the no rail parallel route, there would be delays and an associated cost increase because detailed engineering of these routes would have to be undertaken, as would procurement of materials and acquisition of land.

312. At the hearing, AltaLink submitted that the cost of pipeline interference mitigation was not included in the above cost estimates. It explained that the alternate routes would parallel substantially more pipelines than the preferred routes. AltaLink estimated that the costs to mitigate pipeline induction would be \$3,100,000 for the alternate route and \$550,000 for the preferred route.¹³⁴

313. AltaLink estimated the costs of the full rail parallel route to be \$50.1 million. AltaLink submitted that the full rail parallel route would incur further costs as a result of delays required to amend the application and to further study the electromagnetic interference. It stated that the estimate for the full rail parallel route also did not include additional mitigation costs associated with paralleling the railway. AltaLink explained that the northern portion of the preferred route and the southern portion of the alternate route would also require pipeline interference mitigation as discussed above.¹³⁵ AltaLink stated that its cost estimate for the full rail parallel route did not include the costs associated with mitigation measures required to reduce the transmission line's effects (induction) on nearby pipelines.

314. AltaLink stated that the landowner suggested route option would have an incremental cost of \$184,000, relative to the preferred route. However, the preferred route travels along the north side of Township Road 400 which would require that an EQUS distribution line be relocated to the south side of the road. AltaLink submitted this would require the removal of trees between the transmission line and a residence. In order to reduce the amount of tree removal, AltaLink committed to relocate the distribution line using directional drilling. AltaLink stated that the cost to relocate the distribution line via trenching was estimated to be \$117,000 but that the directional drilling method would increase this cost. AltaLink submitted that the landowner suggested route option would be on the opposite side of the road from the preferred route. Therefore, the landowner suggested route option would not require the relocation of the EQUS distribution line and, as a result, would avoid these additional costs which would offset some of the incremental costs of \$184,000.

315. The preferred route, preferred variant route, the landowner suggested route option, and full rail parallel route cost estimates do not include \$157,000 to remove two structures from Mr. Wiersma's property to reduce agricultural impacts.

316. Mr. Pocock, a member of the Hainsworth group, argued that cost should not be a major consideration in choosing between the routes and that the focus should be reducing the effects on the community and the stakeholders.

¹³⁴ Transcript, Volume 2, page 260, lines 13-16.

¹³⁵ Exhibit 3450-X0211, AML 423L Argument Part 1, page 25.

15.2 Commission findings

317. When comparing the total project costs between the preferred routes and the alternate routes, the Commission considers that these cost differences are not immaterial.

318. When pipeline mitigation costs are included, the cost of the full rail parallel route would be significantly higher and the cost of the no rail parallel route would be significantly lower than the other routes. Because the costs of the no rail parallel route would be significantly lower than the other routes, this route is the most favourable from a costs perspective.

319. In assessing the costs, the Commission notes that the cost estimates provided in the summaries listed above are without the inclusion of any costs due to delays. Based on the cost estimates provided, should the Commission deny the application and direct AltaLink to file an application for the full rail parallel route, this route option would impose significantly greater costs to ratepayers than the other route options applied for in this proceeding.

320. The Commission finds that the increased costs to remove two structures from Mr. Wiersma's property are reasonable should a route that traverses Mr. Wiersma's property be selected. Similarly, the Commission finds that the incremental costs for the landowner suggested route option are not substantial.

321. Project costs are a factor that the Commission will weigh when determining the superior route for transmission line 423L, which will be further discussed in the Siting of transmission line 423L section of the decision.

16 Siting of transmission line 423L

16.1 Applicant's route determination process

16.1.1 Views of the applicant

322. The main component of the project is the construction of a new single-circuit 138-kV transmission line designated as transmission line 423L. Transmission line 423L would connect the existing Lacombe 212S substation to the existing Ellis 332S substation.

323. AltaLink's route determination process for transmission line 423L consisted of a staged review that involved the collection and evaluation of information about the potential impacts of different routing scenarios. AltaLink stated that it applied a systematic siting process, including conceptual, preliminary, detailed siting and final siting stages. AltaLink stated that its route determination process was based on review of environmental and land-use data, and consideration of information and feedback garnered from a broad range of stakeholders over the course of its participant involvement program, and application of AltaLink's professional judgment and experience. AltaLink stated that its siting process considered the major aspects listed in Rule 007: potential agricultural impacts, potential residential impacts, potential environmental impacts, costs, electrical considerations, potential visual impacts, and special constraints.

324. AltaLink identified several preliminary routes in the project area that it presented to landowners during the first round of its consultation. AltaLink stated that the routes were refined to further reduce the potential for impacts by obtaining and incorporating additional information through a combination of stakeholder consultation, preliminary engineering work, and field assessments.

325. AltaLink explained that during the development of final routes and, in light of conversations with stakeholders, it re-evaluated its detailed assessment of impacts and considered the following additional factors to identify the preferred and alternate routes:

- number of corner structures required
- access for maintenance and construction of the transmission line
- electrical considerations
- further feedback received from stakeholders¹³⁶

326. In December 2014, AltaLink amended its application by adding additional route segment options. AltaLink stated that it did this because it conducted further site visits and continued consultation with stakeholders on the project.

16.1.2 Views of the parties

327. Arclan Holdings Ltd. requested that if the preferred route is not approved, the Commission should instruct AltaLink to re-examine a route segment called B10-A45 and to include and disclose a comprehensive comparative analysis of the route selection criteria with other proposed alignments prior to resubmitting a future alignment request. The B10-A45 segment was a route rejected by AltaLink in its route determination process and was generally located one quarter section to the east of the northern alternate route and southern preferred route. Llew Werner, a landowner on the alternate variant route, also stated that more consideration should have been given to the rejected route.

328. In reply, AltaLink submitted that it had analyzed the B10-A45 segment. The B10-A45 segment was generally located on a quarter line and the land use in this area is predominantly agricultural, with shelterbelts located along the quarter line. AltaLink stated that the B10-A45 segment had more shelterbelts than the routes proposed in the application and some stakeholders expressed concerns about the impact of the loss of these shelterbelts.

329. Transport Canada submitted correspondence regarding the need for an Aeronautical Assessment for Obstruction Evaluation to be submitted to it by AltaLink. In response, AltaLink stated that it typically files this information after it receives permits and licences from the Commission. AltaLink followed up with Transport Canada and confirmed that it had no concerns with AltaLink submitting the Aeronautical Assessment for Obstruction Evaluation forms to Transport Canada after the Commission approved a route, and in any event, 90 days prior to construction. The Commission received no further correspondence from Transport Canada regarding this matter.

¹³⁶ Exhibit 3450-X0095, AML RDATE 423L Application Errata Blackline, page 69, paragraphs 288-289.

16.2 Transmission line 423L route comparisons

330. The following map shows the various routes that AltaLink submitted in its application:

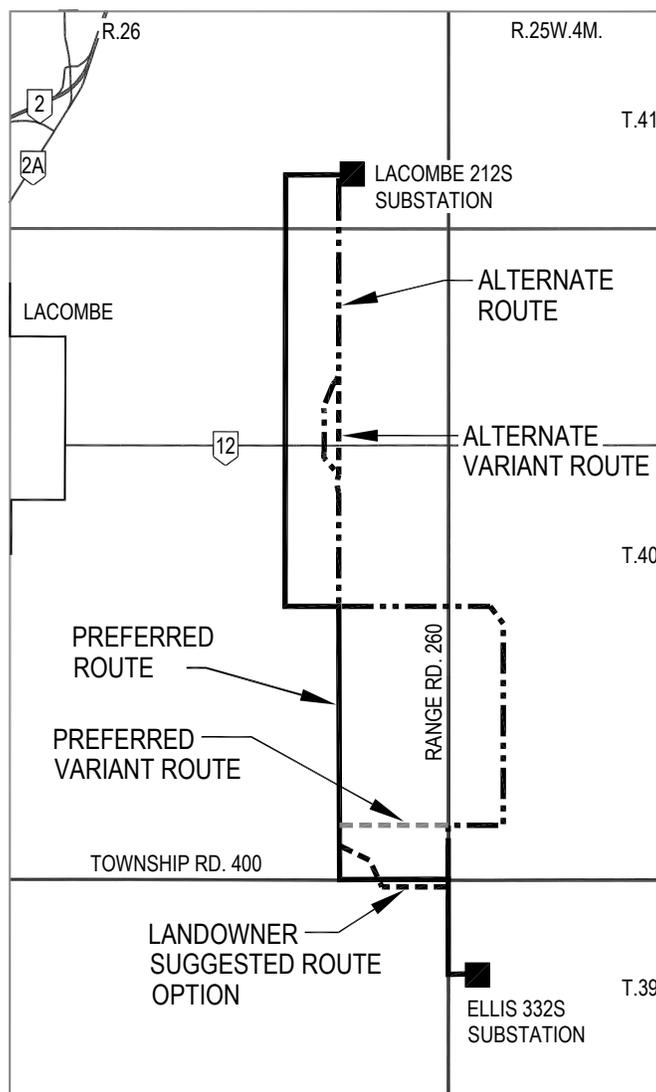


Figure 2 – AltaLink’s proposed routes for transmission line 423L

331. The centre line of transmission line 423L would be located in the middle of a 20-metre wide right-of-way when the transmission line is on private property and does not parallel the CP Rail railway or a road allowance. Where the transmission line parallels the CP Rail railway, the centre line would generally be located one metre outside of the railway right-of-way, in an 11-metre wide right-of-way. Where transmission line 423L is proposed to be located in a road allowance, AltaLink would locate the centre line of the transmission line approximately one metre inside the road allowance boundary, resulting in nine additional metres or right-of-way required. The transmission line 423L structures proposed for all route options were monopoles.

