



AltaLink Management Ltd.

Provost to Edgerton Transmission Development

August 26, 2021

Alberta Utilities Commission

Decision 26171-D01-2021

AltaLink Management Ltd.

Provost to Edgerton Transmission Development

Proceeding 26171

Applications 26171-A001 to 26171-A005

August 26, 2021

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The Commission may, no later than 60 days of the date of this decision and without notice, correct typographical, spelling and calculation errors and other similar types of errors and post the corrected decision on its website.

1 Decision summary

1. In this decision, the Alberta Utilities Commission approves facility applications from AltaLink Management Ltd. for the proposed Provost to Edgerton Transmission Development. For the reasons that follow, the Commission finds that approval of AltaLink's applications, and specifically the preferred route with the south variant, is in the public interest having regard to the social, economic, and other effects of the proposed facilities, including their effect on the environment.

2 Introduction

2. Building a transmission facility in Alberta requires two applications. The first, a needs identification document (NID) application, is filed by the Alberta Electric System Operator (AESO) and identifies the reason the new transmission facility is required. The second, a facility application, is filed by a transmission facility owner and proposes the equipment that will meet the identified need and a location for the facility based on routing, siting, consultation and detailed design.

3. On April 10, 2019, pursuant to Decision 23429-D01-2019,¹ the Commission approved a NID application filed by the AESO for the transmission system reinforcement in the Provost to Edgerton and Nilrem to Vermilion areas and issued Needs Identification Document Approval 23429-D02-2019.²

4. On December 11, 2020, AltaLink filed applications with the Commission for approval to construct the Provost to Edgerton Transmission Development identified in the NID approval. It subsequently updated the applications on February 26, 2021.

5. On January 7, 2021, the Commission issued a revised notice of hearing in accordance with Rule 001: *Rules of Practice*. As indicated in the notice, the Commission considered that persons who own or reside on property located within 800 metres of the right-of-way for any of the proposed routes would have standing to participate.

6. The Commission received statements of intent to participate from George and Marilynn Bishop, Jason Bishop, Ken Leskow, Mary Abbott, Randy J. Gregory, David Nelson, N Over Diamond Cattle Corporation, and Jesse Guy. The Commission did not receive an objection to any of those individuals having standing. The Métis Nation of Alberta Region 2 and

¹ Decision 23429-D01-2019: Alberta Electric System Operator – Amended Provost to Edgerton and Nilrem to Vermilion Transmission System Reinforcement Needs Identification Document, Proceeding 23429, Application 23429-A001, April 10, 2019.

² Needs Identification Document Approval 23429-D02-2019, Proceeding 23429, Application 23429-A001, April 10, 2019.

the Métis Nation of Alberta Region 3 also filed statements of intent to participate on behalf of their members. The Commission determined that those statements of intent to participate did not provide information that indicated that either groups' members may be directly and adversely affected by the proposed transmission development, however, the Commission provided both groups with an opportunity to file additional information about their concerns. Neither group filed additional information and the Commission did not grant them standing.

7. A public hearing to consider the applications was held from May 26, 2021 to May 28, 2021, using videoconference. David Nelson and Heather Bennett, who together own N Over Diamond Cattle Corporation (collectively referred to as the Nelson Parties) participated fully in the hearing. Jesse Guy made an oral statement during the hearing but he did not file written evidence or question the applicant's witnesses. The other parties with standing did not provide evidence beyond their statements of intent to participate and did not participate in the hearing.

3 AltaLink facility applications

8. The proposed transmission development includes the construction and operation of a 240-kilovolt (kV) transmission line, designated as Transmission Line 459L, in two stages:

- Stage 1 – The addition of one 240-kV transmission line, energized at 138-kV, between the existing Hansman Lake 650S Substation and a connection point on Transmission Line 749AL.
- Stage 2 – The addition of one 240-kV transmission line, energized at 138-kV, between a connection point on Transmission Line 749AL and the Edgerton 899S Substation.

