



**Alberta Electric System Operator
Needs Identification Document Application**

**AltaLink Management Ltd.
Facility Applications**

**ATCO Electric Ltd.
Facility Applications**

Central East Transfer-out Transmission Development Project

August 10, 2021

Alberta Utilities Commission

Decision 25469-D01-2021: Central East Transfer-out Transmission Development Project

Alberta Electric System Operator
Needs Identification Document Application
Proceeding 25469
Application 25469-A001

ATCO Electric Ltd.
Facility Applications
Proceeding 25469
Applications 25469-A002 to 25469-A007

AltaLink Management Ltd.
Facility Applications
Proceeding 25469
Applications 25469-A008 to 25469-A010

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Alberta Electric System Operator
Needs Identification Document Application

ATCO Electric Ltd. and AltaLink Management Ltd.
Facility Applications
Central East Transfer-out Transmission
Development Project

Decision 25469-D01-2021
Proceeding 25469
Applications 25469-A001 to 25469-A010

1 Decision summary

1. In this decision, the Alberta Utilities Commission approves a needs identification document (NID) application from the Alberta Electric System Operator, and facility applications from ATCO Electric Ltd. and AltaLink Management Ltd., to construct and operate a double-circuit, 240-kilovolt transmission line between ATCO Electric Ltd.'s Tinchebray 972S Substation and AltaLink Management Ltd.'s Gaetz 87S Substation, and to alter the two substations and associated Transmission Line 9L16 to accommodate the two circuits. For the reasons that follow, the Commission finds that approval of the NID application and facility applications, and specifically AltaLink's South Alternate route and ATCO's Preferred Route A with Route Option ABC, 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 Applications and interventions

2.1 Applications

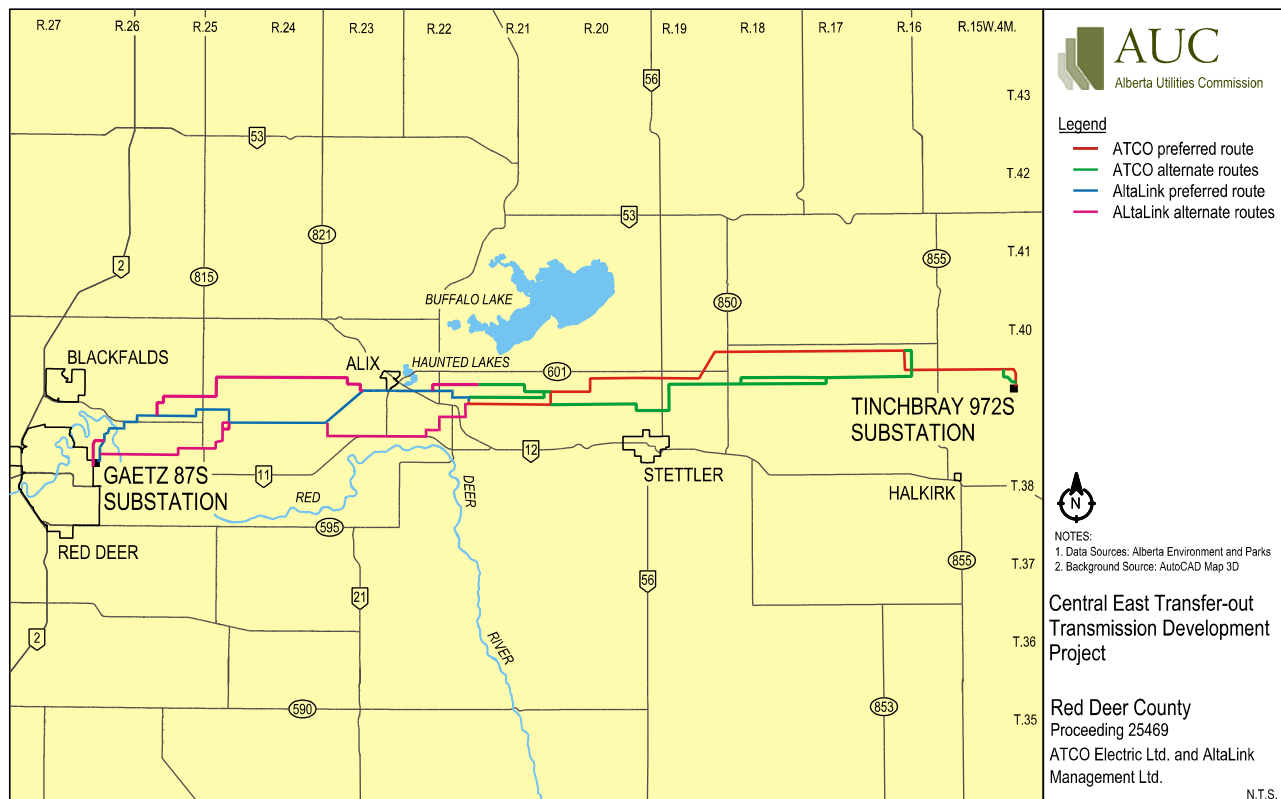
2. The Alberta Electric System Operator (AESO) applied to the Commission on August 12, 2020, for approval of the need to construct transmission development to enable additional generation integration capability in the central east and southeast sub-regions of Alberta. Specifically, the AESO requested that the Commission approve two 240-kilovolt (kV) circuits between Tinchebray 972S and Gaetz 87S substations, and construction milestones based on 0.5 per cent annual congestion on the central east sub-region's west transfer-out path. As described in more detail below, the timing of construction is proposed to be determined in a future reaffirmation study. Collectively, this project is referred to as the Central East Transfer-out Transmission Development Project (CETO project, or the project).

3. ATCO Electric Ltd. applied to the Commission on September 25, 2020, to construct the facilities to meet the AESO's identified need in its service territory. Specifically, ATCO requested approval to:

- Construct and operate a new double-circuit, approximately 80-kilometre long, 240-kV transmission line between the existing Tinchebray 972S Substation and AltaLink Management Ltd.'s proposed 962L/968L transmission line, to be designated Transmission Line 9L62/9L68. ATCO applied with a preferred and alternate route and proposed route variations.

- Alter the Tinchebray 972S Substation to accommodate the two new 240-kV circuits.
 - Alter Transmission Line 9L16 by reconnecting it at a new tie-in location in the Tinchebray 972S Substation.
4. AltaLink applied to the Commission on September 25, 2020, to construct the facilities to meet the AESO’s identified need in its service territory. Specifically, AltaLink requested approval to:
- Construct and operate a new double-circuit, approximately 50- to 60-kilometre long, 240-kV transmission line between the existing Gaetz 87S Substation and ATCO’s proposed 9L62/9L68 transmission line, to be designated Transmission Line 962L/968L. AltaLink applied with a preferred, alternate routes and proposed route variations.
 - Alter the Gaetz 87S Substation to accommodate the two new 240-kV circuits.
5. The two transmission facility owners (TFOs) also applied for the interconnections of their transmission facilities. The applied-for routes are shown below.

Figure 1. Applied-for routes



6. ATCO and AltaLink’s applications included the following:
- A participant involvement program that describes consultation with stakeholders within 100 metres of the project and notification to stakeholders within 800 metres of the project.

- An environmental evaluation that outlines project components and activities, describes baseline environmental conditions, identifies potential effects and mitigation measures, and assesses predicted residual effects of the project.
- An environmental protection plan that describes environmental compliance and protection measures to be applied during construction and operation of the CETO project to avoid or reduce adverse environmental effects.

7. The AESO estimated a total cost of \$332 million for the CETO project. According to ATCO, its preferred Route A would cost approximately \$163 million and its alternate Route C would cost approximately \$162 million within plus 20 per cent to minus 10 per cent accuracy. AltaLink estimated the cost of its Preferred route to be approximately \$159 million, and that of its four alternate routes to be between \$149 million and \$164 million, all within plus 20 per cent to minus 10 per cent accuracy.

2.2 Interventions

8. In response to its notice of hearing issued on October 13, 2020, the Commission received statements of intent to participate from stakeholders objecting to the need and the routing options, some of whom formed groups. The Commission issued nine standing rulings¹ in which it granted standing to numerous individuals, the Consumers' Coalition of Alberta (CCA), Capital Power Corporation, NOVA Chemicals and the Métis Nation of Alberta (MNA).² With respect to the facility applications, the Commission considered that persons who own or reside on property located within 800 metres of the finalized right-of-way of any of the proposed routes have standing to participate in the process.

9. The CCA, the primary intervener objecting to the AESO's NID, focused on the AESO's technical assessment of the need and the proposed transmission development. Throughout the proceeding, the CCA reiterated its concerns with one of the AESO's thermal generation scenarios which it asserted would affect the need and timing of construction of the proposed CETO development. The Commission granted only limited participation (not standing) to the CCA to participate in the facility applications, restricted to the anticipated costs of the proposed facilities that would ultimately be borne by ratepayers.

10. The Landowners Opposed to Route C (LORC), a group of landowners along ATCO's alternate Route C, opposed the AESO's NID application and ATCO's alternate Route C. LORC submitted that the CETO project is not needed and would be an overbuild. The group's concerns included residential, environmental, weeds and clubroot, agricultural, and fire impacts.

11. The Route A Opposition Group (RAOP) consists of landowners along the ATCO preferred Route A, who argued that Route A has high residential impacts because there are more potential country residential and yard site locations along that route. RAOP concerns included residential, environmental, weeds and clubroot, agricultural and health impacts.

12. Brian Perreault, a landowner with land adjacent to the Tinchebray 972S Substation, raised concerns with the substation, indicating that its original construction changed the drainage

¹ Exhibits 25469-X0402, 25469-X0409, 25469-X0440, 25469-X0442, 25469-X0468, 25469-X0476, 25469-X0478, 25469-X0479, and 25469-X0691.

² Capital Power Corporation issued information requests to the AESO. Neither Capital Power nor NOVA Chemicals participated in the hearing.

patterns onto his lands, resulting in washout, erosion and flooding. He requested that the drainage issue be addressed prior to ATCO receiving permission to expand the substation.

13. The Craigievar Group, formed by landowners opposed to AltaLink's Preferred route and North Alternate route, raised issues with property value, agricultural operations, weeds and clubroot, and visual impacts.

14. The SBD Group, consisting of landowners along the AltaLink portion of the project who oppose AltaLink's Preferred route and South Alternate route, raised concerns with residential and social impacts, property value, environmental considerations, business impacts, agricultural impacts, weeds and clubroot.

15. The Solick Group, comprised of landowners opposed to AltaLink's South Alternate route and 138 kV Parallel Alternate route, raised concerns with agricultural impacts, property value and weeds.

16. The MNA, representing more than 3,872 of its members, expressed concerns with the adequacy of consultation, the potential to affect Métis traditional land use and unknown archeological sites in the Tail Creek area.

3 Hearing and other procedural matters

3.1 Virtual oral hearing

17. The Commission held a virtual oral hearing over 21 days, with oral argument and reply, from April 14, 2021 to May 14, 2021. Due to the virtual nature and size of the oral hearing the Commission divided each hearing day into scheduled blocks of time. Parties were directed to adhere to the schedule and were allotted time based on their best estimates, to ensure the hearing proceeded smoothly and that all parties had an opportunity to be heard. The Commission scheduled contingency time to accommodate adjustments to its hearing schedule and also imposed time limits on oral argument and reply argument. A hearing schedule and protocol letter³ was issued to inform parties of the hearing process on April 7, 2021.

3.2 Brian Perreault's intervention in the proceeding

18. The Commission received submissions from Brian Perreault on impacts he attributed to the original construction of the Tinchebray 972S Substation. The Commission allowed B. Perreault to make submissions on the potential impacts to his land during the initial construction of the substation because its Market Oversight and Enforcement group indicated to B. Perreault that the remedies he sought would be affected by the outcome of this proceeding and that this proceeding may be the most efficient means for the Commission to consider his concerns with the Tinchebray 972S Substation, including any further design of the drainage area. This issue is addressed in Section 6 of this decision.

³ Exhibit 25469-X0812, AUC letter - Virtual hearing schedule and protocol.

3.3 Brian Perreault's requests to file new evidence

19. During the oral hearing, the Commission considered a number of motions related to requests from Brian Perreault to file late evidence and the scope of his consultant, Craig Felzien's, testimony.

20. B. Perreault's first motion, to file four site plans as an addendum to the report prepared by C. Felzien as part of his evidence, was filed on April 23, 2021. B. Perreault also requested that C. Felzien be allowed to provide further commentary on the site plans during his direct evidence. In support of his motion, B. Perreault indicated that an expert report prepared by Stantec Consulting Ltd. and filed in ATCO's reply evidence added evidence to the record that C. Felzien was not able to address in his written report. The Commission granted B. Perreault's request⁴ and in a subsequent ruling clarified the permissible scope of C. Felzien's further commentary and granted ATCO's request for further process in relation to the late filed evidence and further commentary.⁵ C. Felzien was directed to file a summary of his direct evidence in relation to the site plans prior to his scheduled testimony on April 29, 2021.

21. On April 29, 2021, the Commission struck portions of C. Felzien's opening statement because they were found to be "contrary to the Commission's ruling of April 26, 2021 where Mr. Felzien's commentary was to be limited to an explanation of the site plans."⁶ On the same day, the Commission also ruled on the permitted scope of C. Felzien's direct evidence and stated that it considered "providing commentary not already addressed in Mr. Felzien's pre-filed evidence and that goes beyond an explanation of the four site plans to be contrary to the Commission's ruling."⁷ The Commission further clarified its interpretation of Section 42.2(b) of Rule 001: *Rules of practice* at the request of B. Perreault's counsel.

22. On May 6, 2021, B. Perreault filed a second motion requesting that the Commission allow him to file written reply evidence that responded to ATCO's written reply evidence, and clarification of the scope of ATCO's yet-to-be-filed written reply evidence. In denying B. Perreault's motion, the Commission disagreed that its April 29, 2021 ruling⁸ could not have been predicted by him given that the Commission adopted an approach consistently applied in all its proceedings and B. Perreault was represented by experienced counsel who should be familiar with those well-established principles. The Commission further noted that B. Perreault had already been granted additional process to respond to the Stantec Report contained in ATCO's reply evidence and that if B. Perreault had concerns that portions of that report or any other evidence filed by ATCO constituted new evidence and not proper reply evidence, those concerns should have been raised much earlier in the proceeding.⁹

23. The Commission considers that some of the conduct of B. Perreault's counsel during the proceeding led to inefficiencies in the hearing process. As stated in its ruling of May 6, 2021, B. Perreault was represented by experienced counsel who should be familiar with the

⁴ Exhibit 25469-X0869, AUC ruling on motion to file new evidence.

⁵ Exhibit 25469-X0875, AUC clarification on scope of C. Felzien's direct evidence and ruling on request for further process.