332. The following table is AltaLink’s comparison of the route options for transmission line 423L:¹³⁷

¹³⁷ Exhibit 3450-X0102, AML RDATA 423L Amendment Errata, pages 4 to 5.

Table 4. AltaLink's comparison of the route options for transmission line 423L

Major aspects and considerations	Preferred route	Preferred variant route	Landowner suggested route option	No rail parallel route	Alternate route	Alternate variant route
Agricultural Impacts						
Cultivated land crossed (kilometres) ¹³⁸	6.8	6.8	6.8	1.3	3.5	2.2
Forage land crossed (kilometres) ¹³⁹	0.3	1.9	1.1	0.3	4.4	4.4
Shelterbelt on quarter line (kilometres)	2.9	3.8	2.9	0	1.6	1.6
Lands farmed across (kilometres) ¹⁴⁰	0.8	0.8 ¹⁴¹	0.8	1.3	1.3	0
Residential Impacts						
Residences within 150 metres of right-of-way edge (#)	2	0	0	10	8	9
Residences within 800 metres of right-of-way edge (#)	36	35	34	30	31	31
Newly-exposed residences within 800 metres	17	16	15	17	18	18
Environmental Impacts						
Wetland areas in or within 800 metres (hectares)	67	68	67	67	76	76
Native vegetation crossed (kilometres)	0.5	0.5	0.5	0	0	0
Visual Impacts						
Residences within 150 metres of right-of-way edge (#)				See above for Residences within 150 m of right-of-way edge (#)		
Electrical Considerations						
Parallel rail lines (kilometres)	4.6	4.6	4.6	0.2	5.6	5.6
Cost						
Total length (kilometres)	15.9	15.8	15.6	14.2	15.5	15.5
Length within road allowance (kilometres)	7.2	5.6	6.0	12.6	7.7	8.9
Length outside road allowance (kilometres)	8.7	10.2	9.6	1.6	7.9	6.6
Number of angles and dead-end structures ¹⁴²	14	14	16	6	11	11
Cost (\$Millions)	46.6	46.6	46.8	41.8	45.7	45.0

¹³⁸ Excludes lands within road allowance.

¹³⁹ Excludes lands within road allowance.

¹⁴⁰ Cultivated lands.

¹⁴¹ The 0.8 km does not include the segment between A45-A50 because that segment is classified as forage land in GIS data. However, the landowner has advised AltaLink during consultation that this section of the route would be farmed across. Taking this section into consideration, the Preferred Variant Route would have 1.6 km farmed across.

¹⁴² Based on route deflections equal or greater than 15 degrees.

333. AltaLink submitted that the preferred route with the landowner suggested route option is the lowest overall impact route. The impacts of each of AltaLink's applied-for routes and the full rail parallel route are discussed in detail below.

16.2.1 Preferred route

16.2.1.1 Views of the applicant

334. The preferred route would generally be located parallel to the CP Rail railway in the north portion and located within the road allowance of Range Road 261 in the south portion.

335. The south portion of the preferred route also featured two variants, the preferred variant route and the landowner suggested route option, as shown below:

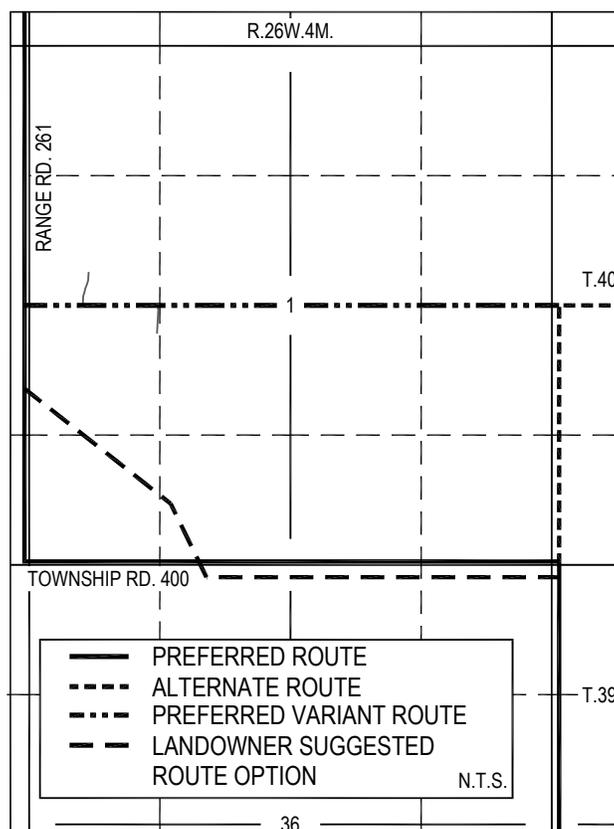


Figure 3 – Preferred route, preferred variant route, and landowner suggested route option

336. AltaLink submitted that the preferred route had lower potential residential impacts and the potential for agricultural impacts on the preferred route can be reduced. The preferred route parallels the least amount of railway other than the no rail parallel route. AltaLink submitted that the preferred route and its variants have a lower estimated cost than the alternate routes or the full rail parallel route after the cost of pipeline induction mitigation is included in the estimate.

337. According to AltaLink, the preferred variant route is similar to the preferred route but the preferred variant route would avoid two residences within 150 metres of the transmission line. AltaLink stated that the preferred variant route would have higher agricultural impacts because it would traverse an area that is farmed across. AltaLink stated that the preferred variant route is not supported by area stakeholders and that it does not consider this to be the lowest overall impact route in the local area.

338. AltaLink stated that the landowner suggested route option would also avoid two residences within 150 metres of the preferred route and that a tree screen separates the residences from the proposed transmission line. The landowner suggested route option has an incremental cost of approximately \$184,000 compared to the preferred route. However, some of these costs may be offset by avoiding the relocation of an EQUUS distribution line.

339. AltaLink submitted that the preferred route with the landowner suggested route option is the lowest overall impact route. This route would have no residences within 150 metres. AltaLink stated that when a transmission line is more than 150 metres from a residence, it is less likely to have a physical impact on the property.¹⁴³

340. The preferred route would have less of the transmission line located on private property and more located in the road allowance versus the full rail parallel route. AltaLink submitted that this would result in lower agricultural impacts and would minimize impacts from construction and maintenance because the transmission line could be accessed from the road.

341. AltaLink indicated that the preferred route would have a lower cost than the alternate route or full rail parallel route when the cost of pipeline interference mitigation is included in the cost estimate.

342. AltaLink explained that the preferred route would parallel the railway for four kilometres, which is less distance than the alternate and the full rail parallel routes. AltaLink stated that CP Rail is willing to accept this length of parallel and favours the preferred route over the alternate route.

16.2.1.2 Views of the parties

343. Tom Denis is a landowner near the preferred route. He expressed concerns about tree removal and the effects of access trails required for transmission line 423L. He stated that the alternate route should be chosen because it would reduce the number of trees chopped down and permit access to the transmission line from the road.

344. Donald and Shirley Parker are located on the preferred route and stated that the alternate route should be selected because there is already a power line along the alternate route. They stated that the preferred route would be located too close to their residence and expressed concerns about the transmission line's impact on their property value. AltaLink stated that the Parker's residence would be approximately 587 metres from transmission line 423L.

345. Ray Wiersma is a landowner at the intersection point of the preferred and alternate routes. He stated that due to the presence of pipelines and the railway, the right-of-way for transmission line 423L would be forced further onto his property which would impede the use of farming equipment in that area. Mr. Wiersma attended the hearing and stated that he was in favour of an earlier version of the route which was closer to the railway with minimal encroachment onto farmable lands.