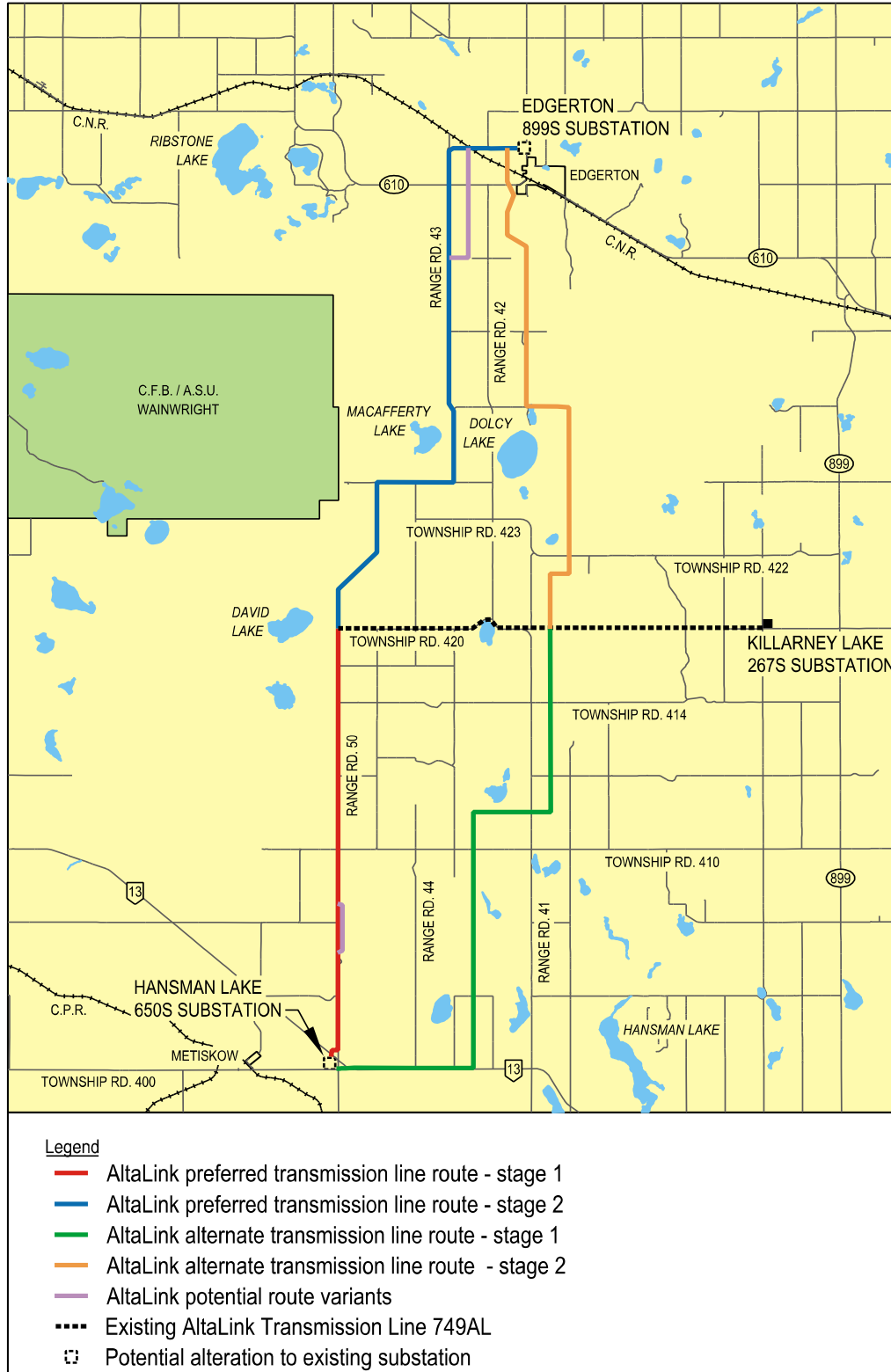
9. To facilitate the construction of the transmission line, modifications at both the Hansman Lake 650S Substation during Stage 1 and the Edgerton 899S Substation during Stage 2 will be required.

10. Re-designation of existing Transmission Line 749AL from the connection point to Killarney Lake 267S Substation will also be required. In Stage 1, Transmission Line 749AL will be renamed and operated as 459L. Thus, Transmission Line 459L will be operated between the existing Hansman Lake 650S and Killarney Lake 267S substations. Once Stage 2 is completed, Transmission Line 459L will be operated between the Hansman Lake 650S and Edgerton 899S substations. The portion of existing Transmission Line 749AL, which was previously re-designated as 459L in Stage 1, will be configured as a T-tap and re-designated in Stage 2 as Transmission Line 459AL.

11. Stage 2 of the project is based on construction milestones outlined in Appendix A of Needs Identification Document Approval 23429-D02-2019. AltaLink stated that once certain levels of load or generation are met, the AESO will provide formal notice that the construction milestone has been met and that AltaLink may commence construction of Stage 2 of the project. The AESO anticipates that Stage 2 will commence by September 2023.

12. AltaLink provided two routes for consideration, the preferred route and the alternate route. On the preferred route, AltaLink identified two variants, the north variant and the south variant. The routes are shown in Figure 1.

Figure 1. Proposed transmission line routes



13. AltaLink's applications included:
- A report on potential agricultural impacts from overhead transmission lines by Serecon Inc.
 - A property value report by Serecon Inc.
 - An environmental evaluation conducted by Stantec Consulting Ltd.
 - A report entitled "Status Report on Electric and Magnetic Field Health Research 2017-2019" by Exponent, Inc.
 - Materials detailing the participant involvement program.