⁶ Transcript, Volume 12, PDF page 16, lines 8-11.

⁷ Transcript, Volume 12, PDF pages 64 and 65.

⁸ The Commission's oral ruling of April 29, 2021 precluded B. Perreault from addressing the evidence placed on the record by ATCO after the submission deadline for intervener evidence.

⁹ Exhibit 25469-X0914, AUC ruling on motion to file reply evidence and clarify scope of ATCO reply.

Commission's well-established principles that during direct examination a witness must confine their evidence to matters addressed in their pre-filed evidence. The lack of adherence to these principles resulted in the Commission issuing multiple rulings where it described and applied these principles in respect of C. Felzien's evidence that could have otherwise been avoided had C. Felzien been instructed properly. Further, counsel for B. Perreault brought a motion to file new evidence 13 days after an initial request to file evidence responding to ATCO's Stantec Report, and 41 days after the Stantec Report was filed. As stated in the Commission's ruling, "If Mr. Perreault had concerns that portions of the Stantec report or any other evidence filed by ATCO Electric constituted new evidence and not proper reply evidence, those concerns should have been raised for the Commission's consideration much earlier in the proceeding."¹⁰

3.4 Consumers' Coalition of Alberta process-related concerns

24. During its argument, the CCA expressed a concern with the limitation of oral argument in the NID application to one hour.¹¹ It stated that the imposed time limit resulted in difficulties in addressing the entirety of a complex record, that it only touched on the key points of some its concerns, and that it must consequently rely on the Commission and its staff in their combined effort to have thoroughly read and understood the entire record related to the NID application. In addition, the CCA stated that as interveners were not given an opportunity for reply argument, an apprehension of bias may have been created and its ability to comment on matters raised in argument by the AESO was limited.

25. In the circumstances and given the scope of the proceeding, the Commission was required to impose time limits on oral argument and reply argument to accommodate a large number of parties. This approach was clearly communicated to parties on April 7, 2021.¹² The Commission considers one hour to be an adequate length of time to deliver a comprehensive argument, particularly where the evidentiary portion of the hearing on the NID was largely concluded five days prior to the commencement of argument on the NID application. It disagrees that the lack of opportunity for intervenor reply argument may create an apprehension of bias. In each of the NID and facility applications, intervenor argument was preceded by applicant argument. Intervenors were free to address issues arising from applicant argument in their respective arguments, should they have deemed it necessary.

4 Legislative framework

26. 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.

27. The AESO, in its capacity as the independent system operator established under the *Electric Utilities Act*, is responsible for preparing and filing a NID application with the

¹⁰ Exhibit 25469-X0914, AUC ruling on motion to file reply evidence and clarify scope of ATCO reply, PDF pages 2 and 3.

¹¹ Transcript, Volume 18, PDF pages 78 and 79.

¹² Exhibit 25469-X0812, AUC letter – Virtual hearing schedule and protocol.

Commission for approval pursuant to Section 34 of the *Electric Utilities Act*. Section 34 describes the circumstances under which the AESO must file a NID application:

34(1) When the Independent System Operator determines that an expansion or enhancement of the capability of the transmission system is or may be required to meet the needs of Alberta and is in the public interest, the Independent System Operator must prepare and submit to the Commission for approval a needs identification document that

- (a) describes the constraint or condition affecting the operation or performance of the transmission system and indicates the means by which or the manner in which the constraint or condition could be alleviated,
- (b) describes a need for improved efficiency of the transmission system, including means to reduce losses on the interconnected electric system, or
- (c) describes a need to respond to requests for system access service.

28. In brief, the AESO must file a NID application if it determines that an expansion or enhancement of the transmission system is required to meet Alberta's needs and is in the public interest, in three circumstances: there is a system constraint or condition affecting performance, a need to improve efficiency, or a request for system access service from a market participant.

29. In Decision 2004-087, the Commission's predecessor, the Alberta Energy and Utilities Board, described the NID process as follows:

It is the Board's view that section 34 contemplates a two-stage consideration of an NID. In the first stage, the Board must determine whether an expansion or enhancement of the capability of the transmission system is necessary to alleviate constraint, improve efficiency, or respond to a request for system access...

If it is determined that expansion or enhancement of the system is required to address constraint, inefficiency, system access requests, or any combination thereof, the Board must then assess, in the second stage, whether enhancement or expansion measures proposed by AESO are reasonable and in the public interest.¹³

30. Section 38 of the *Transmission Regulation* requires the Commission to have regard for a number of factors when considering whether to approve a NID, and Subsection 38(e) creates a presumption of correctness in favour of the AESO's assessment of the need, as follows:

38 When considering whether to approve a needs identification document under section 34(3) of the Act, the Commission must ...

- (e) consider the ISO's assessment of the need to be correct unless an interested person satisfies the Commission that
 - (i) the ISO's assessment of the need is technically deficient, or
 - (ii) to approve the needs identification document would not be in the public interest.

¹³ Alberta Energy and Utilities Board Decision 2004-087: Alberta Electric System Operator Needs Identification Document – Southwest Alberta 240-kV Transmission System Development Pincher Creek – Lethbridge Area, Addendum to Decision 2004-075, Application 1340849, October 14, 2004, PDF page 17.

31. When making a decision on a contested NID application, Subsection 34(3) of the *Electric Utilities Act* states that the Commission has three options: it may approve the application, refer the application back to the AESO with directions or suggestions for changes or additions, or refuse to approve the application.

32. The TFO assigned by the AESO prepares and files the facility application for the Commission's consideration. The Commission may approve or deny the application or approve the application subject to terms or conditions.

33. Applications to construct and operate a new transmission facility are made under sections 14 and 15 of the *Hydro and Electric Energy Act*. Section 2 of that act sets out its purposes, which include the provision of economic, orderly and efficient development and operation, in the public interest, of generation and transmission of electric energy in Alberta. Section 17 of the *Alberta Utilities Commission Act* requires the Commission to consider the social, economic and environmental effects of a proposed project when determining whether approval of the project is in the public interest. The Commission described its mandate under Section 17 in Decision 2009-028:

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.¹⁴

34. The Commission is considering the facility applications under sections 14 and 15 of the *Hydro and Electric Energy Act* and Section 17 of the *Alberta Utilities Commission Act*. In accordance with Section 17, the Commission must assess whether approval of the applications is in the public interest, having regard to the social, economic and environmental effects of the project.

35. The Commission considers that the public interest will be largely met if an application complies with existing regulatory standards, and the project's public benefits outweigh its negative impacts.¹⁵ It must take into account the purposes of the *Hydro and Electric Energy Act* and the *Electric Utilities Act*. The Commission must also determine whether the applicants have met the requirements of Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments* and Rule 012: *Noise Control*. An applicant must obtain all approvals required by other applicable provincial or federal legislation.

¹⁴ Decision 2009-028: AltaLink Management Ltd. - Transmission Line from Pincher Creek to Lethbridge, Proceeding 19, Application 1521942, March 10, 2009, paragraph 33.

¹⁵ EUB Decision 2001-111: EPCOR Generation Inc. and EPCOR Power Development Corporation 490-MW Coal-Fired Power Plant, Application 2001173, December 21, 2001, PDF page 12.

5 Discussion and findings

36. In this part of the decision, the Commission considers and makes findings on the NID application and the TFOs' facility applications. For the reasons outlined below and subject to all of the conditions outlined in Section 8, the Commission approves the applications from the Alberta Electric System Operator, ATCO Electric Ltd. and AltaLink Management Ltd.

5.1 Needs identification document application

37. In this section, the Commission discusses the issues to be addressed, the evidence before it, and its findings in its assessment of the AESO's NID application. It is generally organized as follows: (i) a brief summary of the planning methodology used by the AESO in its application; (ii) the identification of the need to reinforce the transmission system in the central east area and the proposed transmission development to address the need; (iii) the proposed construction milestones for each stage of the development; (iv) the three configuration options associated with the staging of the project; (v) the future reaffirmation study which would be used to trigger construction at each stage; and (vi), an examination of whether the AESO has met its participant involvement requirements and public interest mandates.

5.1.1 The AESO's planning methodology

38. The AESO performed deterministic system planning studies to assess the performance of the existing transmission system in the central east area in accommodating projected renewable generation development, identify the need for transmission reinforcements, evaluate short-listed transmission development options and select the preferred transmission development option.

39. The AESO also adopted a new approach in applying a congestion assessment, based on probabilistic studies, to estimate the levels of congestion in the study area, taking into account the projected increases in renewable generation. The AESO described the congestion assessment as a tool to evaluate and mitigate risk associated with uncertainties in the forecast increases in generation.

40. The congestion assessment informed the establishment of construction milestones for the AESO's transmission development and the associated timing of the need for the staged transmission development. The phased approach would include two stages of construction, with each stage triggered by a construction milestone. The AESO established the milestones based on the level of incremental generation that would cause 0.5 per cent congestion annually during Category A¹⁶ conditions and a 200-megawatt (MW) margin to accommodate the concurrent construction of one average-sized wind farm with the CETO project development.

41. The AESO committed to conducting a reaffirmation study once the incremental generation reaches the upper limit of the milestone range at each stage. The reaffirmation study would take into account the most up-to-date information in the study area, including location, size and type of incremental generation that has met the certainty criteria, any changes to asset ratings enabled through optimization, any additional system optimization enabled within the study area, and the most recent forecast for thermal generation production profiles in the study area.

¹⁶ Category A represents a normal system condition with all elements in service (N-0).

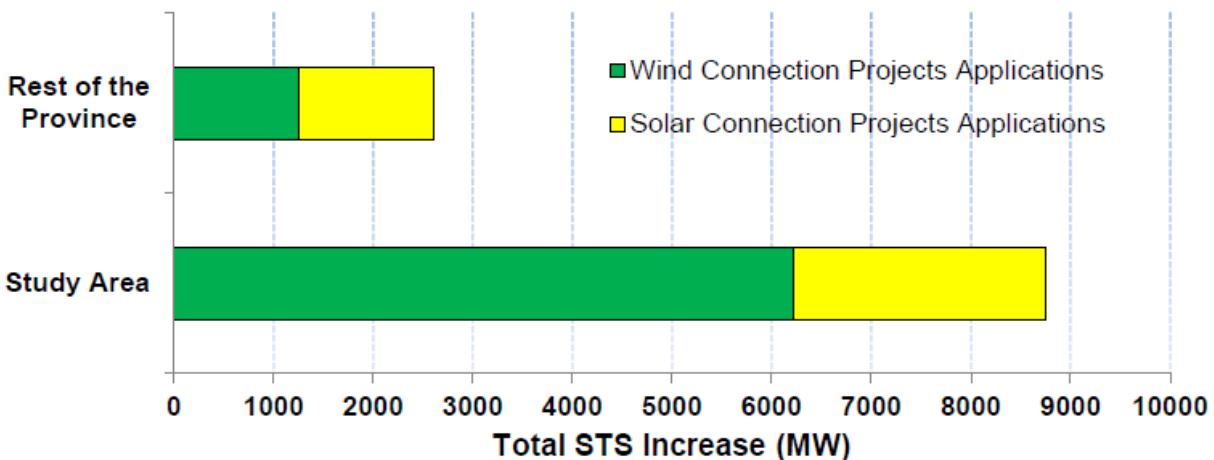
42. The AESO proposed to de-link the need decision (based on deterministic studies) from the construction timing decision (based on probabilistic congestion assessment) via a milestone monitoring process. As a result, it would mitigate the risk of unnecessary system enhancement and expenditure. The CCA generally agreed with the AESO that a congestion assessment is an improvement but cautioned that it added significant complexity.

5.1.2 Is there a need to reinforce the transmission system in the central east area?

43. According to the AESO, the driver of the need for the CETO project is the forecast renewable generation interest in the area, not the load growth. It asserted that in light of a forecast increase in renewable generation development in the central east and southeast sub-regions (study area), an expansion of the transfer-out capability of the transmission system is needed to enable surplus generation to be transferred from the study area to adjacent load centres.

44. The AESO submitted that the study area has a high interest for renewable generation, with a forecast of 900 MW by 2023 and up to 4,600 MW by 2031. The majority of renewable connection projects in Alberta are in the study area. Figure 2, which is based on the AESO's January 2020 project list,¹⁷ illustrates renewable generation interest in the study area, relative to the rest of the province.

Figure 2. Wind and solar connection projects



45. The AESO's generation outlook evolved over the course of this proceeding. Its most up-to-date project list (February 2021) shows a total of 10,188 MW of renewable development interest in the study area and 3,281 MW in the rest of the province.¹⁸ Compared to the January 2020 project list, there is an increase of 1,438 MW of renewable projects in the study area.

46. The study area is home to eight renewable electricity program (REP) projects, totalling 894 MW. While the REP was terminated in June 2019, interest in renewable development in the study area has continued, as demonstrated by generation developers paying their Generating Unit Owner's Contribution (GUOC). Historically, every generator that has paid its GUOC has

¹⁷ Exhibit 25469-X0195, Appendix B – AESO Load and Generation Forecast, PDF page 7.

¹⁸ Exhibit 25469-X0765, AESO Rebuttal Evidence, PDF page 12.

developed and connected its generation project. The GUOC payment, together with the awarded REP projects, constitute the AESO’s certainty criteria for purposes of meeting construction milestones.

47. As of January 2020, the total existing generation in the study area was 2,321 MW, and excluding the Whitla Wind Project which began commercial operation in 2019, the total generation by the REP projects was 692 MW. During 2020, an additional 534 MW of incremental renewable generation met the certainty criteria, such that approximately 1,220 MW of incremental generation in the study area met the certainty criteria as at December 2020.¹⁹ As of mid-March 2021, an additional 233 MW of incremental renewable generation had met the certainty criteria. The pace of projects meeting the certainty criteria is currently approximately 500 MW per year.

48. Due to uncertainties associated with the timing, volume, and offer behavior of the replacement or retirement of the existing thermal generation in the central east sub-region, as shown in Figure 3 below, generation dispatches using statistical and market simulation methods were developed for two thermal dispatch scenarios: Scenario 1 represents a Peaking Scenario where thermal generation has a lower capacity and energy dispatch than the historical thermal fleet, with primarily coal to gas conversion. Scenario 2 represents a Baseload Scenario where thermal generation has similar capacity and energy dispatch as the historical thermal fleet, with new gas replacement. The AESO viewed these two scenarios as bookends to cover a reasonable range of possibilities.