346. AltaLink indicated that it was unable to locate the transmission line adjacent to the railway right-of-way or along the quarter line in the case of Mr. Wiersma's property due to pipelines and their rights-of way. AltaLink stated that it had consulted with Mr. Wiersma and

¹⁴³ Exhibit 3450-X0095, AML RDATE 423L Application Errata Blackline, page 56, paragraph 239.

reviewed its design and determined that it may be possible to eliminate up to two structures that would be located on Mr. Wiersma's property. As previously discussed, the incremental cost of removing two structures would be approximately \$157,000.¹⁴⁴

347. In response, Mr. Wiersma testified that "... I appreciate that AltaLink has possibly re-engineered it and been able to remove a couple of structures. But my goal is to get them totally out of my farming path, and I think that ... there should be able to be a resulting way to get that much closer to the rail line and not disturb our farming operations."¹⁴⁵

348. The Hainsworth group members are generally located on the southern portion of preferred route. The Hainsworth group consists of Denis and Doreen Hainsworth, Roberta and Ronald Biel, Robert (Bob) and Maureen Pocock, and Jan and Jim Pocock. Denis Hainsworth, Bob Pocock, and Ronald Biel testified at the hearing.

349. The Hainsworth group requested that the Commission find that the full rail parallel route is favourable to the preferred and alternate routes. In the alternative, the Hainsworth group submitted that should the Commission not be prepared to approve the full rail parallel route, it requested that the Commission approve the landowner suggested route option.

350. The Hainsworth group stated that the principle advantage of the full rail parallel route is that there would be no residences within 150 metres of the transmission line in comparison to the preferred route, which AltaLink indicated would have two residences within 150 metres.

351. Ronald Biel submitted that the full rail parallel route should be selected because it would have the least effect on residences. He stated that landowners identified the full rail parallel route as the best route early in the consultation process. He submitted that the full rail parallel route would mean that the transmission line would follow the railway and would affect the least number of people. Mr. Biel provided photographs of the CP Rail railway and stated that it would provide a natural corridor for the transmission line.

352. Mr. Biel also contested AltaLink's metric that outlined the residences within 150 metres. Mr. Biel testified that he physically measured the distances from the residences on his property to the alignment of the preferred route. He measured that one residence was 149 metres from the preferred route. The Hainsworth group submitted that because of this, the Commission should accept that there are three residences within 150 metres from the preferred route, rather than two. Mr. Biel submitted that there are two other residences on his property that would be within 200 metres of the transmission line.

353. In reply to Mr. Biel, AltaLink stated that it used GIS to measure the distance and when doing so, it measures from the edge of the right-of-way to the centre of a residence. AltaLink explained that using this method, it measured the residences on Mr. Biel's property to be at distances of 170 metres, 199 metres, and 204 metres. AltaLink pointed out that Mr. Biel confirmed that when he measured, he took the distance from the side of the residence.¹⁴⁶

354. The Hainsworth group stated that paralleling the railway follows the accepted principle of paralleling existing linear infrastructure.

¹⁴⁴ Transcript, Volume 2, page 256, lines 12-14.

¹⁴⁵ Transcript, Volume 2, page 420, lines 8-14.

¹⁴⁶ Exhibit 3450-X0211, AML 423L Argument Part 1, page 48, paragraphs 139-140.

355. The Hainsworth group also suggested that the full rail parallel route was favourable to both the preferred route and the alternate route with respect to agricultural impacts. The Hainsworth group stated that the benefits of paralleling road allowances are reduced by having to take nine metres of farmland as additional right-of-way. It also stated that paralleling road allowances would have an impact on shelterbelts and other vegetation.

356. The Hainsworth group also stated that the full rail parallel route would eliminate the possibility of transmission line 423L having to be moved to accommodate the planned rebuilding of Range Road 261. This was also raised by the Hughes group as discussed in the Alternate route section of the decision.

357. In reply evidence, AltaLink submitted that after further consultation with Lacombe County, the county had indicated that widening Range Road 261 was a priority and that it would be completed in 2016. AltaLink stated that it expects that Lacombe County will have acquired the lands for the road expansion prior to the construction of transmission line 423L and that if the road widening construction aligned with the transmission line construction, AltaLink would apply for an amendment to incorporate the road widening.

358. Denis and Doreen Hainsworth expressed concerns over the devaluation of property, health impacts, interference with communications such as broadband internet, and interference with their right to quiet enjoyment of their property. They stated that their residence would be located approximately 100 metres from the preferred route. The landowner suggested route option would run diagonal through the Hainsworths' property. The Hainsworths submitted that the landowner suggested route option would have lower residential impacts on them compared to the preferred route and would minimize agricultural impacts because it would follow the edge of a treed area and run largely along the edge of pasture. The Hainsworths submitted that the preferred route would have the greatest visual impact because it runs directly in front of their residence.

359. The Hainsworth group was opposed to the preferred variant route. Jim Pocock and the Pocock family farm both the SE-1-40-26-W4 and the NE-1-40-26-W4, which the preferred variant route would cross between. The Hainsworth group stated that a substantial portion of the fence between these quarter sections was removed in order to facilitate farming both quarters as a single field. The Hainsworth group submitted that construction of transmission line 423L between these quarters would negate the benefits of removing the fence and would interfere with farming operations to a greater degree than the landowner suggested route option.

360. Bob Pocock objected to the preferred route and strongly objected to the preferred variant route. He expressed concern about the loss of valuable farming land and the impacts to farming by having to farm around transmission line structures. Mr. Pocock also stated that the residential affects would be greater along the south section of the preferred route compared to the south section of the alternate route.

16.2.2 Alternate route

16.2.2.1 Views of the applicant

361. The alternate route would generally be located within the road allowance of Range Road 261 in the northern portion and located parallel to the railway in the southern portion. It would parallel the railway for approximately five and a half kilometres, which is longer than the parallel of the preferred route but shorter than the full rail parallel route. As a

result, the full rail parallel route is CP Rail's least favourable route of the routes that AltaLink applied for.

362. AltaLink stated that the alternate route would have more residences within 150 metres of the route than the preferred route. All of these residences are located in the northern portion of the alternate route. AltaLink submitted that the alternate route has fewer residences within 800 metres than the preferred route but slightly more than the combination route.

363. The alternate route, when the additional cost of pipeline interference mitigation measures is factored in, is more expensive than the preferred route or the no rail parallel route, but less expensive than the full rail parallel route.

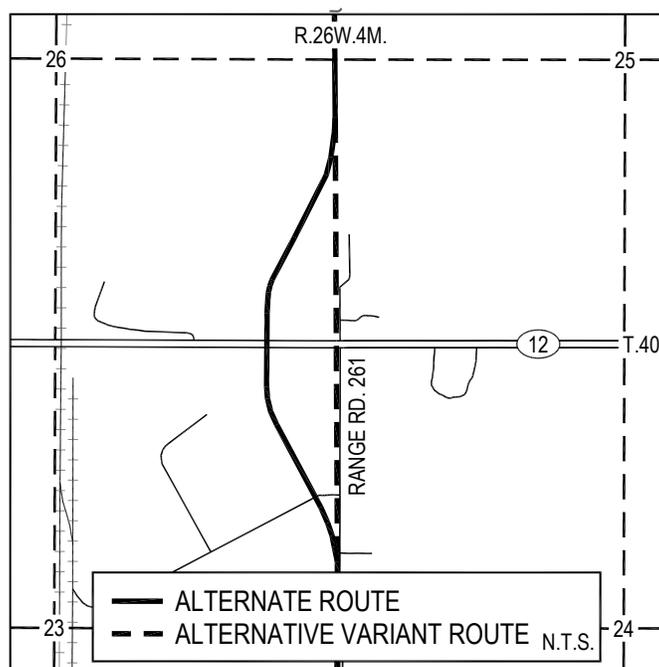


Figure 4 – Alternate route and alternate variant route

364. AltaLink amended its application to include an alternate variant route. The alternate variant route does not make the jog to follow the new alignment of Range Road 261 and, instead, stays along the quarter section line, along the closed road allowance. AltaLink stated that the alternate variant route would have fewer potential agricultural impacts. AltaLink advised that the alternate variant route would require fewer angle structures and would cost approximately \$700,000 less than the alternate route. AltaLink stated that the alternate variant route would have one additional residence within 150 metres and would require additional tree clearing.

16.2.2.2 Views of the parties

365. The Hughes group members are generally located on the north section of the alternate route. The Hughes group consists of Dave and Marcy Hughes, Jacob and Nicole Devrij, Darrell and Donna Hicks, Archie and Clem Werner, and Elaine and Derek Werner. David Hughes, Elaine Werner, Derek Werner, and Darrel Hicks testified at the hearing. The Hughes group requested that the preferred route be selected by the Commission. It based this on the level of residential impacts, impact on planned development, impact on CP Rail, and impact to its members.

366. The Hughes group stated that the alternate route would have greater residential impacts. It submitted that residences within 150 metres of a transmission line experience the greatest impact because these residences have the potential to experience physical impacts.