14. The Commission has carefully weighed the social, economic and environmental effects of the preferred and alternate routes and variant routes, and has taken into account the stated reasons for AltaLink's identification of a preferred route. For the reasons that follow, the Commission approves the preferred route with the south variant.

15. In reaching its determination, the Commission has reviewed all relevant materials comprising the record of this proceeding. Accordingly, 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 with respect to the matter.

4 Stakeholder concerns

16. The Nelson Parties own and have an interest in several quarter sections of land on the preferred route and the south variant route in the south area of the project boundary. In particular, the Nelson Parties' home quarter is located on the east half of Section 24, Township 40, Range 5, west of the Fourth Meridian. The Nelson Parties expressed a number of concerns with the preferred route (Stage 1) and requested that the Commission approve the alternate route. However, the Nelson Parties also requested that, should the preferred route be selected, the Commission approve the south variant.

17. Jesse Guy owns land on the south half of Section 26, Township 43, Range 4, west of the Fourth Meridian. He stated that his farm has existed for over 100 years and that the transmission line on the alternate route in the north area of the project boundary (Stage 2) would intersect his property, effectively dividing it into two pieces. He also stated that the alternate route would pose health and safety risks to his family and to his livestock and farming operation. He was concerned about his property being devalued and an increase in noise and traffic in the area of his home, which he indicated is located on a dead end road.

18. The Commission received statements of intent to participate from individuals who own or occupy property along the preferred route in the north area of the project boundary. George and Marilynn Bishop, Jason Bishop, and Mary Abbott indicated they were opposed to the preferred route and favoured the alternate route (Stage 2). The Bishops stated that they were not anti-development and that they also own land along the alternate route so they would still be impacted. Jason Bishop's concerns included visual and property value impacts from construction of a new transmission line when there was already an existing transmission line adjacent to his and the Bishop's properties. Mary Abbott also indicated that there is an existing transmission

line that runs parallel to her property and she was concerned that construction of a new transmission line along the preferred route (Stage 2) would result in the removal of trees that act as a wind break, an increase in the “humming noise” emitted from transmission lines in the area, and interference with the community viewscape. Ken Leskow indicated that he preferred the north variant because he considered it to be less invasive and disruptive. These parties did not provide any additional information to support the concerns in their respective statements of intent to participate, and they did not participate in the hearing.

19. The Commission also received a statement of intent to participate from Randy J. Gregory, who owns land along the alternate route in the south area of the project boundary. He stated that he was opposed to the alternate route (Stage 1) because it would bisect two quarter-sections of his land. He stated that he did not want the transmission line to run through the middle of his land or along the east side of his land. He did not file any additional information or participate in the hearing.

20. The Commission will address the following stakeholder concerns that were raised by the Nelson Parties or Jesse Guy in the separate sections of this decision that follow:

- Routing considerations
- Residential and social impacts
- Agricultural impacts
- Property value impacts
- Environmental considerations
- Other issues

5 Routing considerations

21. Compared to the alternate route, AltaLink stated that the preferred route had lower overall impacts as it:

- Has a shorter overall transmission line length (47.8 kilometres compared to 54.2 kilometres).
- Has a lower estimated cost (\$125 million compared to \$132.4 million).
- Traverses less agricultural land used for crops (0.8 kilometres compared to 10.9 kilometres).
- Is located within more road allowance (43.0 kilometres compared to 23.2 kilometres).
- Parallels an existing transmission line for a greater length (47.1 kilometres compared to 1.8 kilometres).
- Intersects less native upland vegetation (16.1 hectares compared to 47.5 hectares).
- Intersects less wetland area (19.9 hectares compared to 37.1 hectares).

22. One criteria that AltaLink stated that it considered during its routing selection is the number of residences within 150 metres of a transmission line. AltaLink said that it considered residences within 150 metres to be “very high avoidance areas.”³ The Nelson Parties argued that AltaLink failed to follow its own criteria because there are five residences within 150 metres of the preferred route compared to three on the alternate route.

23. AltaLink acknowledged that there were fewer residences within 150 metres of the alternate route, but stated that it had considered the specific context of the residences and noted that all five residences within 150 metres of the preferred route are already within 150 metres of an existing transmission line. Therefore, AltaLink considered the impacts to these residences to be incremental and not new impacts.

24. The Nelson Parties stated that the height of the proposed transmission line towers is expected to be approximately double the height of the existing transmission line structures, and therefore the impacts caused by the proposed transmission line would be significant enough to be considered new impacts. The Nelson Parties also submitted that the preferred route alignment of the proposed transmission line, on the opposite side of the road from the existing transmission line, would result in new impacts for them because it would be adjacent to their homestead and not across the roadway in the same location as the existing transmission line.