Figure 3. Thermal generation scenarios

Generating Unit Asset ID	Existing Capacity (MW)	Scenario 1		Scenario 2	
		2023	2031	2023	2031
BR3	149	Retired	Retired	New Simple Cycle	New Simple Cycle
BR4	155	Co-firing ^b	Retired		
BR5	385	Conversion	New Combined Cycle (479MW)	Conversion	New Combined Cycle (479MW)
SH1	400	Conversion	Conversion	Conversion	New Combined Cycle (790MW)
SH2	390	Conversion	Conversion	Conversion	
Total Capacity (MW)	1,479	1,330	1,269	1,479	1,573

Notes: ^a The future facility capacity is the same as the existing facility capacity if a capacity size is not specified in the table.

^b Alterations to the Battle River Power Plant to allow additional natural gas as a supplemental fuel in the Battle River 4.

49. The CCA was concerned that the AESO did not develop a base case or most likely scenario along with its bookends and submitted that the Baseload Scenario was not realistically possible. The Peaking Scenario and Baseload Scenario were created by the AESO in late 2018 or early 2019. In its rebuttal evidence, the AESO indicated that in light of changes in the power

¹⁹ Exhibit 25469-X0540, AESO response to CCA’s information requests, PDF page 56.

industry, it now agreed with the CCA that the Peaking Scenario is the more likely future outcome compared to the Baseload Scenario. It explained that some material projects had met the certainty criteria since the application was submitted, including the 800-MW Cascade Power Plant and the 800-MW Suncor boiler replacement, and that these projects would push the Battle River thermal generation into being more of a peaking type of asset.²⁰ It added that there was also a significant number of renewable generation projects that had met the certainty criteria.

50. The CCA asserted that the Battle River and Sheerness thermal plants would no longer operate past 2023, and that the 304 MW of new gas-fired generation assumed to replace Battle River 3 and 4 would be unlikely. Although the Battle River and Sheerness plants could be converted to gas, the CCA does not believe this to be economical, and stated that it is more likely that the plants would be shut down. The CCA submitted that if this were to happen, 1,479 MW of generation in the Baseload Scenario would be freed up and, as a result, the need for the CETO project line could be deferred beyond 2029.

51. The AESO's evidence shows that the existing transmission capability in the study area is limited. The AESO currently uses remedial action schemes (RAS), automatic protection schemes (APS) and High Voltage Direct Current Transmission redispatch to manage the operation of the transmission system in the area and avoid thermal or voltage criteria violations. RAS or APS (or a combination of the two) could result in generation curtailment and reconfiguration of transmission lines.

52. The AESO developed study cases representing stressed operating conditions under both the Peaking and Baseload scenarios. These study cases included various load levels, inertia flows, dispatched percentages of wind generation and thermal generation dispatches. Under the Peaking Scenario in 2023, study cases M1 to M5 were created using the statistical dispatch method, while study cases M6 to M9 were created using the market simulation dispatch method. Cases M2, M6 and M7 have a total thermal generation dispatch from the Battle River and Sheerness plants of 296 MW, 285 MW and 292 MW, respectively.²¹

53. The AESO performed deterministic studies on the study cases for 2023 and 2031 and concluded that the primary transmission limiting component is the west transfer-out path, i.e., the 240-kV Transmission Line 912L between the Nevis 766S and Red Deer 63S substations.

54. The deterministic planning studies show that in 2023, under the Peaking Scenario, the Category B²² generation integration capability in the study area is in the range of 450 MW to 565 MW and the Category A²³ generation integration capability enabled by generation RAS is in the range of 760 MW to 990 MW. Under the Baseload Scenario, the Category B generation integration capability in the study area is in the range of 120 MW to 280 MW and the Category A generation integration capability enabled by generation RAS is in the range of 250 MW to 680 MW.

²⁰ Transcript, Volume 2, PDF page 352.

²¹ Exhibit 25469-X0068, Appendix A – AESO Planning Report, PDF page 27, Table 3-2.

²² Category B events result in the loss of any single element (N-1) under specified fault conditions with normal clearing.

²³ Category A events represent a normal system condition with all elements in service (N-0).

55. In 2031, under the Peaking Scenario, the Category B generation integration capability in the study area is approximately 555 MW and the Category A generation integration capability enabled by generation RAS is approximately 880 MW. Under the Baseload Scenario, the Category B generation integration capability in the study area is approximately 50 MW and the Category A generation integration capability enabled by generation RAS is approximately 135 MW.

56. In summary, the AESO's deterministic planning studies showed that 250 MW to 990 MW of incremental generation in 2023 would cause reliability criteria violations, namely thermal overload, on the existing transmission facilities in the central east area, such as transmission lines 912L, 9L20, 174L and 701L. The AESO determined that in order to meet the forecast generation in the study area over the long-term, transmission development is needed to alleviate the constraints on the central east sub-region's west transfer-out path and satisfy the reliability criteria; that without additional transmission development, the transmission system does not have sufficient capability to integrate the forecast generation in its 20-year planning horizon.

57. The CCA submitted that in the next five years there is a clear need for not only an increased transfer capability out of the study area, but multiple other smaller transmission developments and modifications to provide the system capability required to meet the expected rapid growth in wind and other renewables.²⁴ However, it argued that the need to increase the transfer capability out of the central east area does not necessarily require the construction of the proposed double-circuit transmission line.²⁵

58. The CCA submitted that the Battle River and Sheerness plants would no longer operate past 2023 and that the 304 MW of new gas-fired generation assumed to replace Battle River 3 and 4 is unlikely. This would free up 1,479 MW of generation in the Baseload Scenario and as a result, the need for the CETO project line could be deferred to beyond 2029 for both the Baseload and Peaking scenarios.

59. LORC submitted that there is no need for the CETO project and that excess capacity on the distribution system should be used before new transmission is built. The AESO responded that it has an obligation to connect qualifying customers and that the CETO project gives equal opportunity for distribution and transmission connected projects in the study area because it provides a path for generators to bring their electricity to market. The AESO explained that even if there is extra capacity on the distribution system, that electricity cannot leave the area without transmission system upgrades; and that the need for the CETO project would still exist if the incremental generation in the study area were distribution-connected instead of transmission-connected.

60. LORC pointed to increased transmission and distribution rates as a concern, stating that the AESO cannot say whether an increase in generation will lead to lower pool prices. It argued that renewable generation would be an addition to, rather than replacement of, gas and coal plants because of their status as intermittent generators. This characteristic would result in higher transmission and distribution charges to connect these additional power plants. The AESO replied that eliminating congestion results in the lowest priced electricity available to the market,

²⁴ Exhibit 25469-X0679.02, CCA Evidence Part 3, PDF page 11.

²⁵ Exhibit 25469-X0733, CCA IR Responses to AUC Round 1, PDF page 4.

regardless of where it is located, but that if congestion exists, it must meet customer demand using higher priced generation.

61. LORC submitted that the AESO is giving transmission-connected generation in the study area a competitive advantage by requiring ratepayers to subsidize transmission-connected projects to pay for the connection. It stated that these costs should be paid by the large wind developers. The AESO responded that because the CETO project would benefit the system, which includes many customers, its costs should be considered system (ratepayer) costs pursuant to the *Electric Utilities Act*.

5.1.2.1 Findings

62. The renewable generation interest in the study area is evident to the Commission: the evidence shows that the study area is renewable resource rich and home to 894 MW of REP projects; and in both the AESO January 2020 and February 2021 project lists, the volume of renewable generation connection projects in the study area is more than three times that of the rest of the province. The volume of generation projects in the study area satisfying the certainty criteria has also increased steadily.

63. The Commission also accepts the evidence that the existing transmission system in the central east area is thermally constrained due to the limited transfer out capability, especially the west path, as illustrated in the AESO's deterministic planning studies. With the forecast 900 MW of incremental renewable generation in the area by 2023, the 250 MW to 680 MW generation integration capability in the Baseload Scenario would fall short under all study cases, and the 760 MW to 990 MW generation integration capability in the Peaking Scenario would not sufficiently accommodate all forecast generation without violating reliability criteria. Clearly, in both scenarios, the existing transmission system would not be able to meet the forecast up to 4,600 MW of incremental renewable generation by 2031 because the available generation integration capability is 135 MW to 880 MW. The Commission therefore concludes that there is a need to expand the transmission system in the central east area in order to accommodate the forecast renewable generation projects.

64. The Commission finds that the current volume and pace of generation projects meeting the AESO's certainty criteria are solid indicators that incremental generation projects in the area will move ahead with greater certainty. In December 2020, approximately 1,220 MW of incremental generation in the study area met the certainty criteria, (of which 692 MW of generation are REP projects and 47 MW of generation are two solar generation projects energized and in commercial operation as of July 2020).²⁶ The current pace of projects meeting the certainty criteria is 500 MW per year. Depending on the thermal generation scenarios and study conditions, 250 MW to 990 MW of incremental generation in 2023 could be integrated to the area without causing reliability criteria violations on the transmission system. A comparison of the incremental generation projects meeting the certainty criteria with the range of the available generation integration capability confirms to the Commission that there is a need to expand the transmission system in the central east area in order to accommodate the renewable generation projects.

²⁶ The total existing generation capacity in the study area is counted as of January 2020. Incremental generation is counted after January 2020. Also see Exhibit 25469-X0195, Appendix B Load and Generation Forecast, PDF pages 4 and 5.

65. The AESO did not identify the need for the CETO project based on a single worst-stressed case in its deterministic planning studies. Rather, it developed a wide range of study cases with different load levels, inertia flows, wind and thermal generation dispatches and two thermal generation scenarios, both in the near-term (year 2023) and mid-term (year 2031). It also performed sensitivity studies to test the impacts of future generation distribution in three sub-regions (southeast sub-region, central east sub-region and southwest sub-region) on the total generation integration capability.

66. The Commission observes that some study cases in 2023 under the Peaking Scenario have an approximately 300-MW production profile from the Battle River and Sheerness plants, such that even if these two plants were to retire completely as asserted by the CCA, the freed-up generation integration capability would be approximately 300 MW in these study cases, contrary to the 1,479 MW asserted by the CCA. The Commission finds that with the strong interest and current pace of generation projects meeting the certainty criteria in the area, while the retirement of the Battle River and Sheerness plants may affect the timing, it will not eliminate the need for the CETO project.

67. The Commission does not accept LORC's assertion that large wind generation developers should pay for the cost of the CETO project. The project will contribute to a fair, efficient and openly competitive electric market in the province by enabling incremental generation integration capability in the area, regardless of whether the incremental generation is transmission or distribution-connected. It consequently properly qualifies as a system project, rather than an individual generator connection project, and must be paid for by all the ratepayers who benefit from it.

5.1.3 Is the AESO's proposed option the best solution to integrate renewable generation in the area?

68. The AESO developed six options to address the identified need. Option 1 is the AESO's preferred solution because, in its view, it provides the best overall technical performance, cost estimates, and environmental and land effects. It is also the only option the AESO has applied for. Option 1 involves adding two 240-kV circuits between the Tinchebray 972S and Gaetz 87S substations and modifying both substations to include the addition of 240-kV circuit breakers and associated equipment. The AESO estimated that Option 1 will enable 820 MW of incremental generation at a cost of \$471 million.

69. The CCA stated that the concentration of the forecast generation growth to the northern part of the study area appeared to be misaligned with where generation projects are actually locating. The CCA submitted that accommodating generation in the southern half of the central east sub-region and the southeast and southwest sub-regions is more manageable than the proposed 240-kV lines to provide capacity out of the northern half of the central east sub-region. The AESO responded that because the southern portion of the transmission system has stronger outlets than the northern portion, building a line in the south end would not help with the unbalance.

70. The CCA asserted that the AESO also failed to factor the value of system loss reduction or system efficiency into its cost comparison of options. Selecting alternatives solely on the basis of the most transfer capability without consideration of the total cost of the alternative could result in an economically sub-optimal development proposal. The AESO responded that the

system losses do not vary significantly among options due to similar line length within the same area except for the Eastern Alberta Transmission Line (EATL) bi-pole option.

71. The CCA listed 17 transmission developments as alternatives but stated that it has “neither proposed or not proposed”²⁷ that all the developments listed are required. The AESO responded as follows:

- 1) EATL bi-pole: it was one of the six transmission options considered by the AESO. However, it was eliminated because it had lower integration capability, more cost, lower loss savings and would require additional system upgrades.
- 2) Inexpensive debottlenecking items (for example, phase shifter transformer, bus split at Milo Substation): these optimization opportunities may enable an additional 100 to 200 MW of generation integration capability and therefore do not replace the need for the preferred transmission development which is to provide material incremental generation integration capability for the longer term.
- 3) A high-capacity single circuit between Coyote Lake 963S and East Crossfield 64S substations: it would provide much lower generation integration capability.
- 4) Capital replacement/rebuild of the 912L and/or 9L20 line: it requires lengthy outages (seven to nine months) that will pose significant operational challenges in the absence of the proposed CETO project transmission lines. The AESO’s planning studies include all approved capital maintenance projects that are planned to be implemented by 2023, including directing AltaLink to restore the capability of Transmission Line 174L to its full conductor rating.
- 5) Items outside of the study area (for example, re-termination of some Foothills Area Transmission Development lines): they do not increase the transfer capability in the CETO project study area.

72. The AESO submitted that it is unclear what the CCA’s intentions are if they are not advancing any alternatives. The AESO added that six of the CCA’s listed alternatives would advance transmission rebuilds by over 10 years and that the CCA underestimates the cost and viability of these plans.

73. The CCA stated that a single-circuit 2X795 conductor 240-kV line in combination with flow control devices would provide more transfer-out capability in the long term than the proposed two circuits. It also estimated that building a single-circuit line with a larger conductor would reduce the project cost by \$88 million, reduce system losses, and reduce the land-use impacts by requiring shorter structures and half the wires.

74. Notwithstanding the foregoing, the CCA submitted that it is not currently practical or economical to withdraw the AESO’s application and develop a new solution, and that a new line at the north end of the central east sub-region would be required in the next 10-20 years to accommodate new wind developments.

75. The CCA submitted that the AESO should have an obligation to fully vet the TFOs’ cost of structures to ensure that cost estimates are uninfluenced by a TFO preference unrelated to an

²⁷ Exhibit 25469-X0736.01, CCA IR response to AESO Round 1 FINAL, PDF page 5.

optimal balance between risk, reliability and cost. The AESO replied that it had reviewed the TFOs' service proposal estimates against benchmark data and found the estimates to be reasonable.

76. Responding to LORC's assertion, the AESO indicated that it does not have any specific plan to use the Tinchebray 972S Substation as a hub in the next 10 years.

5.1.3.1 Findings

77. The Commission is convinced that the AESO has explored solutions thoroughly by screening potential alternatives, formulating development options, and evaluating and comparing options. It shortlisted six development options after eliminating 14 screening alternatives; conducted a comprehensive technical assessment on these development options including sensitivity assessments; and also conducted additional assessments on the preferred development option, including a voltage stability analysis, transient stability analysis and transmission system loss analysis.