367. The Hughes group stated that the preferred route would have lower residential impacts since the preferred route would have two residences within 150 metres, while the alternate route would have eight. The Hughes group stated that all of its members own residences that would be within 150 metres of the alternate route, with the closest being 49 metres away. The Hughes group argued that residential impact is the most important of the metrics presented by AltaLink.¹⁴⁷

368. The Hughes group reviewed the residences within 800 metres of the right-of-way edge. It stated that given the similarities in the amount of residences within 800 metres of the right-of-way edge, this metric would not provide a meaningful basis to distinguish which route option is the lowest impact. Therefore, even though the alternate route has slightly less residences within 800 metres, the Hughes group submitted this metric is not useful in distinguishing between the proposed route options.

369. With respect to visual impacts, the Hughes group stated that the alternate route would have higher impacts because the majority of residences within 150 metres of the alternate route would not be effectively screened from the transmission line. The Hughes group submitted that the alternate route options also have a higher amount of newly exposed residences than each of the preferred route options. It stated that this would favour choosing the preferred route or one of the preferred route variants.

370. David and Marcy Hughes submitted that their residence is at an elevated grade and that there is no tree screen between their residence and where the alternate route would be located. They submitted that the alternate route would remove a tree screen that was installed to reduce the visual impact of the Iron Rail Business Park.

371. The Hughes group submitted that using the northern portion of the preferred route would avoid the costs of having to relocate the transmission line when Range Road 261 is widened by the municipality. AltaLink's reply to this submission is discussed in the Preferred route section.

372. The Hughes group argued that the preferred route would have less impact on the safe operation of CP Rail in the area because it would parallel the railway for one kilometre less than the alternate route.

373. Elaine Werner stated that the alternate route would run through her front yard and corrals. She expressed concerns that the transmission line would limit her ability to expand her cattle operation and that AltaLink employees entering onto her lands may potentially allow cattle to escape. She also expressed concerns about weeding and visual impact.

374. Archie Werner and Clem Werner expressed concerns about decreased property value, noise and that the transmission line would obstruct their view.

¹⁴⁷ Exhibit 3450-X0216, Final Argument of the Hughes Group, page 4, paragraph 7.

375. Jacob and Nicole Devrij expressed concerns about visual impact, noise, health, and agricultural impacts. They submitted that they farm right to the road allowance and are concerned about the ability to maneuver farm equipment around the poles. They submitted that the area is already congested with power lines and that adding another will make it feel like they live in an industrial park.

376. Darrel and Donna Hicks expressed concerns about decreased property value, health impacts, noise, weeds, and impacts to wildlife.

377. The Wescott Consulting group represented Iron Rail Business Park and Arclan Holdings Ltd. The Iron Rail Business Park is under development within the east half of 23-40-26-W4M along the alternate route and alternate variant route. Iron Rail Business Park submitted a letter from Arclan Holdings Ltd. that indicated it supported Iron Rail Business Park's objection. Arclan Holdings Ltd. owns land to the immediate north and south of the Iron Rail Business Park. The Wescott Consulting group stated that the preferred route was its most favourable.

378. Iron Rail Business Park stated that the transmission line would decrease the property value of lots in the park that have yet to be sold and expressed concerns about the electrical effects of the transmission line due to induction. This is discussed further in the Industrial property impacts and Electrical effects sections.

379. Iron Rail Business Park stated that it had worked to develop an aesthetically pleasing area with a higher standard of development than other industrial parks. It stated that it incurred considerable expenses to bury all existing power lines serving the development. Iron Rail Business Park submitted that the transmission line would be visually disruptive and contrary to the intent and purpose of creating an aesthetically pleasing industrial park.

380. The Wescott Consulting group, on behalf of Arclan Holdings Ltd., submitted that the alternate route would result in agricultural impacts to Arclan Holdings Ltd. as a result of having to farm around the structures.

381. Viking Projects is a pipeline fabrication and construction company primarily serving the oil and gas industry. Viking Projects submitted that it installs and removes pipelines using large equipment and offers training in safely welding, burying, and removing pipelines. Viking Projects purchased its lot in the Iron Rail Business Park in September 2014. Robert Wilson, president of Viking Projects, testified at the hearing to explain the potential effects of the transmission line on its operations.

382. Viking Projects expressed concerns about the alternate route's impact to its view and to the desirability of the Iron Rail Business Park, but stated that this route would be less intrusive to Viking Projects than the alternate variant route.

383. Viking Projects stated that the alternate variant route would interfere with its plans and operations for the property. Viking Projects stated that the lot is currently under construction to include an office, shop, pipeline storage and training facility. Viking Projects submitted that it also intended to construct a cold storage building which would be located in the right-of-way of the alternate variant route, and would require access with fork lifts and skid steers. Viking Projects stated that there is no other location within the site where it would be feasible to relocate the cold storage building. Viking Projects noted that it also intended to fence the property which would cause issues with AltaLink's ability to access the transmission line.

384. AltaLink replied that Viking Projects would not be able to construct its cold storage building within the right-of-way, and noted that Viking Projects had not yet received approval to construct the building as it was not listed on the development approval from Lacombe County. AltaLink added that there is a 125-foot setback requirement from the road allowance that would restrict Viking Projects from constructing a building in this location. AltaLink stated it intended to access the transmission line from the closed road allowance and not from Viking Projects' property.

385. Viking Projects also expressed concern about the safety of operating its large equipment near the proposed transmission line and the electrical effects of the transmission line, including nuisance shocks. Viking Projects and the Wescott Consulting group retained Rod English to assess the effects of the transmission line on their properties. These concerns are discussed in more detail in the Electrical effects section.

386. Viking Projects submitted that the Commission should approve the preferred route with the landowner suggested route option.

387. Terry Hagar, on behalf of Lacombe County, submitted that Lacombe County supported the alternate variant route. He stated that Lacombe County's agreement with the developer of the Iron Rail Business Park required the developer to construct a road diversion and that the alternate route would bisect the Iron Rail Business Park and would detract from Lacombe County's planning objectives.

388. Llew Werner is a landowner along the alternate variant route. Mr. Werner stated that the preferred route was superior to the alternate route because the alternate route would have 10 more residences in close proximity to the transmission line and would run through a new industrial subdivision. He also expressed concerns about electrical interference, safety, and effects to property value.

389. Philip Wierenga is a landowner near the alternate variant route. Mr. Wierenga stated that the preferred route should be chosen because it parallels the railway and would have less impact on existing residences. He stated that the alternate variant route would remove a shelterbelt that protects his residence from wind and snow and blocks his view of the zoned industrial area. He expressed the view that the alternate route would be a better option than the alternate variant route as it would be less invasive on nearby residences, including his own.

16.2.3 No rail parallel route

16.2.3.1 Views of the applicant

390. The no rail parallel route, also referred to by AltaLink as the combination route, consists of the north portion of the alternate route and the southern portion of the preferred route, and as a result would include the option to use the alternate variant route, the preferred variant route, or the landowner suggested route option.

391. AltaLink submitted that the majority of the no rail parallel route is located within the road allowance of Range Road 261 and that it would be the shortest and least expensive route. It stated that this would reduce the amount of agricultural impacts and impacts from construction and maintenance. However, AltaLink submitted that the no rail parallel route would have the

greatest number of residences within 150 metres.¹⁴⁸ The exact number of residences would depend on the various route variants as discussed above.

392. The no rail parallel route is the most favoured route of CP Rail since it does not parallel the railway for any length.

16.2.3.2 Views of the parties

393. The no rail parallel route would be located near the Hughes group, Wescott Consulting group, Viking Projects, Llew Werner, Philip Wierenga, and the Hainsworth group. The concerns and impacts they expressed above regarding the alternate or preferred route would generally apply to the no rail parallel route as well.

16.2.4 Full rail parallel route

16.2.4.1 Views of the applicant

394. The full rail parallel route consists of the north portion of the preferred route and the south portion of the alternate route.

395. AltaLink submitted that even if CP Rail was willing to accept the full rail parallel route, AltaLink does not consider it to be the route with least overall impact.¹⁴⁹

396. AltaLink submitted that the full rail parallel route would have the highest agricultural impacts of any route, with the largest amount of cultivated and forage land crossed and the highest amount of shelterbelts on a quarter line that would be removed.

397. As discussed in the costs section of this decision, AltaLink stated that the full rail parallel route would be the most expensive route. The full rail parallel route would also require the largest amount of pipeline interference mitigation, which would result in additional costs.

398. AltaLink stated that construction and maintenance of the full rail parallel route would have greater impacts than other routes. AltaLink explained that the full rail parallel route would have additional impacts due to access issues. AltaLink stated that it could not access the full rail parallel route from the railway side and would have to go through private property, and in particular agricultural property, for construction and maintenance purposes. AltaLink stated that on routes primarily along road allowances, this would be much less of an issue.

399. AltaLink stated that there is no incremental residential benefit to the full rail parallel route since the full rail parallel route and the preferred route with the landowner suggested route option both have no residences within 150 metres.¹⁵⁰

400. AltaLink stressed that if it was directed to apply for the full rail parallel route and CP Rail still did not consent to the full rail parallel route, AltaLink may be required to apply to the Canada Transportation Agency for approval. This would result in additional costs, delays, and uncertainty.