25. The Nelson Parties highlighted a number of other criteria that they stated favoured the selection of the alternate route, including the fewer number of residences within 800 metres of the alternate route, fewer pipeline crossings, fewer distribution lines and less surface water crossed by the alternate route.

26. AltaLink submitted that the south variant route represents a greater impact than the preferred route because it would result in approximately 1.5 kilometres of transmission line being located on Crown land, and would require two additional transmission line crossings and four additional angle structures. It stated that the south variant would also cost approximately \$260,000 more to construct than the preferred route.

27. When questioned by the Nelson Parties, AltaLink acknowledged that the \$260,000 was a relatively minor amount, and characterized it as a “rounding error” compared to the overall cost of the project.⁴

28. Although the alternate route has lower impacts relative to the preferred route for a few of the criteria used to assess routing options, the Commission is satisfied that the preferred route will have a significantly lower overall impact than the alternate route. The Commission is particularly persuaded by the fact that the preferred route parallels an existing transmission line for nearly 99 per cent of its length, while only approximately three per cent of the alternate route parallels an existing transmission line. The Commission is also persuaded by the significant length for which the preferred route is located in road allowances as compared to the alternate route.

29. The Commission considers that, in this case, the use of developed road allowances and paralleling an existing disturbance also results in the preferred route being more suitable than the alternate route from an environmental impact perspective. Given that the preferred route would

³ Exhibit 26171.X0002.01, Application, PDF page 68.

⁴ Transcript, Volume 1, page 112.

be shorter and have fewer impacts on native vegetation and wetlands, and for the additional reasons discussed in Section 10, the Commission accepts that the environmental impacts of the routing options favour approval of the preferred route.

30. The Commission is not satisfied that the relatively minor cost increase for the south variant and the incremental impacts associated with it outweighs the increased impacts to the Nelson Parties if the south variant is not selected, as explained below. The Commission notes that the total cost of the preferred route is estimated to be \$125 million (to an accuracy of plus 20 or minus 10 per cent) and therefore the increased cost for the south variant is relatively small compared to the total project cost. In any case, the preferred route is still a lower cost route than the alternate route, even with the additional cost of the south variant.

31. As the Commission has decided that the route assessment criteria significantly favours approval of the preferred route (with or without the south variant) and not the alternate route, the following sections will focus on a comparison between the preferred route and the south variant route, as well as a separate section for the north variant route.

6 Residential and social impacts

32. While the Nelson Parties acknowledged that there is an existing transmission line on their lands, they emphasized that the transmission line is on the opposite side of the roadway from their home quarter and it is largely obscured from the residence by mature trees and a shelterbelt. The Nelson Parties stated that their home quarter not only contains their residence, it also hosts important cattle and farming operations and facilities, including a yearling pen and feed yard.

33. The preferred route would be adjacent to the Nelson Parties' home quarter and would require the removal of mature trees and the shelterbelt. The Nelson Parties stated that the trees and shelterbelt not only obscure the existing transmission line, they also mitigate the impact of traffic, noise, dust and wind and they provide privacy. The Nelson Parties were also concerned that the new transmission structures would be higher than the wooden structures used on the existing transmission line 749L, and so the line would be visible from any location on their property. Heather Bennett added that despite the additional height of the proposed line, it would still pose a hazard to equipment they use to manage silage on their property.

34. The Nelson Parties noted that an area of land on their home quarter, referred to as the Glen, has mature apple and maple trees, an abundance of wildlife and provides a peaceful recreational area that they frequent regularly. The Nelson Parties expressed concern with the impacts on the Glen of the proposed tree and vegetation clearing that would occur to create the right-of-way and workspace needed for the preferred route.

35. Since the south variant route is on the opposite side of the roadway from the Nelson Parties' home quarter, many of the impacts and concerns the Nelson Parties identified with the preferred route would be eliminated or reduced. Notably, the removal of mature trees and the shelterbelt would not be required and construction would not occur in the immediate area of the Glen.

36. AltaLink stated that it considered the potential visual impact of the preferred route to be incremental, and that it would consult with the Nelson Parties to further mitigate visual impacts. AltaLink also stated that it could further mitigate impacts of the preferred route to the

Nelson Parties by limiting tree removal to only those species that could grow to a height that would interfere with the safe operation of the transmission line. In locations where vegetation was removed, AltaLink confirmed that it could plant transmission line-compatible vegetation or it could compensate the Nelson Parties to do that planting themselves.

37. Another potential mitigation that AltaLink considered was using a variation of transmission line structures that would stack the conductors vertically rather than horizontally. These structures would be taller and result in increased cost but would reduce the size of the right-of-way. The Nelson Parties stated the vertical structures would not alleviate any of their concerns since even the use of taller “stacked” monopoles would require a four-metre-wide right-of-way that would necessitate the removal of mature maple and apple trees in the Glen. They preferred the shortest structures allowable.