78. The Commission is satisfied that Option 1 is technically superior to the other five options in terms of incremental generation integration capability and operational flexibility. For example, it provides flexibility to integrate approximately 400 MW more generation in the west Hanna area where there is strong market interest for renewable development. It also has lower estimated costs and lower potential environmental and land use effects.

79. The Commission accepts the AESO's evidence that the CCA's alternatives will likely be more costly, create significantly more landowner impacts or not materially increase generation integration capability in the study area. Notably, the CCA conceded that its alternatives were not fully developed and would require more work. As a result, the CCA's alternatives did not contribute to the Commission's understanding of the issues in this proceeding. The CCA has consequently failed to convince the Commission that these alternatives are superior to Option 1 or that the AESO's assessment of Option 1 is technically deficient.

80. For the reasons stated above, the Commission finds that the AESO's Option 1 is the best solution to integrate renewable generation in the area and approves the proposed CETO project development.

5.1.4 Has the AESO reasonably established the construction milestones?

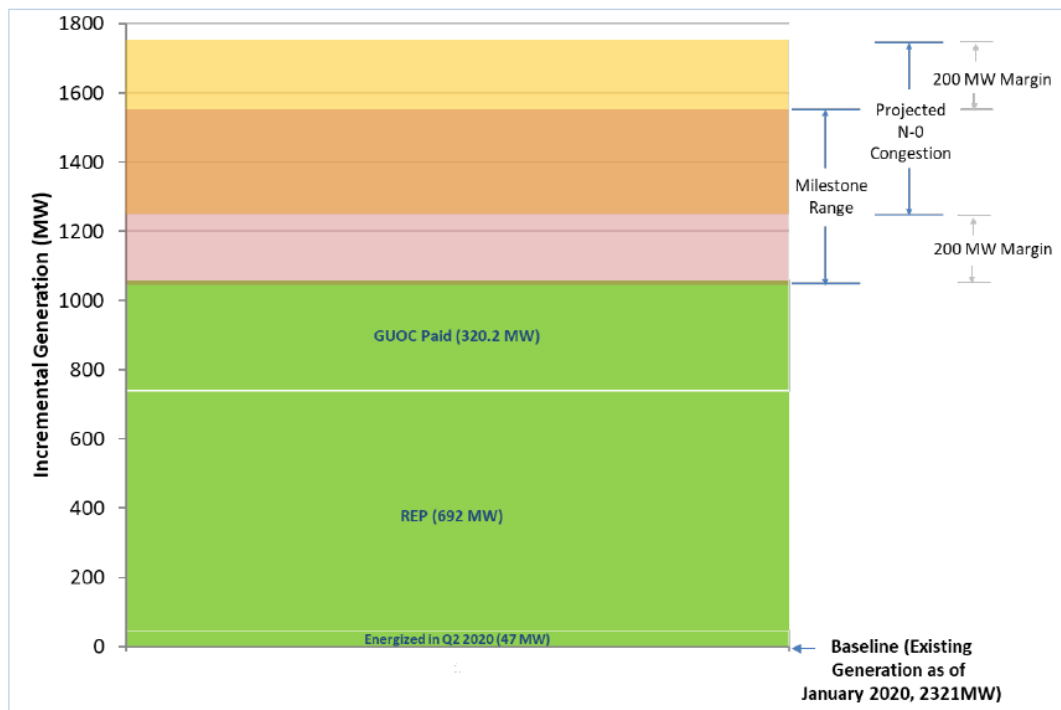
81. The AESO specified construction milestones associated with each stage of the proposed transmission development to minimize the risk that the transmission facility is built too early and therefore delays project costs to a point where the project in-service date aligns with the project need. The milestones were established by performing hourly probabilistic studies (congestion assessment) that demonstrate the relationship between the addition of generation in the study area and the likelihood of observing congestion using two generation scenarios in which the existence and operating patterns of thermal generation were varied.

82. The congestion assessment found that the expected percentage of congested hours increases steadily as new renewable generation development is added in the study area; and as the percentage of congested hours increases, the average magnitude of thermal criteria violations resulting in congestion is also expected to increase. This congestion would occur along the

240-kV transmission line 912L/9L20 of the central east sub-region west transfer-out path, as well as the 138-kV transmission lines 174L and 701L in the central east sub-region.

83. It is expected that the Stage 1 construction milestone will be met with the addition of approximately 1,050 MW to 1,550 MW of incremental generation (above the existing installed generation as of January 2020) that satisfies the AESO’s certainty criteria in the study area, as shown in Figure 4.²⁸ Stage 1 development will increase the generation integration capability in the area by 400 MW to 600 MW.

Figure 4. Stage 1 construction milestones



84. It is expected that the Stage 2 construction milestone will be met with the addition of approximately 1,700 MW to 2,150 MW of incremental generation (above the existing installed generation as of January 2020) that meets the AESO’s certainty criteria in the study area. Stage 2 development will increase the generation integration capability in the area by approximately 300 MW.

85. The CCA stated that the AESO’s congestion assessment contained some fundamental flaws such as the bookend scenarios used to trigger construction being too low for the Baseload Scenario. It also argued that the Baseload Scenario appeared to have a forced scenario rather than being based on credible input assumptions. The CCA asserted that a more reasonable generation output forecast and assessment of congestion should be used to determine the need and the milestones.

²⁸ Exhibit 25469-X0068, Appendix A – AESO Planning Report, PDF page 6, Figure E-1.

86. The CCA submitted that the Peaking Scenario is a more reasonable approximation of the output of the converted coal plants and that the Baseload Scenario does not reasonably forecast in-merit generation. It stated that the Baseload Scenario underestimates the marginal costs for such plants and therefore causes them to dispatch many more hours than they would be dispatched economically. The CCA submitted that the Baseload Scenario should not be relied upon to forecast whether there will likely be congestion in the study area.

87. As mentioned earlier, the AESO now agrees with the CCA that the Peaking Scenario is the more likely scenario, and will accordingly use the upper MW limit of the milestones to trigger a reaffirmation study. Originally, the AESO implied that the lower MW limit of the milestones would be used. The lower limits of the milestones were drawn from the Baseload Scenario which would reach the construction milestones earlier than the Peaking Scenario.

88. The CCA stated that the failure to consider the strong inverse correlation between the hourly wind generation output and hourly thermal generation output would overstate the need to develop incremental transmission capacity. The AESO noted that generation from the Battle River and Sheerness plants plays a relatively small role in contributing to congestion in the Peaking Scenario. The average combined output at these two sites is only 250 MW at the time of congestion in the Peaking Scenario.

89. The AESO reiterated that the timing of the Battle River/Sheerness retirement is inconsequential to the congestion assessment results. The complete retirement of the sites would enable flexibility for the additional integration of less than one year of incremental renewable generation growth in the area because the current renewable growth pace is approximately 500 MW per year.

90. The AESO further pointed to the firm transport delivery service contract within the Battle River and Sheerness regions that requires the generator facility owner to have at least a five-year expectation of operating starting in 2022. As a result, the AESO proffered that there is a reasonable probability of continued production from those sites.

5.1.4.1 Findings

91. A substantial portion of the CCA's evidence focused on the reasonableness of the AESO's Baseload Scenario and how it affected the results of the congestion assessment and the establishment of milestones. The Commission finds that the AESO's acceptance of the Peaking Scenario as the most likely scenario and its intention to use the upper limits of the milestones effectively eliminate the CCA's primary concern with the AESO's congestion assessment.

92. The AESO developed generation scenarios and performed congestion assessments in late 2018 and early 2019 based on the best information available at that time. The Commission is satisfied that in conducting the reaffirmation study, the AESO will take into account the most up-to-date information in the study area including location, size and type of incremental generation that has met the certainty criteria, any changes to asset ratings enabled through optimization, any additional system optimization enabled within the study area and the most recent forecast for thermal generation production profiles in the study area. The AESO will also solicit stakeholder feedback on study assumptions prior to conducting the reaffirmation study.

The Commission acknowledges the AESO's commitment to conduct a sensitivity study on the complete retirement of the Battle River and Sheerness plants and to examine whether the increased milestones would be accommodated in the reaffirmation study.

93. For the reasons stated above, the Commission finds the AESO's construction milestones to be reasonably established.

5.1.5 Is proposed Configuration 1 superior to other configurations?

94. The AESO considered the following three configurations to meet the need for the development of two circuits between the Tinchebray 972S and Gaetz 87S substations.

Table 1. Configuration considerations

Configuration	Description
1	Add two circuits on a double-circuit structure with the conductors tied together in Stage 1. The second circuit to be untied and energized when the Stage 2 milestone is met.
2	Add one circuit on a double-circuit structure in Stage 1 with a second circuit added when the Stage 2 milestone is met.
3	Add one circuit on a single-circuit structure in Stage 1. Add an additional circuit on a separate single-circuit structure when the Stage 2 milestone is met and file under a separate facility proposal.

95. The AESO supports Configuration 1 as recommended by the TFOs because it would reduce potential overall impacts to stakeholders and the environment and has lower life-cycle costs. The TFOs also indicated that Configuration 1 would reduce line losses and electric magnetic fields in comparison to Configuration 2.

96. The AESO expects the incremental generation required for Stage 2 to occur within a four-year period, even under the Peaking Scenario. The AESO's net present value analysis for the life-cycle cost favours Configuration 1 over Configuration 2 provided Stage 2 is in-service four or less years following Stage 1. Configuration 1 has a lower life-cycle cost than Configuration 3 provided Stage 2 is in-service 18 or less years following Stage 1. Currently, the first construction milestone will fall within the 2023 timeframe and the second construction milestone will fall within the 2027-2029 timeframe.

97. The AESO submitted that the system loss in 2023 for Configuration 1 would be more than 10 MW lower than Configuration 2. A high-level analysis of the economic benefit would yield a loss saving of approximately \$4 million dollars per year for Configuration 1 when compared to Configuration 2, assuming an average system loss difference of 10 MW and an annual average pool price of \$50/MWh.

98. Should the second stage be pushed beyond four years, or is not needed at all, there would be cost savings associated with the delay in that construction as illustrated in Figure 5:²⁹

Figure 5. Net present values at different energization dates

Energization date	Second Stage energization date	NPV of Configuration 2 (millions)	NPV Configuration 3 (millions)
2023	2024	\$340	\$430
2023	2025	\$337	\$423
2023	2026	\$334	\$416
2023	2027	\$332	\$409
2023	2028	\$329	\$403
2023	2029	\$326	\$396
2023	2030	\$324	\$390
2023	2031	\$321	\$384
2023	2032	\$319	\$378
2023	2033	\$317	\$372
2023	2034	\$314	\$367
2023	2035	\$312	\$361
2023	2036	\$310	\$356
2023	2037	\$308	\$351
2023	2038	\$306	\$347
2023	2039	\$304	\$342
2023	2040	\$303	\$338
2023	2041	\$301	\$334
2023	2042	\$299	\$330
2023	2043	\$298	\$326

99. The CCA argued that the advantages of staging the project to better manage and defer cost is almost entirely lost as a result of the selection of Configuration 1.

5.1.5.1 Findings

100. Because the capital cost and life-cycle cost of Configuration 3 are much higher than configurations 1 and 2, the Commission finds Configuration 3 to be inferior and eliminates it from its consideration. It must consequently decide which of configurations 1 and 2 is superior.

101. Although Configuration 1 has a higher upfront capital cost than Configuration 2, its life-cycle cost is lower than Configuration 2 if Stage 2 of the CETO project development is required within four years of Stage 1. In light of the 500 MW per year pace of generation meeting the certainty criteria, the Commission finds that it is very likely that Stage 2 development will be required within four years of Stage 1 development. As such, the life-cycle cost of Configuration 1 is very likely to be lower than Configuration 2.

102. In addition, Configuration 1 would have the least impact on landowners and the environment because construction and reclamation would only occur once. It would also have

²⁹ Exhibit 25469-X0412, Attachment AESO-AUC-2020NOV06-001, PDF page 5, Table 3.

less potential to spread clubroot than Configuration 2. Under Configuration 1, construction crews only have to be mobilized once and land access agreements only have to be made once.

103. While the Commission agrees with the CCA that Configuration 1 nullifies the purpose of staging the CETO project, the Commission finds that the overall benefits of Configuration 1 outweigh Configuration 2 and therefore approves Configuration 1.

5.1.6 Reaffirmation study

104. The reaffirmation study will follow the same methodology as the congestion assessment filed with the CETO NID application. The AESO will study one scenario reflecting the most up-to-date information in the study area and conduct a sensitivity analysis assuming the retirement of the Battle River and Sheerness thermal plants. The reaffirmation study will analyze the congestion trend to at least 2030 to confirm that congestion levels are not short-term and are large enough to trigger construction, and will also determine whether an increased milestone monitoring range can then be accommodated.

105. The AESO set out the process for reaffirmation³⁰ in which the AESO will determine, on an annual basis at a minimum, whether a reaffirmation study would be triggered, based on the incremental generation meeting certainty criteria. The CCA considered it critically important to vet the AESO's supply assumptions prior to any modelling being done because there should be other metrics than only the inclusion criteria (i.e., certainty criteria) to assess the likelihood of new future generation builds. The AESO committed to seeking stakeholder feedback on key study assumptions prior to finalizing assumptions and conducting the reaffirmation study.

106. The CCA submitted that a significant amount of data must be disclosed so that stakeholders can assess whether the modelling input assumptions and the individual plant output forecast are reasonable. For example, unless plant revenue can be compared to plant cost, one cannot conclude whether it is reasonable for individual plants to continue to participate in the market. The AESO argued that the CCA was seeking large volumes of detailed and, in some cases, confidential data in order to audit the AESO's work. The CCA indicated that stakeholders cannot possibly audit the AESO's work because the CCA does not have access to its models and detailed results.

107. The AESO disagreed that all input assumptions requested by the CCA are fundamental and key to conducting the reaffirmation study due to confidentiality, magnitude of the data, and being outside the study area, publicly available or irrelevant. The AESO plans to provide similar information it included in its application or provided to the CCA during the information request process; for example, the assumptions for existing thermal generating units in the study area including technology type, average heat rate, fuel cost, carbon emission cost, variable operational and maintenance cost, and start-up cost. The AESO explained that if it makes changes to the existing generating facilities in the study area, it will share assumed block size and bidding assumptions for the Battle River and Sheerness thermal plants.

108. Should the reaffirmation study confirm that the construction milestone is not met, the AESO will summarize the study and notify the Commission. If the study confirms that the milestone is met, the study report will be filed with the Commission at least 15 days prior to directing the TFOs to commence construction. Although the AESO does not see a need for

³⁰ Exhibit 25469-X0765, AESO Rebuttal Evidence, PDF page 9.

another intensive regulatory review, it will follow the Commission's direction on the process required.