¹⁴⁸ Exhibit 3450-X0095, AML RDATE 423L Application Errata Blackline, page 20, paragraphs 20-21.

¹⁴⁹ Exhibit 3450-X0211, AML 423L Argument Part 1, pages 24-25, paragraph 61.

¹⁵⁰ Exhibit 3450-X0211, AML 423L Argument Part 1, page 24, paragraph 61.

401. AltaLink submitted that the full rail parallel route would have the greatest effect on CP Rail since the full rail parallel route would parallel the railway for a distance of nine and a half kilometres. Mr. Hampton testified that the full rail parallel route would increase the risk to people, both the public and CP Rail's employees, and to CP Rail's equipment. Mr. Hampton stated that CP Rail would have to implement specific procedures for areas where the transmission line parallels the railway and sought to minimize the length of the parallel as much as possible.¹⁵¹ This is discussed further in the Electrical effects section of this decision.

16.2.4.2 Views of the parties

402. The full rail parallel route would be located near Tom Denis, Donald and Shirley Parker, and Ray Wiersma. The concerns and impacts they expressed regarding the northern preferred route apply to the full rail parallel route as well.

403. The Hainsworth group argued that the full rail parallel route is favourable to both the preferred route and the alternate route with respect to residential, agricultural and related impacts. It further argued that by paralleling the CP Rail railway for most of its length, the full rail parallel route would not impact any residences within 150 metres of the transmission line and would minimize both residential and agricultural impacts. The Hainsworth group's position on siting is further discussed in the Preferred route section of the decision.

404. The Hainsworth group also argued the CP Rail report contained assumptions that may not have been reflective of actual conditions and that CP Rail was too narrow in its consideration of mitigation methods which caused it to reject the full rail parallel route. This is discussed further in the Electrical effects section of the decision.

16.3 Commission findings

405. As discussed in the previous sections, in determining the public interest, the Commission must compare the respective social, economic and environmental impacts of the routes proposed by AltaLink. In determining social, economic and environmental impacts, the Commission considers routing criteria including agricultural impacts, residential impacts, visual impacts, electrical considerations, environmental impacts and cost. The Commission also considers special constraints such as the presence of the railway.

406. The Commission accepts that all applied-for route options are viable and notes that this was not contested by the parties in the proceeding.

407. For the reasons that follow, the Commission finds that the preferred route with the landowner suggested route option is the superior route for transmission line 423L.

408. The parties to the proceeding identified the criteria they considered relevant to choosing a route and expressed their views of the relative importance of the criteria in this application. Making a decision on a transmission line application is a complex process in which the decision maker considers all the evidence regarding the impacts of each route taking into account the effectiveness of mitigation measures examined in the proceeding. The Commission does not weigh routing criteria individually. Rather, it weighs all of the criteria together, and considers both the potential impact on individuals and on the larger community.

¹⁵¹ Transcript, Volume 4, page 592, lines 4-8.

409. The Commission accepts AltaLink's and the Hughes group's statements that residences more than 150 metres from a 138-kV transmission line are less likely to have physical impacts on their property. However, the Commission looks at this potential impact holistically and therefore has taken into account that residences just outside the 150-metre distance may experience substantially similar impacts. In making its determination, the Commission accepts the views of the landowners who would be impacted by the transmission line and finds that residential impacts are not solely determined by proximity to a transmission line. However, it can also be expected that residences roughly 150 metres away from a transmission line are less likely to experience physical impacts than residences much closer to a transmission line.

410. With respect to residential impacts, the Commission notes that there are a number of residences within 100 metres of transmission line 423L on the northern portion of the alternate route. The Commission considers the difference in the number of residences within or nearly within 150 metres of the transmission line between the north portion of the preferred and north portion of the alternate to be substantial. Conversely, the difference in the number of residences between the south section of the preferred route and the south section of the alternate route is marginal.

411. Based on the above, the Commission finds that the residential impacts along the alternate route and the no rail parallel route are significantly higher than any other route, in particular along the north section of these routes.

412. With respect to costs, the Commission finds that the no rail parallel route has a cost advantage, however, this advantage is not enough to justify the other impacts such as the additional residential impacts. The Commission also has regard to the \$48.8 million cost of the alternate route and \$48.1 million cost of the alternate variant route relative to the \$47.2 million cost of the preferred route and the \$47.4 million cost of the preferred route with landowner suggested route option when including pipeline interference mitigation costs.

413. The Commission finds that the agricultural impact of transmission line 423L is influenced by multiple factors, including the amount of cultivated land crossed, the placement of structures and site-specific concerns. The Commission considers the routing of the north portion of the alternate route and the south portion of the preferred route in the road allowance of Range Road 261 to be an important factor in determining the superior route. The Commission finds that locating transmission line 423L within a road allowance will help to reduce agricultural impacts and impacts related to construction and maintenance. However, the agricultural benefits of siting the north section of the alternate route in the road allowance of Range Road 261 are outweighed by the residential impacts.

414. The Commission finds that the discrete agricultural impacts of the preferred route to Mr. Wiersma can be reduced by the removal of two structures and, as discussed in the Costs section, the increased costs are reasonable.

415. With respect to the alternate route compared to the alternate variant route, the Commission found in the Electrical effects section that the alternate variant route has the potential to impact Viking Project's operations. Further, the Commission notes that the alternate variant route would have greater residential impacts than the alternate route. Conversely, the alternate route, in comparison to the alternate variant route, would result in greater agricultural impacts to Arclan Holdings Ltd.

416. The Commission finds that the preferred route and the preferred route with the landowner suggested route option, are on balance, superior when compared to the alternate route, alternate variant route, and the no rail parallel route, primarily due to these routes' respective residential impacts. Accordingly, it is unnecessary to make a finding regarding how the other applied-for routes, namely the no rail parallel route, the alternate route, and the alternate variant route, compare amongst themselves.

417. The Commission further finds that the preferred route and the preferred route with the landowner suggested route option are superior to the preferred variant route. The Commission makes this finding due to the preferred variant route's agricultural impacts and that the landowners who will be most impacted by this route do not support it.

418. The Commission finds that the landowner suggested route option is superior to the preferred route in the area near the Hainsworth group's land. The Commission finds that the landowner suggested route option will have less residential and visual impacts than the preferred route. The fact that the landowners who will be potentially impacted by these routes expressed a strong preference for this route is the primary consideration for the Commission. The Commission finds that the incremental cost is outweighed by the benefits to the landowners and notes that it will be offset, in part, by avoiding the relocation of the EQUUS distribution line.

419. The Commission is of the view that the evidence before it does not support the making of a finding of fact, by the Commission, that the routing factors, on balance, indicate the full rail parallel route is superior.

420. In the Commission's view, the full rail parallel route is favourable from a residential impacts perspective. The Commission disagrees that the evidence indicates that the full rail parallel route would have no incremental residential benefit relative to the preferred route with the landowner suggested route option. The Commission finds that while the preferred route with the landowner suggested route option and the full rail parallel route both have no residences within 150 metres, the preferred route with the landowner suggested route option would have slightly more residential impacts given that it would have more residences that are near the 150 metre metric, such as the three residences on Mr. and Mrs. Biel's property.

421. However, the difference in residential impacts between the preferred route with the landowner suggested route and the full rail parallel route are not significant enough to outweigh the other impacts of the full rail parallel route. The Commission notes that the full rail parallel route would be located primarily on private property and not within public road allowances which would result in additional agricultural, construction, and maintenance impacts. The Commission finds that the full rail parallel route would be the most expensive to construct by a substantial margin. The Commission accepts that if the full rail parallel route were to be constructed, there would be impacts on the operations of CP Rail and, at best, these effects would require the most mitigation requirements for electromagnetic interference. Based on the metrics the Commission has before it, the Commission finds that, on balance, the full rail parallel route is not a superior alternative to the preferred route with the landowner suggested route option.

422. Based on the above, the Commission finds that the preferred route with the landowner suggested route option is the superior route, even in comparison to the full rail parallel route, and that its approval is in the public interest pursuant to Section 17 of the *Alberta Utilities Commission Act*.

423. The Commission approves the preferred route with the landowner suggested route option for transmission line 423L.

17 Other components

17.1.1 Views of the applicant

424. As part of the project, AltaLink proposed to alter Lacombe 212S substation by adding two new 138-kV circuit breakers. The Lacombe 212S substation is located in NW-1-41-26-W4M.

425. AltaLink proposed to alter the Ellis 332S substation by adding one new 138-kV circuit breaker. The Ellis 332S substation is located in SW-31-39-25-W4M.