38. In response to a question from the Nelson Parties, AltaLink confirmed that an underground transmission line would still require the removal of vegetation but unlike the proposed overhead transmission line, the entire right-of-way would have to be on private property.⁵ AltaLink submitted that the costs of an underground line would likely be between four and seven times more than that of an overhead transmission line.

39. The Commission considers that the Nelson Parties’ request for the shortest structures is reasonable in the circumstance, and the Commission approves the standard horizontal structures originally proposed by AltaLink. Although the underground transmission line could mitigate some visual impacts, the Commission is not satisfied that the significant cost increase or greater use of private land is warranted when the overhead south variant route would also mitigate some of the impacts to the Nelson Parties.

40. The Nelson Parties noted that the planning of the transmission line had already created disturbances, such as increased traffic and people, within what they stated was a normally quiet area. They are concerned that, if approved, the construction and maintenance activities would further erode their privacy. In response to the Nelson Parties’ concern, AltaLink submitted that after a new transmission line is constructed, no major repairs are expected for 20 years.

41. The Commission acknowledges the impacts on the Nelson Parties that may have resulted from pre-planning activities and recognizes that there will be further impacts during construction of the transmission line. However, these impacts will be temporary and limited to the construction phase rather than being continuous throughout the operational life of the transmission line.

7 Agricultural impacts

42. The Nelson Parties stated that the preferred route would have significant impacts on their cattle and farming operation due to the removal of the shelterbelt and the transmission line’s proximity to several facilities including corrals, feed storage and grain storage. The Nelson Parties also submitted that while the south variant route would impact the cattle and farming operation, the impacts would be significantly less.

⁵ Transcript, Volume 1, pages 128 to 130.

43. The Nelson Parties explained that a part of the shelterbelt that borders a yearling pen protects newborn cattle from the wind. They stated that if the shelterbelt is removed to allow transmission line construction on the preferred route, they would be required to relocate the yearling pen or accept an increased risk that young cattle would die. In response to a question from the Commission, Heather Bennett confirmed that there is no suitable location to relocate the yearling pen on the same quarter.
44. AltaLink disagreed with the Nelson Parties that the yearling pen or other facilities would have to be moved to permit construction on the preferred route. It added, however, that if facilities did require relocation, AltaLink was committed to paying to relocate the facilities.
45. The Nelson Parties stated that there is a constant flow of heavy equipment moving onto and off of their home quarter, and that the equipment that operates on top of silage piles would be higher than the proposed transmission line. The Nelson Parties were concerned that farming equipment could accidentally contact the transmission line, resulting in safety concerns and liability issues for them.
46. AltaLink stated that the use of equipment under 6.1 metres in height is generally not restricted by the presence of transmission lines, and that most agricultural equipment can be lowered below this height. In the case of specialized equipment that did pose a hazard, AltaLink stated that it would work with the Nelson Parties on locating transmission line structures or using taller structures to allow the continued use of the equipment.
47. The Nelson Parties were also concerned about the increased fire risk if the preferred route was selected. They stated that a fire had previously occurred as a result of an existing AltaLink transmission line when a line break occurred approximately four kilometres north of their home quarter. The fire damaged some of their pasture land and barbed wire fencing. They added that if a similar fire occurred on their property, they would be concerned not only for their own safety but for the risk of loss of their cattle and the million dollars' worth of feed located in their feed yard. The Nelson Parties stated that although the south variant route would not eliminate the risk of fire, the location of the transmission line on the opposite side of the road might prevent the fire from reaching their home quarter.
48. AltaLink submitted that the transmission line would be designed and constructed in accordance with the Alberta Electrical Utility Code and all other applicable guidelines and standards. In addition, the structures would be constructed using non-flammable steel and insulating fibreglass cross-arms. With the clearing of vegetation, AltaLink stated that it believed the risk of fire would be properly mitigated.
49. The Nelson Parties were concerned with AltaLink's practice of using a helicopter to examine the existing transmission line, which David Nelson said occurs about once a year and scares the cattle, especially the yearlings. He further indicated that the Nelson Parties have never received advance notification of these inspections. He said he feared that the scared cattle would run through barbwire or break a leg during the inspections, which he suggested could be avoided with proper planning and notice.
50. AltaLink stated that a detailed aerial patrol of transmission lines is conducted by a low flying helicopter every 10 years. A helicopter also conducts an aerial inspection of lines on an annual basis but during this inspection the helicopter is several hundred feet in the air and moves

at a speed of 150 kilometres per hour. AltaLink indicated that it would be unlikely that a landowner would even notice the helicopter during the annual inspection.⁶

51. The Commission agrees with AltaLink that by following all applicable guidelines and standards that the risk of fire can be properly mitigated. However, the Commission is not convinced that the other potential impacts of the preferred route on the Nelson Parties' cattle and farming operations have been sufficiently mitigated when compared to the lesser impacts of the south variant route. The Commission considers that Heather Bennett and David Nelson are best positioned to assess how a transmission line in the preferred route could affect their cattle and farming operations on their home quarter, and it accepts their concerns about how the removal of the shelterbelt and the possible need to relocate the yearling pen and other facilities would significantly impact their operations.