109. The CCA submitted that the reaffirmation process should be subject to review to ensure that the transmission line is not built too early and assess how the proposed CETO development may change.³¹ It added that the Commission may want to direct the AESO to modify the solution, given the updated information.

110. The upper limit of the Stage 1 milestone, i.e., 1,550 MW of incremental generation that has to satisfy the certainty criteria, had not been met as of May 14, 2021, the close of record of this proceeding. While the AESO has not yet initiated the reaffirmation study, it expects to trigger it in the fourth quarter of 2021.

5.1.6.1 Findings

111. The Commission finds the proposed reaffirmation process to be reasonable because it would provide stakeholders with an opportunity to provide feedback on key study assumptions before the AESO finalizes those assumptions and conducts the congestion assessment. The reaffirmation study report would also include all similar information, including study assumptions, to what was in this NID application and in the responses to the CCA's information requests to the AESO.

112. The Commission accepts that the purpose of the reaffirmation study is not to re-evaluate the need for the CETO project, and that it instead serves to delink the need decision from the construction timing decision. The need to reinforce the transmission system in the central east area has been established by the AESO's deterministic planning studies, as discussed in Section 5.1.2. Likewise, the proposed CETO transmission development to meet the identified need has been found to be superior to any other options, including the CCA's proposals, as discussed in Section 5.1.3. As a result, subject to issues that the Commission may choose to explore in the reaffirmation study process, the Commission does not agree with the CCA that another regulatory review on the CETO development is justified.

113. As indicated in the AESO's NID application, if Stage 1 of the CETO project development is not in service by December 31, 2025, the AESO will notify the Commission whether the need to expand or enhance the transmission system described in the NID continues, and whether the preferred transmission development continues to be the AESO's preferred technical solution. In addition, if Stage 2 of the CETO development is not in service by December 31, 2030, the AESO will provide an update to the Commission on its status. The Commission finds that these commitments effectively examine the continuous validity of the need for and the proposed CETO development, which in turn address the CCA's concern with the project being built too early or requiring modifications.

114. The Commission is satisfied that the reaffirmation study would utilize the most up-to-date information, explore optimization opportunities like flow control devices and assess congestion over the long-term. In particular, the Commission finds that a sensitivity scenario

³¹ Exhibit 25469-X0679.02, CCA Evidence Part 3 – Technical – Transmission Planning and Congestion, PDF pages 86 and 87.

with the complete retirement of the Sheerness and Battle River thermal plants would address the CCA's primary concern in this proceeding.

5.1.7 Has the AESO met the requirements of the participant involvement program?

115. The CCA asserted issues with the AESO's consultation process, specifically that ratepayers and their representatives, such as the CCA, were not seriously engaged until after the NID application was filed with the Commission. The CCA stated that at this stage, any input is seen as threatening the work undertaken by the AESO and the TFOs, or potentially delaying the in-service date of the project, preventing co-operation between the parties. The AESO replied that the participant involvement program for the CETO project was initiated well before the application was filed with the Commission, and that the CCA chose not to participate until after the application was filed.

116. The AESO conducted a participant involvement program for the CETO NID between January 2019 and March 2020. The AESO notified and provided information packages to stakeholders in the CETO project area, including occupants, landowners and residents, market participants, local authorities, agencies and government, and Indigenous communities. The AESO used various methods to notify stakeholders, such as postal code drop, newspaper, the AESO website, the AESO stakeholder E-newsletter, emails and information packages.

117. AESO personnel were available at the TFOs' open houses to discuss the need for the project and answered questions. The AESO hosted an information session on October 3, 2019 to provide an overview of three transmission projects, including the CETO project.

118. The AESO held a technical session to answer stakeholder questions regarding the NID application in December 2020. The CCA credited the AESO for holding this technical session and stated that informal discussions between the CCA and AESO were more helpful. However, the CCA asserted that the one-day technical session and timing of the session after filing the application did not allow for consideration of alternatives.

119. The CCA requested that the Commission encourage the AESO to work with external parties earlier to allow for a more productive and less adversarial process. It urged the Commission to direct the AESO to engage parties earlier in the process by filing a preliminary application before any major need decisions are made. The AESO responded that it would engage the CCA earlier in the process if the CCA were committed to provide input into the AESO's decision-making process and its participation were not contingent upon cost recovery.

5.1.7.1 Findings

120. The Commission is satisfied that the AESO has met the notification and consultation requirements in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments*. In addition to consulting with stakeholders prior to filing the NID application, the AESO continued to engage them. For example, the AESO held a one-day technical session to assist interested parties in better understanding the planning results, milestone design, alternative options considered and congestion assessment results. It also had informal discussions with the CCA to provide clarification and additional information, which resulted in the withdrawal of the CCA's motion for further and better responses to its information requests. That said, the Commission

acknowledges that an effective participant involvement program may not ultimately resolve all stakeholder concerns.

121. Given the findings above, the Commission considers that the CCA's submissions on the AESO's consultation process did not assist in its understanding of the relevant issues. Further, the Commission finds that the CCA's proposal to have the AESO file a preliminary application before any major need decision is made to be outside the scope of this proceeding.

5.1.8 Has the AESO met its public interest mandate?

122. LORC submitted that the AESO did not conduct any type of public interest analysis but assumed that the requirement to plan to accommodate 100 per cent of in-merit electric energy onto the Alberta Interconnected Electric System (AIES) is in the public interest. It stated that the AESO did not conduct its own environmental assessment and instead delegated that to the TFOs. LORC also submitted that the AESO did not examine the amount of agricultural land that will be displaced by the renewable projects, nor did it provide evidence on the positive or negative economic implications or effects on property taxes, construction jobs or capital investment.

123. The CCA argued that the strong advocacy approach that the AESO uses in advancing its projects seems to be inconsistent with its public interest mandate when Alberta economic conditions call for restraint.

124. The AESO submitted that there is a public interest benefit to pursuing an uncongested transmission system, which provides investment certainty and non-discriminatory access to the AIES and therefore supports generation development. It stated that to fulfill its public interest mandate, the AESO must balance several factors including reliability, cost and market access.

125. The AESO submitted that the NID application met the requirements established in the *Electric Utilities Act*, *Transmission Regulation* and AUC Rule 007. It studied a wide range of system conditions under which a wide variety of supply could compete to deliver low energy prices to customers. It considered six transmission development options and concluded that the preferred transmission development is technically superior to other options in terms of the incremental generation integration capability, operational flexibility, capital cost and environmental and land use effects. The AESO stated that it conducted a net present value analysis to better understand the differences in the life-cycle costs of three different configurations. The AESO added that it reviewed the TFOs' service proposal estimates against benchmark data and found the estimates to be reasonable.

5.1.8.1 Findings

126. When considering whether to approve a NID under Section 34(3) of the *Electric Utilities Act*, the Commission must have regard for the principle that it is in the public interest to foster an efficient and competitive electricity market and a transmission system that is flexible, reliable and efficient and preserves options for future growth. These criteria are set out in Subsection 38(a) of the *Transmission Regulation*. The AESO also has a legislated public interest mandate. This mandate is informed by Section 34(1) of the *Electric Utilities Act* and involves balancing several factors including cost, reliability and market access. The Commission acknowledges that in doing this balancing, the AESO considers the public interest criteria set out in Subsection 38(a) of the *Transmission Regulation*. The public interest as it relates to the Commission's assessment of a transmission facility application involves a different set of criteria

and includes social, economic and environmental components pursuant to Section 17(1) of the *Alberta Utilities Commission Act*.

127. The Commission finds that in evaluating the need and preparing its NID application, the AESO discharged its public interest mandate by balancing several factors, including cost, reliability and market access. For example, the AESO had conversations with the TFOs on their capital replacement or maintenance plans in order to co-ordinate the transmission system plans with the TFOs' capital maintenance plans, if effective and beneficial to do so; and as a result of that conversation, the AESO directed AltaLink to restore the capability of Transmission Line 174L to its full conductor rating. The Commission also accepts that the estimated project cost was reduced due to the AESO's prudent relaxation of certain transmission loading standards combined with new construction methods and that the reaffirmation study will contribute to mitigating the risk of overbuild.

128. Further, the Commission accepts that the AESO considered the public interest broadly: it evaluated six technical solutions to meet the need where social, environmental and economic factors were considered in its evaluation; and, as it pertained to project economics, its consideration of staging and milestones, as well as the life-cycle cost evaluations, assisted the AESO in selecting its lowest cost option, which meets the technical need, and provides more certainty in the timing of development.

129. The Commission is satisfied that the AESO's preferred transmission development is in the public interest and that it considered the factors set out in Subsection 38(a) of the *Transmission Regulation*. The AESO's preferred transmission development is the lowest cost option to meet the need, complies with Alberta reliability standards, is consistent with its long-term forecast and area transmission system plans which will foster an efficient and competitive market, and preserves options for future growth.

130. Lastly, the Commission is satisfied that it was appropriate to defer environmental and land use considerations to the TFOs, as required in NID7(9) of Rule 007. (This is particularly so in circumstances such as these, where the AESO NID application and TFO facility applications are requested to be considered jointly, pursuant to Section 15.4 of the *Hydro and Electric Energy Act* and Section 6 of Rule 007). LORC's submissions on and pursuit of environmental and land use considerations in the NID portion of the hearing did not contribute to the Commission's understanding of the relevant issues. This delegation is permitted under Section 13(1) of the *Transmission Regulation*. The TFOs have expertise in evaluating these elements and are required to do so as part of their applications.

5.1.9 Conclusion on the needs identification document application

131. For all the reasons described above, the Commission concludes that the AESO's NID application meets the requirements of Rule 007. None of the interested parties has satisfied the Commission that the assessment of the need to expand the transmission system in the central east area to improve system reliability and allow for the interconnection of future generation in the area is technically deficient or not in the public interest.

132. Having regard to the foregoing, the Commission approves the proposed CETO development and the construction milestones as filed by the AESO.

5.2 Facility applications

133. In this section, the Commission considers the issues and the evidence, and makes findings in its assessment of the ATCO and AltaLink facility applications. It is organized as follows: (i) the structure types proposed by the TFOs; (ii) agricultural impacts; (iii) environmental impacts; (iv) other potential impacts such as fire, noise and electromagnetic fields; (v) the assessment of the routing proposed by the TFOs; (vi) the Gaetz 87S and Tinchebray 972S substation alterations; (vii) the impacts to the MNA; and (viii), the consultation process and participant involvement programs.

5.2.1 Structure types

5.2.1.1 Structure choice

134. Earlier in this decision, the Commission approved the NID application for this project and a double-circuit configuration to meet the NID. This section discusses the ATCO and AltaLink proposals on the type of structure to use for the CETO project transmission line, that meets both the approved NID and double-circuit configuration. To be certain, this section does not discuss the single-circuit positions advanced by the CCA in its facility argument because the Commission has already made its determinations on this matter earlier in Section 5.1.3.

135. Both ATCO and AltaLink proposed the use of double-circuit steel monopole structures for this project because they meet the technical requirements and functional specification of the AESO's NID, which requires the construction of two circuits. Both TFOs asserted that the double-circuit steel monopole structure is a cost-effective solution and the least-impact solution for the double-circuit transmission line. The Commission considers that insufficient evidence was filed to persuade it otherwise. Although the CCA proposed building a single-circuit option, it did not offer any evidence advancing a different double-circuit option. As a result, the CCA's submissions on a single-circuit option did not assist the Commission in its understanding of these issues.

136. The CCA raised concerns regarding the double-circuit steel monopole structures, stating that historically monopole structures have cost 30 per cent more than lattice towers and likely even more when compared to H-Frame structures. The CCA suggested that inclusion of the higher cost risks associated with monopole structures in the TFOs' line optimization studies would have identified the higher costs of the proposed monopoles when compared to the use of H-Frame structures. Both TFOs' line optimization studies included all cost considerations directly associated with structure types and conductors, including foundation costs. The TFOs ruled out lattice towers early on in their assessments because the costs of these towers were shown to be much higher than the other options considered.

137. While the Commission found the TFOs' line optimization studies to be helpful, it also recognizes that these studies only depict a specific point of time, are planning documents and have the potential to change. The Commission found the breakdown of costs provided in ATCO's study to be particularly useful for the purpose of comparing the costs of different structure and conductor combinations. It would like to see this type of information in future line optimization studies and those studies included in facility applications.

138. In the Commission's view, the line optimization studies demonstrate that double-circuit steel monopole structures are a cost-effective option for this project. AltaLink's study showed

that double-circuit steel monopole structures had the lowest 20-year, net present value.^{32, 33} Constructing two single-circuit transmission lines on either separate steel H-Frame structures or separate steel monopole structures was shown to have a higher cost than the double-circuit steel monopole option. ATCO's study showed that when considering capital costs, the double-circuit steel monopole structure with a 2x795 kcmil ACSR³⁴ conductor is the least cost option.³⁵ ATCO stated that when considering the 40-year cumulative present value (CPV), the double-circuit steel monopole only had a CPV 7.75 per cent greater than its base case of two separate single-circuit wood H-Frame structures.³⁶ It also noted that landowner feedback indicated a strong preference for double-circuit structures combined with a strong objection to two single-circuit structures due to the larger right-of-way required and resulting impact to land use. ATCO's witness Chris Storey testified that it proposed a double-circuit steel monopole structure because overall that choice had the least impact.

139. AltaLink's line optimization study did not consider wood H-Frame structures. The CCA suggested that if it had, the results might have been similar to those of ATCO, and possibly provide a \$167,000 per kilometre reduction in direct construction costs when compared to steel monopoles.³⁷ AltaLink stated that it had reviewed the cost of wood H-Frame structures and steel H-Frame structures at the outset of its optimization study and found that the cost from its suppliers were very similar. AltaLink's witness Brian Townsend testified that after considering the additional costs of operations and maintenance for wood, the TFO decided to exclude wood from the line optimization study and go with steel because the cost was similar. ATCO's witness Dustin Baptist also testified that over time, wood H-Frame structures require a higher amount of ongoing maintenance when compared to steel monopole structures.

140. The CCA recommended that the TFOs prepare cost estimates of the foundation costs and risk range for double-circuit steel monopoles, single-circuit steel monopoles and single-circuit wood H-Frame structures. The CCA's perspective was that foundation costs for monopoles could be much higher than forecast, especially if soil conditions along the route are poor. ATCO explained that compared to foundations for a single-circuit H-Frame, monopole foundations do have a higher contingency line item in its estimates, and that as a result, the impact or risk of the foundation costs has already been included in its service proposal estimates.

141. The Commission approves the double-circuit steel monopole structures proposed by the TFOs in their facility applications. These structures meet the AESO's NID, the approved double-circuit configuration and have shown to be the least impact structures when considering the TFOs' line optimization studies and feedback from landowners during consultation.