426. AltaLink also requested approval to alter the existing transmission line 80AL in the vicinity of the Lacombe 212S substation to accommodate transmission line 423L. If the preferred route for transmission line 423L were approved, AltaLink proposed to relocate approximately 0.9 kilometres of the existing transmission line 80AL onto double-circuit structures with transmission line 423L in the road allowance near the Lacombe 212S substation. A 0.9-kilometre portion of transmission line 80AL would be salvaged to facilitate the relocation of transmission line 80AL onto double-circuit structures with transmission line 423L. AltaLink stated that this would avoid the need for two sets of structures to carry the adjacent lines. If the alternate route for transmission line 423L were approved, transmission line 80AL would be re-terminated at the Lacombe 212S substation and would not be put on double-circuit structures with transmission line 423L. A 0.04-kilometre portion of transmission line 80AL would be salvaged to re-terminate it at the Lacombe 212S substation.

427. AltaLink also proposed to relocate approximately 0.8 kilometres of transmission line 784L onto double-circuit structures to be shared with transmission line 423L near the Ellis 332S substation. AltaLink stated that this would avoid the need for two sets of structures to carry the adjacent transmission lines. AltaLink stated that this would be required for both the preferred and alternate routes for transmission line 423L. A portion of transmission line 784L would be salvaged to facilitate the relocation of transmission line 784L on to double-circuit structures with transmission line 423L.

428. No party raised concerns specifically regarding the alterations to the substations or to transmission lines 80AL and 784L.

17.1.2 Commission findings

429. The Commission finds that there are no environmental, social or economic impacts from the alterations that would indicate that the alterations are not in the public interest. The Commission approves the alterations to the Lacombe 212S substation, the Ellis 332S substation, transmission line 80AL, and transmission line 784L.

18 Decision

430. The Commission finds that the application meets the requirements stipulated in Rule 007 and is in the public interest pursuant to Section 17 of the *Alberta Utilities Commission Act*.

431. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves the application and grants AltaLink the following approvals:

- Appendix 1 – Transmission line 423L – Permit and Licence 3450-D02-2015 – November 27, 2015;
- Appendix 2 – Alter transmission line 784L – Permit and Licence 3450-D03-2015 – November 27, 2015.
- Appendix 3 – Alter transmission line 80AL – Permit and Licence 3450-D04-2015 – November 27, 2015;
- Appendix 4 – Alter Northeast Lacombe 212S substation – Permit and Licence 2460-D05-2015 – November 27, 2015; and
- Appendix 5 – Alter Ellis 332S substation – Permit and Licence 3450-D06-2015 – November 27, 2015.

432. The appendices will be distributed separately.

Dated on November 27, 2015.

Alberta Utilities Commission

(original signed by)

Tudor Beattie, QC
Panel Chair

(original signed by)

Neil Jamieson
Commission Member

(original signed by)

Ian Harvie
Acting Commission Member

Appendix A – Proceeding participants

Name of person or group counsel or representative
AltaLink Management Ltd. R. Lonergan D. Watt
T. Denis
Hainsworth group G. Fitch
Hughes group N. Ramessar M. Niven
Lacombe County Terry Hager
D. and S. Parker
Viking Projects Ltd. G. Langford
L. Werner
Wescott Consulting group R. Wescott
P. Wierenga
R. Wiersma

Appendix B – Oral hearing – registered appearances

Name of organization (abbreviation) counsel or representative	Witnesses
AltaLink Management Ltd. R. Lonergan D. Watt	L. Hampton S. Heffernan D. Hoover G. Mezei D. Mildenberger W. Mundy K. Turriff M. Van Wyk
Hainsworth group G. Fitch	F. Dawalibi R. Biel D. Hainsworth R. Pocock
Hughes group N. Ramessar M. Niven	D. Hughes D. Hicks D. Werner E. Werner
Viking Projects Ltd. G. Langford	R. English R. Wilson
Wescott Consulting group R. Wescott	R. Wescott
R. Wiersma	R. Wiersma

Alberta Utilities Commission

Commission Panel

T. Beattie, QC, Panel Chair
N. Jamieson, Commission Member
I. Harvie, Acting Commission Member

Commission Staff

S. Sinclair (Commission Counsel)
A. Anderson
T. Richards
L. Stelck
A. Alibhai

Appendix C – Abbreviations

Abbreviation	Name in full
AESO	Alberta Electric System Operator
AltaLink	AltaLink Management Ltd.
AUC or the Commission	Alberta Utilities Commission
CP Rail	Canadian Pacific Railway Limited
DFO	Department of Fisheries and Oceans Canada
EMF	Electric and magnetic fields
EMI	Electromagnetic interference
EPRI	Electrical Power Research Institute
ESR	Environmental Specifications and Requirements
EUB or the Board	Alberta Energy Utilities Board
GIS	geographic information system
Iron Rail Business Park	Iron Rail Business Park Ltd.
kV	kilovolt
NID	Needs identification document
Rule 007	<i>Rule 007: Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments</i>
Rule 012	<i>Rule 012: Noise Control</i>
Serecon	Serecon Valuations Inc.
Serecon industrial report	Exhibit 3450-X0083, AML Reply Evidence - Appendix A Serecon Impact of 138 kV Transmission Line
SES Technologies	SES Technologies Ltd.
SES Technologies report	Exhibit 3450-X0040, SES Technologies Report – AltaLink 423L Project
TERA	TERA Environmental Consultants
Viking Projects	Viking Projects Ltd.

Appendix D – Standing ruling

[\(return to text\)](#)



Appendix D .pdf

(consists of 4 pages)

Appendix E – The Commission’s ruling on the Hainsworth group motion to reschedule hearing

[\(return to text\)](#)



Appendix E.pdf

(consists of 2 pages)

Appendix F – The Commission’s ruling on the Hainsworth group motion for extension for filing intervenor evidence

[\(return to text\)](#)



Appendix F.pdf

(consists of 2 pages)

Appendix G – The Commission’s ruling on the Hainsworth group motion on CP Rail attendance and evidence

[\(return to text\)](#)



Appendix G.pdf

(consists of 2 pages)

Appendix H – The Commission’s ruling on AltaLink’s motion for a partial adjournment of the hearing

[\(return to text\)](#)



Appendix H.pdf

(consists of 1 page)

Appendix I – The Commission’s letter regarding hearing process

[\(return to text\)](#)



Appendix I.pdf

(consists of 4 pages)

February 10, 2015

To: Interested Parties

**AltaLink Management Ltd.
Red Deer Area Transmission Development - Lacombe Transmission Line 423L
Proceeding 3450**

Ruling on Standing

Introduction and background

1. The Alberta Utilities Commission must determine whether to grant standing to persons who have filed statements of intent to participate in Proceeding 3450.
2. In Proceeding 3450, the Commission will consider an application filed by AltaLink Management Ltd. for transmission facilities intended to address the need identified in the needs identification document approved in AUC Decision [2012-098](#)¹ in the Red Deer area. The proposed project consists of the following:
 - A new single-circuit 138-kilovolt (kV) transmission line, designated as 423L, between the existing Lacombe 212S substation and the existing Ellis 332S substation.
 - Modifications to the existing 80AL transmission line near Lacombe 212S substation and the existing 784L transmission line near the Ellis 332S substation.
 - Alterations at Lacombe 212S substation and Ellis 332S substation to accommodate transmission line 423L.
3. AltaLink has put forward a preferred route, an alternate route and a preferred variant route for transmission line 423L. In addition, through an amendment filed with the Commission on December 18, 2014, AltaLink has put forward for the Commission's consideration two local route variants, one a landowner-suggested route option and an alternate variant route option.
4. The Commission has asked that I inform you of its ruling.

¹ Decision 2012-098: Alberta Electric System Operator – Red Deer Region Transmission Development Needs Identification Document, Proceeding 1368, Application 1607507, April 10, 2012.

Statements of intent to participate

5. Thirteen statements of intent to participate were filed prior to or in response to the Commission's notice of application issued on November 17, 2014, or to the Commission's notice of amendment issued on January 13, 2015.²

6. Eleven of the statements of intent to participate were received from parties who appear to own, reside or have an interest in land within 800 metres of the right-of-way of one of the routes put forward by AltaLink for the Commission's consideration. Of the eleven statements of intent to participate, two were filed by corporations, Viking Projects Ltd. and Iron Rail Business Park Ltd. The remaining nine statements of intent to participate were filed by individual landowners.

7. At the time of this ruling, two landowner groups have formed. The first consists of Denis and Doreen Hainsworth, Robert and Maureen Pocock, Ron and Roberta Biel, and Jim and Jan Pocock (the Hainsworth Group). All members of this group, with the exception of Jim and Jan Pocock filed statements of intent to participate on an individual basis. A specific statement of intent to participate for the group was not filed.

8. The twelfth statement of intent to participate was received from a second landowner group, the Hughes Group, consisting of David and Marcy Hughes, Archie Werner and Clem Werner, Darrell and Donna Hicks, Elaine Werner and Jacob and Nicole Devrij. David Hughes also filed a statement of intent to participate on an individual basis.

9. The thirteenth statement of intent to participate was received from Lacombe County. Lacombe County has control of the road allowances near the project and is the subdivision and development authority for the lands in the vicinity of the new transmission line.