52. The Commission also believes that impacts on the Nelson Parties from helicopter operations can be reduced with proper advance notification to them. As such, the Commission finds that the following condition of approval is warranted:

- Prior to conducting inspections by aircraft of the transmission line near the Nelson Parties' property, AltaLink will notify the Nelson Parties in writing not less than seven days in advance of the inspection occurring and communicate any alterations to the planned flight schedule via telephone as required.

8 Property value impacts

53. The Nelson Parties retained Gary Barber of Wainwright Assessment Group Ltd. to provide a property value report. The report concluded that there would be a total estimated loss of market value and costs to the Nelson Parties of approximately \$80,000 as a result of the transmission line following the preferred route. The loss was attributed to an approximately \$20,000 loss of market value due to changes in landscaping (i.e., tree removal), an owner cost of approximately \$40,000 to relocate the cattle feeding pen away from the proposed transmission line, another \$10,000 cost to relocate the feed storage yard away from the transmission line in order to eliminate the risk of loss of cattle feed due to fire, and \$10,000 for loss of use of land. The Nelson Parties submitted that the devaluation of their property could be eliminated or mitigated if the south variant was approved.

54. AltaLink's property value report prepared by Serecon Inc. stated that only two properties would be affected by the preferred route. With respect to the Nelson Parties' home quarter, the report concluded:

This large parcel property contains a residence and farm building site in the southeast corner. Although the residence does have some a visual tree buffer, some trees will be removed increasing the visibility of the line. There is also an existing transmission line...running along the east side of road allowance. We feel the negative visual and residence location impact could be up to 5%. There would be no potential impact if the proposed route variant is used in this location.⁷

⁶ Transcript, Volume 1, page 148.

⁷ Exhibit 26171-X0023, Appendix K Landowner Impacts, PDF page 104.

55. The expert reports filed in this proceeding both indicate that there will be an adverse property value impact on the Nelson Parties' home quarter if the preferred route is selected, although there is no agreement between the experts on the dollar value of the impact. The Commission finds that constructing the transmission line in the south variant route would eliminate or significantly reduce the impact on the value of the Nelson Parties' property. This finding further persuades the Commission that the south variant route results in lower overall impacts on stakeholders.

9 Environmental considerations

56. The Nelson Parties provided a series of photographs showing the presence of moose, deer, eagles, grouse, small birds and coyotes within the home quarter. The Nelson Parties stated that the area is home to waterfowl, other birds and other wildlife that were not photographed. The Nelson Parties were concerned that vegetation removed for the transmission line would take 100 years to regrow and would permanently remove habitat for these animals.

57. The Nelson Parties stated that the environmental evaluation, prepared by Stantec Consulting Ltd. for AltaLink, indicated that both the preferred route and the alternate route are viable from an environmental assessment standpoint. The Nelson Parties stated that the evaluation did not specifically consider the removal of established trees and vegetation that would be required for the preferred route. They submitted that using the south variant would mitigate this impact because the route locates the transmission line on pastureland that is also owned by the Nelson Parties and can be easily restored, whereas the mature trees on the homestead side of the roadway would be lost permanently.

58. AltaLink acknowledged that the environmental evaluation concluded that all applied-for routes were viable from an environmental standpoint. It stated, however, that the preferred route was considered more suitable because it parallels an existing transmission line for most of its length and uses a much larger percentage of previously graded developed road allowance than the alternate route. It also stated that the high proportion of the preferred route that is sited on previously disturbed road allowances results in lower overall predicted effects on agricultural soils, native vegetation, wetlands and wildlife habitat, and reduces the risk of wildlife mortality during construction. It added that avian collision risk was also predicted to be slightly lower on the preferred route due to the smaller area of potential water bird staging and breeding wetlands that are intersected.

59. AltaLink stated that the removal of vegetation and habitat loss were considered along all route options, which included the Nelson Parties' properties. AltaLink explained that the environmental evaluation identifies specific locations where species at risk or protected features are observed in the project area. As there were no species at risk or wildlife features observed on the Nelson Parties' properties, this area was not highlighted in the environmental evaluation.