³² The study considered two circuits by 2028.

³³ Exhibit 25469-X0512, AML-CCA-2020DEC17-001 Attachment 1 (CETO Line Optimization Study Rev 2), PDF pages 5 and 6, Tables 3 and 4.

³⁴ Aluminium conductor steel-reinforced measured in thousands of circular mills.

³⁵ Exhibit 25469- X0569, ATCO-CCA-2020DEC17-001(a), Attachment 1, PDF page 13, Table 6.

³⁶ Exhibit 25469- X0569, ATCO-CCA-2020DEC17-001(a), Attachment 1, PDF page 20, Table 12.

³⁷ 25469 CCA Argument on AltaLink and ATCO Facility Appl FINAL for references, PDF page 13, paragraph 32.

5.2.1.2 Cost estimates

142. In an effort to protect customers from the TFOs taking undue risk, the CCA recommended that if the Commission approved a double-circuit transmission line, it should inform the TFOs that any actual costs that are more than the 30 per cent threshold of costs in the PPS estimate will be scrutinized very carefully in a deferral account application and will be at a significant risk of disallowance.

143. The Commission will evaluate all project costs, regardless of the quantum of variance to the PPS estimate in a well-established process. As such, it does not find it is necessary to make any statement to the TFOs on the scrutiny of their project costs.

5.2.1.3 Guyed structures for corner structures

144. The CCA recommended that the Commission direct ATCO and AltaLink to use guyed structures for the 90-degree, dead-end corners and only install self-supporting structures at corners where there is no practical and cost-effective means to use guyed structures. The CCA acknowledged that if guyed structures were used, additional payments would have to be made to landowners to obtain their support. Its estimated potential savings of \$384,000 per structure, if guyed structures were used, did not include the cost of additional landowner payments.³⁸

145. In its line optimization study AltaLink assumed using guyed dead-end and angle structures and agreed that guyed angle and dead-end structures may reduce structure costs. However, it disagreed with the CCA's evidence that the additional cost of using a self-supported structure is \$384,000 higher than a guyed structure. When AltaLink compared structure costs in its initial line optimization study,³⁹ the incremental increase for a self-supporting dead-end structure was approximately \$142,000;⁴⁰ and since updating its line optimization study for grillage foundations and Zone C loading, the incremental cost for self-supporting structures is even lower. AltaLink also indicated that additional land costs would partially offset any cost savings associated with guyed structures. It explained that during consultation on the use of guyed angle and dead-end structures, 28 of the 32 stakeholders who provided feedback objected to these structures because of the need to farm around them.⁴¹

146. In response to the CCA's suggestion, ATCO undertook a preliminary estimate of the potential cost difference, for its preferred route, of guying the outside corner of a two-pole monopole 90-degree corner. ATCO identified 11 corners in its project design and stated that only seven of these locations could support guy wires. ATCO submitted that after analysis, supported by vendor pricing, engineering modelling and a geotechnical desktop study, the estimated capital cost of a self-supporting two-pole monopole corner could be reduced by \$82,200 by guying the outside corner pole. ATCO noted that this did not include any additional land costs that would offset the cost savings,⁴² and would also have to be balanced against the additional disruption to landowner use of agricultural land from the guy wires.

³⁸ 25469 CCA Argument on AltaLink and ATCO Facility Appl FINAL for references, PDF page 11, paragraph 27.

³⁹ This study was subsequently superseded.

⁴⁰ Exhibit 25469-X0759, AML Reply Evidence, PDF page 68, paragraph 248.

⁴¹ Exhibit 25469-X0759, AML Reply Evidence, PDF page 70, paragraph 257.

⁴² Exhibit 25469-X0767.01, ATCO Reply Evidence, PDF pages 128 and 129, paragraph 569.

147. Although the parties could not agree on the quantum of savings, all agreed that the use of guyed structures would result in cost savings. It is important to the Commission that opportunities for cost savings, such as this one, be considered whenever possible. As such, in areas of the approved route (i.e., corner or dead-end locations) that can technically accommodate the use of guy wires, the TFOs are directed to consult with landowners on the potential use of a guyed structure on their land and inform them of any additional land payments resulting from their use. In those locations where the landowner agrees to have a guyed structure on their land, the Commission directs AltaLink and ATCO to use such a structure.

5.2.2 Agricultural impacts

148. Agricultural impacts were a contentious issue, primarily focused on concerns about farming around transmission structures and the management of clubroot and weeds. This section discusses those concerns generally; further findings that are specific to route segments are made later in the routing section.

149. In general, paralleling existing transmission lines is preferable because the incremental impacts are usually less than the new impacts to greenfield sites. However, paralleling existing transmission lines can increase the impact to cultivated land because the separation distance between the transmission lines often pushes the transmission line right-of-way further in-field. In contrast, a transmission line right-of-way can be sited on the boundary lines in a greenfield setting. In ATCO's portion of the route, preferred Route A would parallel existing transmission lines for 74 per cent of its length, whereas alternate Route C is sited on parcel lines for 72 per cent of its length. In the AltaLink portion of the project, paralleling existing transmission lines occurs primarily on the alternate route from Gaetz 87S Substation to point C31 (on both the 138 kV Parallel Alternate route and South Alternate route) and along the Preferred route and North Alternate route, from point C52 to point B95.

150. There were competing submissions from interveners on whether paralleling existing transmission lines or greenfield placement would result in greater adverse impacts, particularly on cultivated fields. This is discussed in more detail below. In response to concerns with farming around transmission towers, the RAOP and SBD groups filed reports from Elite Environmental Ltd., authored by Dale Fedoruk. ATCO filed a report from Robert Telford of Telford Land & Valuation Inc. in reply.

151. While weeds, clubroot and other soil-borne diseases did not factor into the selection of one route over another, interveners on all routes raised significant concerns in regard to all, along with associated mitigation measures to address them. The RAOP and SBD groups filed reports from Elite Environmental Ltd. and Dr. Ron Howard of RJH Ag Research Solutions Ltd., to address these issues.

5.2.2.1 Farming around transmission structures

152. The Commission heard concerns with farming around transmission structures in cultivated fields, from interveners along all routes. The level of impact varied based on some key distinctions, such as whether the CETO project structures parallel existing transmission lines, the distance between the CETO project structures and the fenceline or another transmission line, and whether the land on either side of the CETO project structures is farmed contiguously. The effect of the line on aerial spraying was also raised as a concern by interveners. AltaLink's 138 kV

Parallel Alternate route and ATCO's preferred Route A are characterized as paralleling existing transmission lines for 27.2 kilometres and 46.92 kilometres respectively.

153. The TFOs indicated that where possible, they endeavored to route transmission along field or quarter section lines, and away from mid-field placements, where impacts to farming operations are lower. Along greenfield routes, such as the western portion of AltaLink's Preferred route and ATCO's alternate Route C, the CETO structures would typically be placed on the property line, or one metre in-field from a road allowance.

154. RAOP submitted that farming around multiple transmission line circuits is more complex, involves more training, requires more time, uses more inputs (overlapped seed/spray or requiring more passes) and is less safe. Another impact of parallel routing is that the CETO project structures would be pushed further in-field to maintain a safe separation distance between the existing transmission line. ATCO requires separation distances of 28 metres from Transmission Line 9L20 and 22 metres from Transmission Line 7L143. Along ATCO's portion of the project, the CETO structures would be placed 12.6 metres and 22 metres in-field when paralleling transmission lines 9L20 and 7L143, respectively. For AltaLink, the separation distances from transmission lines range between 13 and 26 metres. Likewise, AltaLink's proposed structures would be pushed in-field if an existing transmission line were located on the quarter section line.

155. D. Fedoruk submitted that placement of towers along field margins or boundaries of properties would be less impactful to farming operational efficiencies. Mid-field tower placement creates more hazards and operational barriers, increases loss of farmable land, and increases operator risk and safety. D. Fedoruk also explained that the land between the fence and the towers can be difficult to farm, depending on the separation distance and size of equipment used. During cross-examination, landowners along greenfield routes conceded that in-field structure placement is more impactful than along property lines.

156. ATCO estimated the loss of land use for each structure to be 0.095 acres and 0.28 acres when structures are 12.6 metres and 22 metres from property boundaries, respectively.⁴³ ATCO submitted that landowners are compensated for these impacts with an annual structure payment for lost revenue and additional expenses for overlapping and missed areas along a property boundary. It confirmed it would work with landowners to identify opportunities to strategically locate structures to minimize potential impacts to agricultural activities, such as placing structures adjacent to existing in-field features that already obstruct cultivation.

157. Impacts on cultivated land are compounded in situations where there are multiple mid-field transmission lines and where both sides of the land are contiguously farmed: there are a greater number of structures to farm around, additional field passes are required, overlapping may occur, and areas may be unfarmable if the space between obstructions is too small for equipment to reach. In D. Fedoruk's view, having an additional parallel line increases safety risk, reduces equipment efficiencies and increases crop input costs.

158. R. Telford, retained by ATCO, submitted that the agricultural impact of multiple mid-field transmission structures described by D. Fedoruk appears to be overstated. R. Telford stated that D. Fedoruk's findings were based on knowledge of the equipment used by CK Farms

⁴³ Exhibit 25469-X0773.01, Appendix 06 – Rob Telford Report, PDF page 14.

and the true impacts of the project would vary depending on the size of the equipment, which could change from one landowner to another.

159. The TFOs argued that structure placement can mitigate some impacts where the line is placed on a contiguously farmed field paralleling an existing transmission line. They both noted that alignment preference and structure placement varies from one landowner to another and committed to working with landowners on structure placement.

160. From an aerial spraying perspective, although applicators generally fly parallel to transmission lines, they sometimes fly under conductors. RAOP submitted that spraying parallel lines is more difficult because the land between the lines can not be sprayed by plane. Applicators also do not fly under conductors when there is more than one set of transmission structures and do not spray on top of conductors. LORC submitted that, as it relates to its members the CETO project would create a new impact on aerial spraying, rather than an incremental one. It stated that its members spray crops routinely, generally in a north/south direction and the line would change the spray pattern to an east/west direction to parallel the line, requiring additional passes and expense. LORC is also concerned that the increased complexity of a transmission line would result in applicators placing its members' lands lower in the priority queue, or charging a premium.

161. The Commission considers that from an agricultural impact perspective, siting transmission structures in-field is more impactful than along property boundaries and on the edge of cultivated fields. While in-field structure placement occurs in both parallel and greenfield scenarios, it is more prevalent in the parallel scenario where an existing transmission line is present on or near property boundaries. It is more difficult to farm around and in between structures in this circumstance. This issue is further compounded where the land on both sides of the transmission line is being farmed contiguously.

162. The Commission agrees that the deeper in-field placement has a larger impact, as demonstrated by R. Telford's loss of use calculations. It also agrees with ATCO that equipment size plays a large role in determining the amount of lost cultivation; and, although beyond its jurisdiction, the Commission recognizes that compensation and annual structure payments are intended to address cultivation loss and make farmers whole.

163. The Commission is also of the view that the routing along parallel transmission lines has a slightly higher potential impact on aerial spraying. It does not agree with LORC's submission that a new impact is a significant detriment and notes that aerial spraying around transmission lines is a regular occurrence in Alberta, as demonstrated by the spraying currently occurring on ATCO's preferred Route A, where there is an existing transmission line.

5.2.2.2 Clubroot and weeds

164. Weed control and the prevention of clubroot and other soil-borne diseases, such as *Aphanomyces*, were major concerns among most interveners. As a result, the Commission has addressed this topic generally. Issues with clubroot and other diseases do not favour one route over another as they have been identified in the counties of Paintearth, Stettler and Lacombe, and on the lands of certain interveners. Intervenors expressed a concern with the spread of the disease

and generally requested that the Commission require cleaning of equipment to protocol level 3⁴⁴ (level 3) between all titled parcels of land, regardless of ownership. Certain interveners, such as RAOP and LORC, also referred to the County of Stettler's recommendation that all parcels be treated as clubroot positive and a level 3 cleaning protocol be applied.

165. D. Fedoruk recommended that level 3 cleaning standards be applied to avert the spread of clubroot, *Aphanomyces* and other weeds. He emphasized that care and caution be taken to prevent the introduction of new or resistant weed species into any fields due to the difficulty managing introduced weeds.

166. The two TFOs proposed different approaches to address this issue. ATCO proposed to implement a level 3 cleaning requirement for the project where activities or conditions will result in the disturbance of soil, to perform this cleaning prior to entering each separately-owned parcel of land, and to provide landowners with advance notice of construction activities.

167. ATCO submitted that weeds and soil borne diseases are covered in its environmental evaluation and environment protection plan, and that it implements a variety of measures to limit the risk of spreading noxious weeds and plant diseases during construction, operations and maintenance. ATCO incorporated the applicable portions of the best management practices identified under the Government of Alberta, Alberta Clubroot Management Plan into its environmental management system procedures and practices for cleaning.

168. A number of interveners are concerned with ATCO's cleaning standard. They stated that ATCO does not test for clubroot before entering land and instead relies on information from counties and landowners. Intervenors are also concerned that ATCO did not commit to doing a pre-construction weed survey and does not default to level 3 cleaning during emergency situations and frozen conditions. ATCO disagreed that a weed survey and field testing is required since level 3 cleaning is the default where soil is disturbed, even in frozen conditions. It added that although it may have to respond quickly without determining the appropriate cleaning level during emergency conditions, it is committed to ensuring that its equipment has been cleaned to the extent possible. ATCO further committed to using third party observers to ensure its clubroot protocol is followed.

169. Intervenors requested that cleaning take place before ATCO enters each quarter section, regardless of ownership. D. Fedoruk confirmed his view that cleaning is only required prior to entering if a field spans more than one quarter section and is farmed as a single plot. ATCO indicated that if there is a grouping of land over multiple quarter sections with the same owner but are not farmed together, it would clean prior to entering the field the first time, as long as it was able to continue to the next field uninterrupted. ATCO added that it consults with landowners and would consider additional cleaning between commonly-owned parcels if it were made aware of existing clubroot that warranted further cleaning.

⁴⁴ Exhibit 25469-X0553, STD-06 Vehicle & Equipment Cleaning & Levels, PDF page 2. ATCO defines Level 1 as mechanical cleaning, reasonably removing rocks, mud and soil clumps using brooms, shovels or brushes or by hand. Level 2 is washing, using a compressed air, pressure washer or equivalent with water or steam to remove all soil and rocks. Level 3 is disinfection, incorporating a two per cent bleach, or comparable alternative solution, and letting the solution sit on the surface for 20 minutes.