10. In this ruling, the Commission must decide if persons who filed a statement of intent to participate in Proceeding 3450 have demonstrated that they have rights that may be directly and adversely affected by the Commission's decision on the application for transmission line 423L. A person who demonstrates potential for direct and adverse effect is said to have 'standing'.

Commission findings

11. Under Section 9 of the *Alberta Utilities Commission Act*, the Commission must hold a hearing on an application if a person shows that he or she has rights that may be directly and adversely affected by the Commission's decision on the application.

12. There is a two-part test for determining standing. First, a person must demonstrate that the right he or she is asserting is recognized by law. Second, a person must provide some information that shows that the Commission's decision on the application may directly and adversely affect his or her rights. The first part of the test is legal; the second part of the test is factual. For the factual part of the test, the Alberta Court of Appeal has stated that "some degree of location and connection between the work proposed and the right asserted is reasonable."³

² A statement of intent to participate was filed by Donald Parker and another statement of intent to participate was filed by Donald and Shirley Parker in relation to the same lands. These submissions have been counted as one statement of intent to participate for the purposes of this ruling.

³ *Dene Tha' v Alberta (Energy and Utilities Board)*, 2005 ABCA 68, paragraph 14.

13. Persons with standing have a right to have their concerns about an application considered at a hearing. As a part of this right, the Commission must give persons with standing a reasonable opportunity to understand the application and the position of other parties in the proceeding. It is the Commission's practice to allow persons with standing to file and present evidence, cross-examine the applicant and to make argument.

14. In the past, the Commission has allowed persons without standing the opportunity to provide a brief statement to the Commission that describes their views on the application. However, where all persons with standing withdraw their objections, the Commission may cancel the hearing even if parties without standing have expressed a desire to participate in that hearing.

Ruling

15. The Commission is satisfied that those landowners who reside, own or have an interest in land within 800 metres of the right-of-way of one of the proposed routes may be directly and adversely affected by the Commission's decision on the application. Given the scope of the project, the Commission finds that there is a sufficient degree of connection between the ownership and occupation rights asserted by the parties and the project-associated concerns raised in the objections. As such, landowners listed in Appendix A to this ruling have been granted standing in this proceeding.

16. Groups of individuals that are comprised of one or more persons with standing and person who do not have standing may, at the discretion of the Commission, participate in the proceeding. The basis for these groups' participation is that one or more of its members have standing. This is the case with both the Hainsworth Group and the Hughes Group who the Commission has determined have standing in this proceeding. However, please note that individuals who do not have standing on an individual basis, but belong to a group that does have standing, are not eligible to apply for the recovery of costs of their individual participation.

17. Lacombe County filed a statement of intent to participate given that the project will occur within the boundaries of the county. The Commission has determined that Lacombe County has standing to participate in the proceeding.

Yours truly,

Shari L. Boyd
Commission Counsel

Attachment

Appendix A
Individuals and Groups with Standing in Proceeding 3450

1. Ronald and Roberta Biel
2. Ray Wiersma
3. Robert Pocock
4. Donald and Shirley Parker
5. Dave Hughes
6. Denis and Doreen Hainsworth
7. Tom Denis
8. Llew Werner
9. Philip Wierenga
10. Iron Rail Business Park Ltd.
11. Viking Projects Ltd.
12. Lacombe County
13. Hughes Group
14. Hainsworth Group

March 24, 2015

To: Interested Parties

AltaLink Management Ltd.
Red Deer Area Transmission Development 423L
Proceeding 3450

Ruling on adjournment and rescheduling of process steps

Request

1. On February 19, 2015, the Alberta Utilities Commission issued a notice of hearing for this proceeding, which scheduled a hearing in Red Deer commencing on Tuesday, May 26, 2015, and set out process steps preceding the hearing.
2. On February 26, 2015, the Commission received a motion from the Hainsworth Group requesting an adjournment until July or August.
3. The Hainsworth Group sought an adjournment to avoid the time when its members, some of whom are farmers, would be busy with spring seeding and spraying. The letter also indicated that this issue had been raised in the Red Deer Area Transmission Project proceeding and, that at that time, the Commission had committed to make best efforts to take the Hainsworth Group's concerns into account when rescheduling the hearing.
4. By letter dated March 3, 2015, the Commission sought feedback from interested parties in relation to the proposed adjournment. AltaLink Management Ltd. (AltaLink) responded by the March 9, 2015 deadline.
5. AltaLink indicated that postponing the hearing would result in additional costs to customers.
6. The Commission has ruled on this motion and has directed me to write to interested parties to advise them of its ruling and its reasons.

Commission ruling

7. The Commission has had an opportunity to consider the views of parties who filed submissions in relation to the Hainsworth Group's request and finds that an adjournment and a rescheduling of the process steps preceding the hearing are appropriate. The Commission finds that adjourning the hearing until July or August as proposed by the Hainsworth Group is not

appropriate due to the length of the delay, the Commission's availability and the possible prejudice to the other interested parties.

8. The Commission is issuing the following revised process schedule and hearing date for this proceeding:

Process step	Date
Applicant's deadline to respond to information requests	April 7, 2015
Interveners' written evidence deadline	April 23, 2015
Information requests to interveners deadline	May 7, 2015
Interveners' deadline to respond to information requests	May 22, 2015
Applicant's reply evidence deadline	June 8, 2015
Commencement of hearing	June 23, 2015

9. The revised process schedule and hearing date should allow members of the Hainsworth Group to attend the hearing while also considering the interests of the other parties involved.

10. If you have any questions, please feel free to contact the undersigned at 403-592-4499 or shanelle.sinclair@auc.ab.ca.

Yours truly,

Shanelle Sinclair
Commission Counsel

April 22, 2015

To: Interested Parties

**AltaLink Management Ltd.
Red Deer Area Transmission Development 423L
Proceeding 3450**

Ruling on extension of the intervener evidence date

1. On March 24, 2015, the Alberta Utilities Commission issued a revised notice of hearing for this proceeding which scheduled a hearing in Red Deer commencing on Tuesday, June 23, 2015, and set out process steps for the hearing.
2. On April 21, 2015, the Commission received a request from Mr. Fitch on behalf the Hainsworth Group requesting a brief extension to file intervener evidence from Thursday, April 23, 2015, to Monday, April 27, 2015. The Hainsworth Group sought the extension to accommodate its counsel.
3. Mr. Fitch submitted that Mr. Watt, counsel for AltaLink Management Ltd. (AltaLink) in this proceeding, had not objected to the request or the dates proposed and enclosed an email from Mr. Watt confirming AltaLink's non-objection.
4. Because the applicant consents to the request, the Commission finds it unnecessary to seek feedback relating to the proposed extension to the evidence filing date.
5. The Commission has ruled on this request and has directed me to write to interested parties to advise them of its rulings and its reasons.

Commission ruling

6. The Commission finds that the extension request as proposed by the Hainsworth Group is permissible due to the length of the delay, the applicant's consent to the request, and that no further amendment to the process schedule was requested. Accordingly, the Hainsworth Group may file its evidence by April 27, 2015.
7. The Commission finds that granting the request will not create undue prejudice to any party to the proceeding.

8. If you have any questions, please feel free to contact the undersigned at 403-592-4499 or shanelle.sinclair@auc.ab.ca.

Yours truly,

Shanelle Sinclair
Commission Counsel

June 18, 2015

To: Interested Parties

AltaLink Management Ltd. (AltaLink)
Red Deer Area Transmission Development 423L
Proceeding 3450

Ruling on Hainsworth Group motion filed on June 12, 2015

Introduction and background

1. On June 12, 2015, the Alberta Utilities Commission received a motion from the Hainsworth Group, stating the following:¹

The Hainsworth Group seeks an order from the Commission:

- a. Striking in its entirety AltaLink's reply to the SES Technologies Report filed by the Hainsworth Group (section 2.4.2 of AltaLink's Reply Evidence, Ex. 3450-X0082);
- b. In the alternative, should the AUC not see fit to strike the entirety of AltaLink's reply to the SES Technologies Report, an order striking the following paragraphs from AltaLink's reply evidence:

111, 119, 125, 126, 127, 128, 130, 132, 135, 137, 141, 142, 152, 160, 161, 168, 170, 172, 173, 178, 180, 186, 187, 188, 189, 191, 192, 193, 194, 197, 198, 201, and 202;
- c. In the further alternative, that the Commission issue a notice to attend to Canadian Pacific (CP) compelling a representative of CP to attend the public hearing in Proceeding 3450 to speak to CP's position.

2. By letter dated June 15, 2015, the Commission wrote to interested parties and communicated that it would afford any party adverse in interest the opportunity to comment on the Hainsworth Group's motion by Tuesday, June 16, 2015. The Commission also stated that should comments be received, the Hainsworth Group may reply to any comments by Wednesday, June 17, 2015.