60. Dr. James Power stated that the preferred route would affect less native grasslands and native trees and shrub cover when compared with the south variant route. He further noted that while the alternate route would avoid the Nelson Parties' property, it would not eliminate vegetation clearing and would have a greater impact on wildlife habitat when compared with the preferred route. He concluded that all routes are viable and that environmental mitigation can be applied to reduce the potential residual effects to an acceptable level.

61. As previously noted, the Commission considers that from an environmental perspective, the preferred route is more suitable than the alternate route. The preferred route with the south variant would present a generally low level of concern with regard to the ecosystem components considered in the environmental evaluation of the project. The Commission is satisfied that impacts associated with the south variant route can be mitigated to a reasonable degree with the diligent implementation of the mitigation measures proposed in the environmental evaluation and environmental protection plan.

10 Other issues

62. The Nelson Parties stated that the preferred route's close proximity to their residence caused them considerable concern over the potential for the transmission line to impact their health. David Nelson stated that he had taken steps to reduce his exposure to electromagnetic fields and he was concerned that the transmission line being located within 150 metres of his residence would expose him to high levels of electric and magnetic fields.

63. AltaLink submitted that the electric field at the Nelson Parties' residence, if the transmission line was constructed on either of the preferred or south variant routes, was expected to be 0.0 kilovolt/metre and the magnetic field was expected to be 0.1 milligauss. Joe Gilbert of AltaLink stated that these levels are significantly lower than the expected levels in a typical home, and below the exposure guidelines from the International Commission on Non-Ionizing Radiation Protection (ICNIRP) of 4.2-kilovolt/metre for electric fields and 2,000 milligauss for magnetic fields (together referred to as EMF). AltaLink also noted the following response from Dr. Gabor Mezei of Exponent, Inc. to the Nelson Parties' health risk concerns, included in its reply evidence:

None of the scientifically valid weight-of-evidence reviews conducted by national and international health and scientific agencies concluded that exposure to [extremely low frequency] EMF below scientifically established guideline values is a cause of any adverse health effects in humans or animals. On its website, Health Canada currently states, "The potential health effects of extremely low frequency EMF has been studied extensively. While some people are concerned that long term exposure to extremely low frequency EMF may cause cancer, the scientific evidence does not support such claims."⁸

64. Based on the evidence in this proceeding, the Commission accepts that the EMF levels from the transmission line at the Nelson Parties' residence are expected to be well below the ICNIRP guidelines. The Commission also accepts Dr. Mezei's conclusion that the current scientific evidence indicates that EMF levels below these guidelines are not expected to cause any adverse health effects on humans or animals.

65. The Nelson Parties were also concerned about other potential electrical effects of the transmission line, including nuisance shocks and interference with electronic devices. They stated that they are currently experiencing interruptions to their cell phones, wireless internet, radio and GPS service and they believe that the existing transmission line may be the cause. They are concerned that another, closer transmission line would exacerbate the problem.

⁸ Exhibit 26171-X0099, PDF pages 15 and 16.

66. AltaLink stated that if it was determined that its transmission line was the cause of nuisance shocks, it would install mitigation measures to remove any charge build-up on metallic objects near the line in order to reduce the risk of nuisance shocks. AltaLink also stated that it would follow specific standards that define the requirements for grounding, and if nuisance shocks were experienced in the future, the Nelson Parties could contact AltaLink to request further mitigation including additional grounding, where required.

67. AltaLink also committed to having the existing transmission line hardware inspected to ensure that it is operating within applicable regulations. It stated that this inspection will be requested as a priority item to be undertaken at the next available opportunity.

68. AltaLink stated that it would work with the Nelson Parties to investigate concerns related to GPS equipment and to mitigate any interference that is caused by its existing facilities. It also stated that it would conduct post-construction measurements of radio frequency interference levels to ensure compliance with applicable standards.

69. Based on the commitments by AltaLink, the Commission finds that any electrical interference effects the Nelson Parties experience that are believed to be caused by AltaLink's existing or proposed transmission lines will be investigated by AltaLink and, if necessary, that AltaLink will take measures to mitigate these effects.

10.1 The north variant

70. AltaLink stated that the north variant is a viable route option that addresses some of the concerns of stakeholders in the area. The variant is 5.7 kilometres in length and would result in roughly the same total length of line as the preferred route. However, the north variant is located predominately outside road allowances and would not parallel any existing transmission line. Instead, 4.9 kilometres of the north variant route (equal to approximately 85 percent of its length) is located along quarter section lines. AltaLink stated that the north variant would also require one additional corner structure and additional right-of-way and access.

71. The selection of the north variant would also result in an additional 1.5 hectares of wetland and 0.2 hectares of native upland being intersected, compared to the preferred route. The environmental evaluation concluded that the north variant would result in a slightly higher overall effect on ecosystem components when compared to the preferred route.