170. AltaLink stated that if the project were approved, it would implement a clubroot sampling program to inform which fields required level 3 cleaning. In his report, Dr. R. Howard noted that AltaLink lacked information on soil testing methodology and recommended a two-stage clubroot sampling program which AltaLink agreed to. AltaLink's program involves taking an initial soil sample at the entrance of a field to test for clubroot, followed by a second collection of samples along the approved route, approximately every 150 metres; lands would be classified as infected, regardless of spore count, if clubroot is detected in the lab; and land parcels previously identified as containing the clubroot pathogen by municipal, provincial, or previous sampling programs would not be included in the sampling program, but would instead be treated as containing clubroot for the duration of the project and subject to the level 3 cleaning procedure.

171. For this project, AltaLink's level 3 cleaning procedure would involve the use of bleach or Spray Nine for the purpose of disinfecting equipment. AltaLink submitted that its clubroot mitigation measures are also applicable to *Aphanomyces* and that it will implement an *Aphanomyces* testing program based on the Saskatchewan Pulse Growers *Testing for Aphanomyces and Other Root Rot Pathogens* program. AltaLink specified that level 3 cleaning was not required during frozen conditions and committed to doing a pre-construction weed survey.

172. AltaLink explained that all vehicles and equipment would be cleaned to a level such that soil would not be distributed on the roadway after leaving a worksite, and that if rough cleaning does not sufficiently remove soil to prevent distribution on a roadway, it would employ onsite pressure washing or transport equipment offsite for cleaning. It also committed to having third party monitors on-site.

173. Certain interveners had specific concerns. The Craigievar Group members expressed concern that AltaLink would not commit to level 3 cleaning as a default. AltaLink submitted that it would consider level 3 cleaning but would first have informed conversations with landowners to determine appropriate mitigation measures based on the pathogens present. The SBD Group requested, and AltaLink agreed, that should AltaLink's Preferred route from points C49 to C31 to D31 and to D25 be selected, it be required to comply with the SBD Group's individual biosecurity plan prior to entry on their lands.

174. The Commission finds both TFOs' approaches to be appropriate to mitigate the risk of clubroot. The TFOs should take the landowners' preferences into consideration.

175. The Commission agrees with ATCO that field testing is not required when level 3 cleaning is deployed. The purpose of testing is to inform whether level 3 cleaning should be used and this is not required when level 3 cleaning has already been selected. The Commission also considers that AltaLink should comply with the request for level 3 cleaning from interveners along its route. In those situations, field testing is not required. For those landowners along AltaLink's routes who prefer field testing, AltaLink should comply with that request and conduct level 3 cleaning only where the test results detect the presence of clubroot.

176. From a cleaning frequency perspective, the Commission finds that the TFOs' proposed approach to clean prior to entering separately-owned parcels sufficiently mitigates clubroot risk and that cleaning between every quarter section is not required. The Commission encourages the

TFOs to consult with the counties and landowners to obtain additional information to inform whether additional cleaning is required.

177. Finally, as the evidence shows, ATCO's level 3 cleaning requirement is tied to the disturbance of soil, regardless of the season. The Commission accepts that soil disturbance has a high risk of the spread of clubroot, that ATCO's clubroot policy is sufficiently protective during these events, and that a condition requiring level 3 cleaning during winter conditions is consequently not required.

5.2.3 Environmental impacts

178. ATCO and AltaLink retained the consulting services of Stantec Consulting Ltd. and Jacobs Consultancy Canada Inc., respectively, to complete environmental studies and an environmental evaluation report for their respective portions of the CETO project. Both reports outline project components and activities, describe baseline environmental conditions, identify potential effects and mitigation measures, and assess predicted residual effects of the project. Both TFOs also prepared a project-specific environmental protection plan to be implemented for the CETO project.

179. From an environmental perspective, Stantec found that when considering the minor differences in potential effects on the various environmental components between ATCO's preferred Route A and alternate Route C, Route A would be preferred. However, Stantec stated that the proposed routes would each have similar biophysical characteristics and similar potential effects on environmental features, and therefore concluded that all routes would be suitable options with the implementation of proposed mitigation measures and standard best practices.

180. While Jacobs found that AltaLink's South Alternate route would be the most suitable route option when considering the potential environmental effects of the project, it concluded that the differences between the proposed route options would be minor from an environmental perspective. Jacobs stated that all route options are viable, provided that the mitigation measures outlined in AltaLink's standards and procedures, environmental protection plan and project-specific environmental requirements are implemented.

5.2.3.1 Adequacy of environmental surveys

181. The potential project impacts to wildlife and wildlife habitat were concerns raised by many of the intervener groups. The Brando Holsteins Inc. submissions included concerns around the adequacy of wildlife observation points selected by Jacobs for the wildlife field surveys. LORC raised concerns with the adequacy of Stantec's wildlife and baseline studies, the environmental evaluation methods, compliance with AUC Rule 007, project effects on groundwater and effects on wildlife and wildlife habitat.

182. LORC also questioned the route metrics and submitted that due to deficiencies in data collection, the route metrics and route comparison are inaccurate. It stated that the breeding bird surveys were inadequate because of the time of day at which they were completed and being conducted from the roadside. LORC members argued that additional fragmentation of existing wooded areas would be detrimental to wildlife and therefore Route A would have a lesser impact.

183. ATCO filed a report in which Stantec reviewed and responded to the evidence filed in relation to the environmental considerations associated with the project for LORC, RAOP and the MNA. ATCO submitted that AUC Rule 007 does not identify specific surveys that are required to establish a local baseline but that an environmental evaluation must describe the potential effects of construction and operation of the project on the environment.

184. Concerning the adequacy of baseline wildlife and vegetation surveys, Stantec stated that the desktop review and field surveys completed for the environmental evaluation complied with Rule 007 as well as the Commission's transmission line developments environmental guidelines checklist; and that all surveys were conducted in accordance with Alberta Environment and Parks (AEP) accepted standards and protocols, including the *Alberta Native Plant Council Guidelines* and Alberta's *Sensitive Species Inventory Guidelines*, by experienced vegetation ecologists and wildlife biologists familiar with the project region. Stantec indicated that surveys and protocols were discussed and agreed upon with AEP and were found to be reasonable for the proposed project.⁴⁵

185. AltaLink stated that Jacobs' wildlife ground field surveys were conducted within representative habitat types that provide higher value for wildlife. Survey locations were determined based on aerial imagery, land cover classification data, safe access for field crews and land access permission. In addition, an aerial overflight of the entire project area was conducted to identify potential wildlife habitat features and open water wetlands with the potential to support large numbers of water birds.

186. AltaLink committed to completing pre-disturbance assessments on the approved route prior to the start of construction. It also indicated that mitigation measures specified in its standards and procedures, environmental protection plan and project-specific environmental requirements, which include industry-accepted best practices and provincial and federal guidelines, would be implemented to avoid or reduce potential adverse effects on wildlife species and wildlife habitat.⁴⁶

5.2.3.2 Evidence of Cliff Wallis

187. In response to concerns with environmental impacts of the project, the LORC and SBD groups filed expert reports prepared by Cliff Wallis of Cottonwood Consultants Ltd.

188. Concerning AltaLink's portion of the project, C. Wallis agreed with the assessments by Jacobs in its environmental evaluation stating, "[w]ith appropriate mitigation as outlined in the application and supporting documents, all routes (Preferred, Alternate, Variants) are considered viable. Much of the routings parallel existing linear disturbances in what is already a highly fragmented landscape."⁴⁷

189. As for the ATCO portion of the project, C. Wallis could not recommend one route over another based on biodiversity metrics, as he considered the differences between the proposed route options to be too minor. He noted that with appropriate mitigation all routes are considered

⁴⁵ Exhibit 25469-X0771, Appendix 04- Stantec Reply Evidence, PDF page 9.

⁴⁶ Exhibit 25469-X0759, AML Reply Evidence, PDF page 29.

⁴⁷ Exhibit 25469-X0661, Appendix G – Evidence of Cliff Wallis, PDF page 16.

viable, and that other non-biodiversity metrics may be of greater assistance in determining a preferred route.

190. If the project is approved, C. Wallis recommended the following conditions of approval for both the ATCO and AltaLink portions of the project:

- The requirement for frozen ground conditions or use of access matting when working in and around wetlands.
- A protocol for dealing with snakes should be developed as part of the work under the environmental protection plan.

191. C. Wallis concluded in his reports that with the mitigation measures proposed by both TFOs, the non-treed nature of a significant portion of the various route options, the minimal pole footprint for most structures, and having the various proposed routes located on existing linear features would reduce the potential environmental risks associated with the project and keep the impacts on biodiversity to an acceptable level.

192. In response to C. Wallis's concerns around wetlands, ATCO explained that it would seek approval from AEP under the *Water Act* and other applicable legislation, as indicated in the project environmental evaluation, where avoidance of wetlands through structure placement would not be possible. It also specified that proposed activities and mitigation measures would be reviewed by AEP prior to issuance of *Water Act* approvals. ATCO stated that it develops constraint maps, that include wetlands, based on available provincial data sets which are supplemented by the assessments completed by Stantec as part of the environmental evaluation. It submitted that it would work to avoid placing structures within riparian areas and limit vegetation removal to the extent possible.

193. ATCO stated that it plans to complete work in frozen or dry conditions, particularly in sensitive areas such as wetlands. Where conditions are either not frozen or not dry, ATCO explained that it would employ a number of mitigation measures that may include matting. However, ATCO argued that a condition that matting must be used at all times if conditions are not frozen would not be reasonable and that construction may safely take place in dry conditions, without matting.

194. AltaLink stated that its approach for working in and around wetlands is provided in the Temporary Access Standard,⁴⁸ Temporary Access Procedure,⁴⁹ Work in and Around Water Standard and Work in and Around Water Procedure.⁵⁰ Specific requirements include using methods to prevent soil compaction, which may include clean access matting or low ground pressure equipment.

195. AltaLink submitted that the use of matting has the potential to result in vegetation or sod shearing as mats can experience frequent freeze and thaw cycles that may cause them to freeze in place.⁵¹ It stated that its current construction schedule is planned for winter construction and

⁴⁸ Exhibit 25469-X0530, AML-SBD-2020DEC17-003 Attachment (Standards and Procedures), PDF page 51.

⁴⁹ Exhibit 25469-X0530, AML-SBD-2020DEC17-003 Attachment (Standards and Procedures), PDF page 60.

⁵⁰ Exhibit 25469-X0530, AML-SBD-2020DEC17-003 Attachment (Standards and Procedures), PDF page 93.

⁵¹ Exhibit 25469-X0530, AML-SBD-2020DEC17-003 Attachment (Standards and Procedures), Section 6.6, PDF page 79.

specified that requiring it to work with frozen ground or to use access matting would remove some of the flexibility needed to construct with the least possible impact. As such, its view is that a further condition is unnecessary and could potentially result in greater impacts to the environment.⁵²

196. AltaLink noted that no reptiles were observed during field surveys conducted for the project along any of the proposed routes. In its environmental evaluation, Jacobs noted the potential presence of snakes in the project area, stating that the plains garter snake, red-sided garter snake and wandering garter snake have the potential to occur in the local study area. AltaLink submitted that it would commit to conducting pre-disturbance assessments which would document the potential presence of wildlife, including snakes.

197. At the hearing, C. Wallis remarked that both TFOs agreed to develop a protocol for dealing with snakes as part of the work under their respective project-specific environmental protection plan and further, that he had reviewed the standards and procedures for work in and around wetlands and had no concerns with the proposed approaches and mitigation measures.

5.2.3.3 Proposed conditions

198. Both the RAOP and LORC groups submitted that the commitments made by ATCO should be required as conditions of approval. This included the recommended conditions outlined in the report prepared by C. Wallis. RAOP requested that the Commission include a condition of approval which requires ATCO to comply with its procedures in its working in wet/thawed conditions & restricted activity periods⁵³ and procedure for installing and maintaining access mats.⁵⁴

199. The SBD Group also requested that the environmental commitments made by AltaLink be included as conditions of approval. Specifically, the SBD Group requested that:

- AltaLink adhere to its Temporary Access Standard, Temporary Access Procedure, Work in and Around Water Standard, and Work in and Around Water Procedure.
- AltaLink conduct and complete pre-disturbance assessments on the approved route prior to commencing construction.
- AltaLink implement mitigation measures specific to AltaLink's Standards and Procedures, environmental protection plan, and project-specific environmental requirements, which include industry-accepted best practices, provincial and federal guidelines to avoid or reduce potential adverse effects on wildlife species and wildlife habitat.
- Frozen ground conditions or use of access matting be required when working in and around wetlands.

200. ATCO committed to following its environmental protection plan and working in wet/thawed conditions and restricted activity periods work procedure regarding construction mitigation measures to employ if unfavourable conditions were encountered. ATCO stated that a

⁵² Exhibit-X0759, AML Reply Evidence, PDF page 46.

⁵³ Exhibit 25469-X0557, RAOP-ATCO-2020DEC17-001(b), Attachment 1.

⁵⁴ Exhibit 25469-X0558, RAOP-ATCO-2020DEC17-001-(b), Attachment 2.

condition of approval such as that requested by RAOP would unreasonably restrict its construction practices and is therefore not warranted.

201. AltaLink submitted that it has developed a number of environmental mitigation measures to ensure that the construction of the project would mitigate potential environmental effects, including its environmental protection plan and project-specific environmental requirements document. AltaLink stated that its approach to working in and around wetlands is provided in its temporary access standard and procedure, and work in and around water standard and procedure. As such, it concluded that a further condition would be unnecessary and could result in greater impacts to the environment as it would remove the flexibility required to construct with the least possible impact.

5.2.3.4 Findings

202. In their respective environmental evaluation reports both Stantec and Jacobs concluded that with sufficient mitigation measures, all route options would be viable from an environmental perspective. Jacobs found that the South Alternate route would be the most suitable route option when considering the potential environmental effects on the AltaLink portion of the project, however, it noted that the differences between routes would be considered minor. Likewise, in concluding that ATCO's preferred Route A would be the preferred option on its portion of the project, it considered the differences in potential environmental effects between route options to be minor. These conclusions were generally supported by C. Wallis, who noted that the proposed routings largely parallel existing linear disturbances and combined with the proposed mitigation measures should reduce the impacts to an acceptable level.

203. The Commission accepts that the wildlife surveys completed for the project were conducted in accordance with AEP accepted standards and protocols, including the AEP *Sensitive Species Inventory Guidelines*. In addition, the mitigation measures proposed by the TFOs included updating wildlife surveys as required prior to any construction to identify wildlife features including nests and dens. The Commission is therefore satisfied that any project activities will be informed by a current route-specific understanding of wildlife activity. It finds that the environmental evaluation reports filed by the TFOs comply with the information requirements prescribed in Rule 007 and is further satisfied that with the implementation of proposed mitigations measures, the project is unlikely to result in significant effects to the environment.