2. AltaLink, through its counsel, responded to the Hainsworth Group's motion by letter dated June 16, 2015. AltaLink stated that it intends to call the employee of CP who authored the information provided in its reply to the SES Technologies Report as a witness during the hearing.

¹ Exhibit 3450-X0085, Hainsworth Group Motion, page 1.

3. On June 16, 2015, counsel for the Hainsworth Group objected to the CP employee sitting as a member of the AltaLink witness panel for the reasons set out in that letter including that “the major part of the problem here has been the too-close identification of CP with AltaLink.”² Instead, the Hainsworth Group submitted that CP witness’ participation should be to sit separately from the AltaLink witness panel.

4. On June 17, 2015, AltaLink filed a letter indicating that, after it received the Hainsworth Group’s motion dated June 12, 2015, it advised CP’s in-house legal counsel. CP, with the advice of its counsel, agreed that the employee who authored the information could be called as a witness by AltaLink during Proceeding 3450.

5. The writer has been authorized by the Commission to convey its ruling and its reasons for its ruling to interested parties.

Commission ruling

6. Given that the author of the CP information will be available for cross-examination and to provide oral evidence, the Commission considers it unnecessary to strike all or a portion of AltaLink’s reply evidence or to compel the CP employee to attend the hearing. The Commission finds that in this case, no procedural unfairness will arise from the admittance of any of AltaLink’s reply evidence to the SES Technologies Report.

7. Regarding the Hainsworth Group’s request that the CP employee sit separately from the AltaLink witness panel, the Commission notes that AltaLink commissioned CP to provide a report which was included in AltaLink’s application to the Commission. As such, the Commission is of the view that AltaLink may present this evidence, relating to its proposed route selection, in the manner which it sees fit.

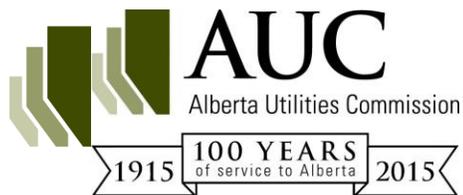
8. The Commission also considers that the CP employee may sit with the AltaLink witness panel because CP is not a party to the proceeding as that term is defined in Rule 001: *Rules of Practice*.

9. With respect to the Hainsworth Group’s submission that “...the major part of the problem here has been the too-close identification of CP with AltaLink” the Commission determines that counsel for the Hainsworth Group (or any other party) may address the materiality or weight to be given to the evidence provided by the CP employee in argument.

Yours truly,

Shanelle Sinclair
Commission Counsel

² Exhibit 3450-X0092 Hainsworth Group letter to AUC, page 1.



Fifth Avenue Place, Fourth Floor, 425 First Street S.W.
Calgary, Alberta, Canada T2P 3L8
Phone 403-592-8845 Fax 403-592-4406
www.auc.ab.ca

August 25, 2015

To: Interested Parties

**AltaLink Management Ltd. (AltaLink)
Red Deer Area Transmission Development 423L
Proceeding 3450**

1. The evidentiary portion of the hearing on the issue of electromagnetic interference (EMI) commenced on Thursday, August 20, 2015, with written argument to follow.
2. On Friday August 21, 2015, during the hearing, AltaLink requested an adjournment, on the basis that, among other things, new information was introduced in direct evidence by a witness for the Hainsworth Group. The Commission granted the adjournment, in part, and held that reply evidence would be heard on Thursday, August 27, 2015, in the Commission's Calgary hearing room.
3. The Commission has revised the process schedule as follows:

Process step	Date
Continuation of hearing	August 27, 2015 11:30 am
Applicant's deadline for argument	September 8, 2015
Interveners' deadline for argument	September 21, 2015
Applicant's deadline for reply argument	September 28, 2015

4. The writer has been authorized to write this letter on behalf of the Commission.

Yours truly,

Shanelle Sinclair
Commission Counsel



June 15, 2015

To: Interested Parties

**AltaLink Management Ltd.
Red Deer Area Transmission Development 423L
Proceeding 3450**

Proceeding 3450 hearing process

1. The public hearing for this proceeding is scheduled to commence in Red Deer, Alberta on June 23, 2015.
2. To ensure that the hearing proceeds in an orderly and efficient manner, the Commission intends to take a number of steps as outlined below.

Hearing schedule

3. The hearing will commence each morning at 9 a.m. and finish at 5 p.m., if required. A lunch break is scheduled each day from 12:30 p.m. to 1:30 p.m. The Commission may sit some evenings depending upon the need.

Opening statements, aids to cross-examination and time

4. The Commission understands that parties intend to cross-examine each other. The Commission requests time estimates for cross-examination be provided by June 19, 2015.
5. Opening statements should be brief and filed at least one day in advance of the commencement of the oral hearing. The Commission reminds all parties that witnesses in its proceedings must confine their testimony to matters set out in their pre-filed documentary evidence or arising from evidence adduced in cross-examination.
6. Aids to cross-examination should be provided to counsel for the party under examination and uploaded to the eFiling System at least one business day ahead of time. Five paper copies should also be provided to AUC staff if the aids to cross-examination are filed after June 22, 2015.
7. The Commission will make best efforts to provide a projector at the hearing. The purpose of the projector is to allow parties to refer to maps or diagrams during the course of cross-examination or direct evidence. The projector will not be managed by AUC staff. When a party's witness panel is seated, counsel or another person assisting that party, who is not on the witness panel, may elect to display applicable maps and diagrams filed on the record of the

proceeding which are referred to by the witnesses. Parties wishing to use the projector should discuss any technical concerns with AUC staff.

Witnesses

8. The Commission requests that all parties identify the witness(es) they intend to seat at the oral hearing and submit the following information for each witness:

- name of the witness
- key areas of responsibility, if applicable
- if the witness is a consultant, a curriculum vitae (if already filed on the record, provide the exhibit number)

9. Should the parties intend to seat expert witnesses, please see the Commission's direction on this matter attached hereto as Appendix 1.

10. Should there be limited availability of witnesses, the Commission requests that parties inform AUC staff of any scheduling conflicts. The Commission will create an order of appearances so that the hearing proceeds in an orderly and efficient manner.

11. The Commission asks that the above witness information be filed by no later than Friday, June 19, 2015.

Yours truly,

Shanelle Sinclair
Commission Counsel

Attachment



Appendix 1

June 15, 2015

To: Interested Parties

**AltaLink Management Ltd.
Red Deer Area Transmission Development 423L
Proceeding 3450**

Qualifying witnesses

1. Section 20 of the *Alberta Utilities Commission Act*, SA 2007c. A-37.2, states that when the Alberta Utilities Commission (the Commission) is conducting a hearing, it is not bound by the rules of law concerning evidence that apply to judicial proceedings. The Commission also is able to determine the processes that best fit the nature of its proceedings. This allows the Commission some flexibility to determine what evidence to admit and what weight to give the evidence it admits, while at the same time, adhering to the principles of procedural fairness that underlie the formal rules of evidence.
2. One of the procedural matters that the Commission deals with is the qualification of experts. The purpose of qualifying a witness as an “expert” is to allow the witness to provide relevant opinion evidence. However, the Commission has generally allowed witnesses, whether qualified as experts or not, to provide opinion evidence where relevant to the scope of a proceeding. The value ascribed to such evidence is a question of weight, which is a function of the professional qualifications, specialized knowledge, experience, relevant publications, industry recognition and independence of the witness.
3. Given the above, the Commission is currently considering whether its current practice of qualifying expert witnesses is necessary or efficient. The elimination of the need to qualify witnesses as experts may streamline proceedings and avoid possible disputes over the “expert” designation, while continuing to allow parties to focus on the issue of the weight that should be accorded by the Commission to a party’s evidence in the circumstances. To that end, the Commission has directed the writer to advise parties to this proceeding that it will not be necessary for counsel to request that their respective witnesses be qualified as “expert” witnesses with regard to their pre-filed written evidence or testimony at the oral hearing commencing on June 23, 2015.
4. Given the continued need for the Commission to assess the weight attributable to the relevant evidence (including opinion evidence), curriculum vitae for the witnesses should continue to be provided and counsel should continue to review the qualifications of their witnesses as part of this hearing. Opposing counsel may, of course, question a witness’

qualifications and the credibility of the evidence provided, and opine on the weight that the Commission should give to the witness' evidence.

5. With regard to any issues arising regarding cost claims, Schedule A to Rule 009: *Rules on Local Intervener Costs*, establishes the same scale of costs for consultant fees, analysts and experts. As such, cost claims submitted by eligible intervener parties for their consultants' fees are not dependent on those consultants being formally qualified as expert witnesses. The costs awarded for the participation of consultant witnesses will be assessed on the basis of their contribution and assistance to the Commission in understanding the issues relevant to the proceeding.

6. If you have any questions, please contact the writer at 403-592-4499.

Yours truly,

Shanelle Sinclair
Commission Counsel