72. The Commission finds that approval of the north variant over the preferred route is not warranted. The preferred route parallels an existing transmission line and the north variant does not, and it utilizes a far greater percentage of existing road allowances and is expected to have fewer environmental impacts.

11 Conclusion

73. For the reasons detailed above, and subject to the specified conditions, the Commission finds that approval of the proposed development is in the public interest having regard to the social, economic, and other effects of the project, including its effect on the environment, in accordance with Section 17 of the *Alberta Utilities Commission Act*. Specifically, the Commission approves the preferred route with the south variant.

74. The Commission notes that although minimizing costs is always a key factor when considering alternate proposals for transmission development, in this case AltaLink itself characterized the modest incremental cost of the south variant as equivalent to a rounding error. The Commission also notes that as between the preferred route and the preferred route with the south variant, the south variant wholly addressed many of the Nelson Parties' concerns about the project affecting their homestead and the operations there that sustain their livelihood (e.g., clearing of mature trees in the Glen and the shelterbelt, relocating the yearling pen and other farming facilities or operations) and substantially addressed other concerns (e.g., machinery clearance under the transmission line and visual impacts from their residence). The Commission encourages AltaLink to consider, in retrospect, if incorporating the south variant into its preferred route at an earlier point in time, once the Nelson Parties had made their concerns known and a preliminary assessment of the impacts of the south variant was completed, may have been a much more reasonable and efficient course of action in the circumstances.

75. The Commission finds that the facility applications filed by AltaLink under sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, comply with the information requirements prescribed in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments* and are consistent with the need approved by the Commission in Needs Identification Document Approval 23429-D02-2019.

12 Decision

76. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves the applications and grants AltaLink the following approvals set out as appendixes to the decision:

- Appendix 1 – Transmission Line Permit and Licence 26171-D02-2021, to construct and operate Transmission Line 459L between Hansman Lake 650S Substation and Killarney Lake 267S Substation
- Appendix 2 – Transmission Line Permit and Licence 26171-D03-2021, to alter Hansman Lake 650S Substation
- Appendix 3 – Transmission Line Permit and Licence 26171-D04-2021, to construct and alter Transmission Line 459L between Hansman Lake 650S Substation and Edgerton 899S Substation
- Appendix 4 – Transmission Line Permit and Licence 26171-D05-2021, to alter Edgerton 899S Substation
- Appendix 5 – Transmission Line Permit and Licence 26171-D06-2021, to re-designate a portion of Transmission Line 459L as Transmission Line 459AL

77. The Commission notes that the map in Appendix A to Permit and Licence U2002-704 for AltaLink Transmission Line 749L also shows AltaLink Transmission Line 749AL. The Commission considers that an update to the permit and licence for Transmission Line 749L is not required at this time given that the routing of Transmission Line 749AL is not actually changing, rather it is ultimately being re-designated as Transmission Line 459AL. The

Commission will update the map for Transmission Line 749L if and when an alteration to that line is approved in the future.

78. The appendixes will be distributed separately.

Dated on August 26, 2021.

Alberta Utilities Commission

(original signed by)

Kristi Sebalj
Panel Chair

(original signed by)

Douglas A. Larder, QC
Vice-Chair

(original signed by)

Cairns Price
Commission Member

Appendix A – Proceeding participants

Name of person(s) or organization (abbreviation) Name of counsel or representative
Mary Abbott
AltaLink Management Ltd. Brenden Hunter Karen McGlone
George and Marilyn Bishop
Jason Bishop
Ken Leskow
Randy J. Gregory
Jesse Guy
David Nelson, Heather Bennett, and N Over Diamond Cattle Corporation Ryan O'Connor

Appendix B – Oral hearing – registered appearances

<p>Name of organization (abbreviation) Name(s) of counsel and witnesses</p>
<p>AltaLink Management Ltd. (AltaLink) Brenden Hunter, Karen McGlone</p> <p>Joe Gilbert Keith Turriff Megan Dorosz Gabor Mezei Glen Doll James Power</p>
<p>Jesse Guy</p>
<p>The Nelson Parties Ryan O'Connor</p> <p>David Nelson Heather Bennett N Over Diamond Cattle Corporation Gary Barber</p>

Appendix C – Summary of Commission conditions of approval in the decision

This section is intended to provide a summary of all conditions of approval specified in the decision for the convenience of readers. Conditions that require subsequent filings with the Commission will be tracked as directions in the AUC's eFiling System. In the event of any difference between the conditions in this section and those in the main body of the decision, the wording in the main body of the decision shall prevail.

The following is a condition of Decision 26171-D01-2021 that does not require subsequent filings with the Commission:

- Prior to conducting inspections by aircraft of the transmission line near the Nelson Parties' property, AltaLink will notify the Nelson Parties in writing not less than seven days in advance of the inspection occurring and communicate any alterations to the planned flight schedule via telephone as required.