204. The Commission is of the view that a condition to require frozen ground conditions or use of access matting when working in and around wetlands is not required in the circumstances. Of note, both TFOs provided their respective standards and procedures for work in and around wetlands that outline mitigation measures to alleviate the potential impacts to wetlands; and more importantly, C. Wallis reviewed those standards and procedures and has no concerns with the mitigation measures proposed by the TFOs. The Commission consequently finds both TFOs' approaches appropriately mitigate the risk to wetlands.

205. As recommended by C. Wallis, the TFOs committed to developing a snake protection protocol as part of the work under their respective project-specific environmental protection plan. Accordingly, the Commission imposes, to each of ATCO Electric Ltd. and AltaLink Management Ltd., the condition of approval set out in Section 8 of this decision.

206. The Commission is satisfied that the environmental effects of the project can be mitigated to a reasonable degree if the TFOs adhere to the above commitments, including abiding with all pertinent provincial and federal environmental legislation and guidelines and diligent implementation of the mitigation measures proposed in their respective environmental evaluation reports and environmental protection plans.

5.2.4 Other impacts to stakeholders

5.2.4.1 Does the CETO project pose a risk from electromagnetic fields?

207. Electric and magnetic fields (also known as electromagnetic fields or EMFs) are present wherever electricity flows. Sources of electric and magnetic fields include electric transmission and distribution lines, household appliances, power tools, office equipment, computers and any other electrical device. EMFs also occur naturally on the earth. EMFs associated with transmission lines are sometimes referred to as extremely low frequency (ELF) EMF because electric power is transmitted at 60 cycles per second (or 60 hertz or Hz), which is at the very low end of the frequency spectrum.

208. Electric fields are produced by voltages applied to electrical conductors, or wires, and equipment. The strength of an electric field is directly related to voltage and will increase as voltage increases. Electric fields may be shielded or blocked by intervening objects such as trees or buildings and are measured in volts per metre (V/m) or kilovolts per metre (kV/m).

209. Magnetic fields on the other hand, are created by the flow of electricity (the current). The strength of a magnetic field is directly related to the current; the higher the current, the higher the magnetic field. Unlike electric fields, magnetic fields are not easily shielded. They are generally measured in milligauss (mG).

210. The intensity of both electric and magnetic fields from transmission lines decreases with distance from the source.

211. AltaLink and ATCO submitted that although stakeholders are concerned with continuous exposure to transmission lines, including those proposed to be constructed as part of the CETO project, Health Canada and the World Health Organization (WHO) have reviewed EMF studies and have concluded that EMFs at extremely low frequencies, less than 300 hertz, do not cause any long-term adverse health effects.

212. The TFOs also referred to a 2010 update published⁵⁵ by the International Commission on Non-Ionizing Radiation Protection on exposure guidelines, which set the electric field and magnetic field exposure rates for the general population to a maximum of 4.2 kV/m and 2,000 mG, respectively. The TFOs submitted that their modelled exposure rates for electric and magnetic fields would be below these general population recommended exposure rates and both committed to conducting measures and discussions with stakeholders when requested.

213. On behalf of the RAOP and SBD groups, Dr. Paul Héroux and Dr. Anthony Miller submitted that there are health risks associated with long-term exposure to EMFs and that the transmission line should be buried underground in order to mitigate these concerns. Alternatively, Dr. P. Héroux recommended that the TFOs install EMF monitoring stations along

⁵⁵ Exhibit 25439-X0304, AML CETO - Appendix Q Electrical Considerations, PDF page 6.

the length of the transmission line. The SBD Group argued that monitoring stations installed near residences that are 50 to 150 metres from the transmission line is cost-effective and would align with its position that the precautionary principle⁵⁶ should be applied to the CETO project.

214. RAOP requested that conditions be placed on the transmission line approvals such that EMF levels must not exceed the calculated average magnetic fields 50 per cent of the time and that ATCO must not exceed the calculated peak magnetic field level more than one per cent of the time. ATCO submitted the requested conditions were not reasonable because the loading on the transmission lines are controlled by AESO and out of its control.

215. The Commission places significant weight on the WHO's conclusions that, based on available research data, exposure to electromagnetic fields is unlikely to constitute a serious health hazard, and that exposure to EMF from transmission lines is not a demonstrated cause of any long-term adverse effect to human or animal health.

216. The Commission finds that the evidence of Dr. P. Héroux and Dr. A. Miller on the health risks associated with ELF magnetic fields and the precautionary measures they advocate for are inconsistent with the conclusions of the WHO, Health Canada and other national and international organizations; and further that neither Dr. A. Miller nor Dr. P. Héroux provided sufficient evidence to displace the conclusions of those organizations.

217. Given the predicted EMF levels,⁵⁷ the Commission finds that the evidence before it does not support a conclusion that there will be health effects attributable to the EMF produced by the proposed transmission line at the nearest residences. As a result, there is no need to mitigate the effects of EMF; and in particular, there is no need to bury the transmission line on the basis of impacts from EMF nor to install remote monitoring stations to confirm the modelling conducted by the TFOs. The Commission expects AltaLink and ATCO to adhere to its commitment to conduct pre- and post-constructing monitoring at the request of stakeholders, and to explain to them the findings of those measurements. Likewise, the Commission finds that conditioning approval of the transmission line on magnetic field levels is not required given that the predicted levels are far below the exposure guidelines for the general population.

5.2.4.2 Noise

218. AltaLink provided noise modelling for the proposed project and stated that there are no significant noise sources associated with the normal operation of a transmission line. It confirmed that contribution to audible noise levels at the right-of-way edge from the proposed project would result in audible noise levels well below the nighttime permissible sound level of 40 dBA and are considered negligible.

219. Similarly, in its application, ATCO demonstrated audible noise levels well below the nighttime permissible sound level of 40 dBA and are considered negligible. ATCO submitted that noise will be greatest during construction of the transmission line and once construction is completed, minimal noise is anticipated from ATCO's operations over the life of the project.

⁵⁶ Transcript, Volume 19, pages 2991-2996.

⁵⁷ Exhibit 25439-X0304, AML CETO - Appendix Q Electrical Considerations, PDF page 23.

220. Both TFOs stated they will comply with the requirements of Rule 012: *Noise Control* and would conduct construction activity according to applicable bylaws.

221. The Commission finds that the transmission line will not be a significant source of audible noise and is satisfied with both AltaLink's and ATCO's commitments to comply with the requirements of Rule 012 and applicable bylaws.

5.2.4.3 Does the CETO project pose a higher fire risk?

222. LORC and Brian Perreault raised concerns with electricity-associated fire risk. They stated that the proposed project would increase the risk of fire in the Tinchebray 972S Substation area, pointing to a fire around the Cordel 755S Substation and two recent grass fires on B. Perreault's property in support of their position. ATCO disagreed that project infrastructure would contribute to an elevated fire risk because the proposed transmission structures are steel rather than wood and the substation does not contain oil-filled equipment. ATCO also submitted that the substation's gravel pad provides a sufficient buffer to prevent fires from spreading off-site. It investigated the two recent grass fires on B. Perreault's property and concluded that fires in the area can be responded to properly.

223. The interveners also expressed a concern for the safety of their homes and properties in the Tinchebray 972S Substation area given the limited access and hilly terrain. They submitted that the coulees form an island, limiting access in and out of the Tinchebray area to Township Road 400 to the east and Range Road 151A to the south. They stated that local fire departments can not control fires in the coulees because they lack the skill and equipment and often rely on landowners to provide access and direction to fires.

224. ATCO stated that it offers free half-day power line safety training for emergency first responders (Fire, RCMP, Emergency Medical Services and Environment Sustainable Resource Development personnel) in its service area. These sessions are led by ATCO safety professionals and power line technicians, to provide information first responders may need to protect the public and respond safely to electrical emergencies. ATCO submitted that the coulee setting does not create a higher fire risk and that wooded areas pose the highest risk.

225. LORC requested that ATCO be required to adopt mitigation measures such as conducting a "point of ignition risk of fire assessment" and storing fire suppressing equipment for landowners to access. ATCO submitted that it is developing a risk assessment model to determine where ATCO's electrical assets are most exposed to risk of damage from fires and where fires have an elevated risk of escalating to large-scale events. While this tool has not been completed, ATCO indicated that initial data does not suggest this area to be high risk. Lastly, ATCO submitted that due to the safety-sensitive nature of its facilities, it cannot allow access to stored fire suppression equipment at the Tinchebray 972S Substation to landowners, or any third parties.

226. Based on the evidence before it, the Commission finds that the proposed CETO project, including the Tinchebray 972S Substation, does not pose a fire risk that is higher than for a typical transmission development. The Commission is persuaded by the fact that the Tinchebray 972S Substation does not contain oil field equipment, and agrees with ATCO that the gravel pad at the Tinchebray 972S Substation provides a sufficient buffer to prevent fires from spreading off-site. While the Commission does not associate the use of wood transmission

structures with a high risk of fire, the Commission does find that the use of steel structures results in a lower risk because they are not combustible.

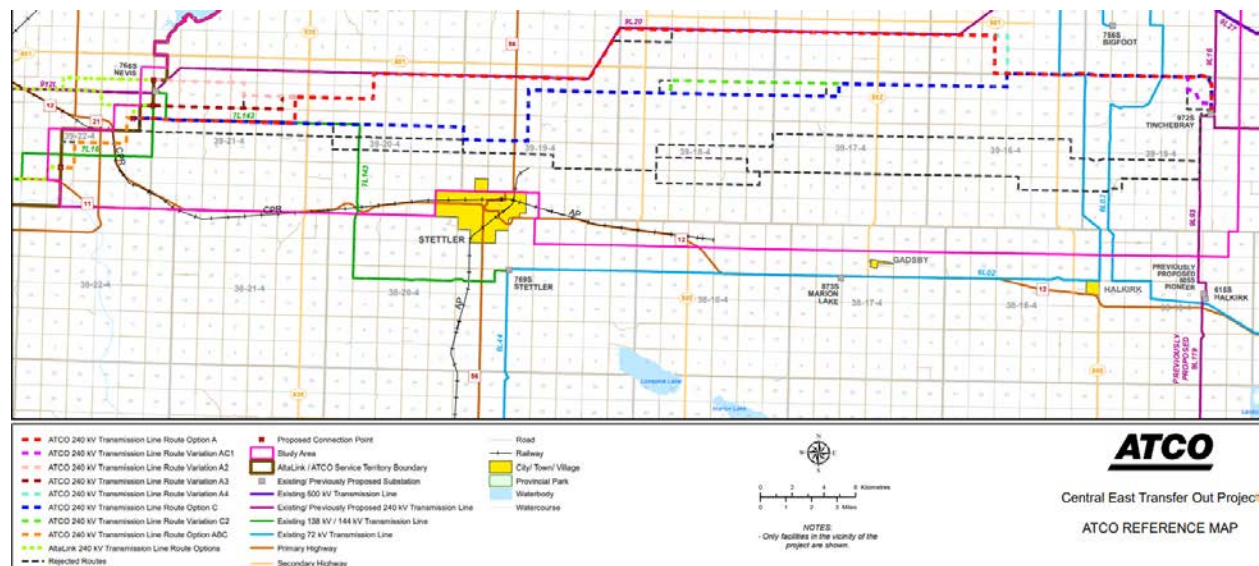
227. The Commission agrees that limited access into the area may decrease reaction time for emergency responders. To mitigate this concern, it encourages ATCO to consult with landowners and first responders in the area to develop a fire access plan. The Commission also acknowledges ATCO’s other mitigation measures in this regard, such as its safety training course. As for LORC’s request for a point of ignition risk of fire assessment, the Commission considers this to be unnecessary because ATCO is actively developing a system-wide risk assessment tool. Upon completion of this tool, the Commission expects ATCO to use the results to inform whether additional fire mitigation is required in its service territory. Finally, the Commission agrees with ATCO that providing and storing fire suppression equipment on-site within the Tinchebray 972S Substation is not advisable from a safety and security perspective.

5.2.5 Routing

5.2.5.1 ATCO Electric Ltd.

228. ATCO proposed the preferred Route A and alternate Route C to connect the Tinchebray 972S Substation to AltaLink’s service territory. Parts of these routes are common, however, the routes deviate between points A15 and B69. ATCO also proposed three variants and four connection points with the AltaLink line. The Commission has assessed these routes in three parts: (i) Tinchebray 972S Substation to point A15, (ii) point A15 to point B69, and (iii) point B69 to AltaLink’s service territory.⁵⁸ ATCO’s proposed routes are depicted in the figure below.

Figure 6. ATCO’s proposed routes for the CETO project⁵⁹



⁵⁸ The map below does not show the location of reference points, ATCO provided route mosaic maps in exhibits 25469-X0225 and 25469-X0226, which do show these locations.

⁵⁹ Exhibit 25469-X0220, Atch4_CETO Project_Reference Map Drawing.

5.2.5.1.1 Tinchebray 972S Substation to point A15

229. This portion of the CETO project is common to the preferred and alternate routes (common route portion). Interveners along this route segment are Brian Perreault, Doreen Blumhagen, Jason Felzien and Dwayne Felzien.

230. B. Perreault's primary concern is the flooding of his land which he attributes to the initial construction of the Tinchebray 972S Substation and transmission line to connect the Halkirk Wind project.

231. This common route portion passes over the grain bin yard sites of LORC members J. and D. Felzien and requires the relocation of a distribution line. D. Blumhagen objected to the common route portion because it would require that a distribution line be relocated to her residence's side of the road.

232. Route Variant AC1⁶⁰ was suggested by landowners in the area, which ATCO in turn advanced as an applied-for variant. This variant increases the distance of the CETO line from residences and does not require that a distribution line be relocated next to D. Blumhagen's property.

5.2.5.1.1.1 Findings

233. The Commission approves the common route portion, from Tinchebray 972S Substation to point A15. It finds that this common route portion has a lower, overall impact than Route Variant AC1 when considering cost and available mitigation measures. Route Variant AC1 costs \$1,289,000 more than the common route portion due to the increased number of turns. While the nearest residence is closer to the common route portion, the CETO line would be separated from this residence by Township Road 400. ATCO is also in discussions with D. Blumhagen and the Beaver Rural Electrification Association to bury a portion of the distribution line which would address D. Blumhagen's concern.⁶¹

234. From a mitigation perspective, the Commission is satisfied that ATCO's commitment to work with landowners on the relocation of hay bales and other structures within the right-of-way is sufficient to mitigate their concerns. It also acknowledges ATCO's commitment to work with distribution system owners and landowners to explore mitigation measures, including the relocation or burying of distribution lines.

5.2.5.1.2 Point A15 to B69

235. For this portion of the CETO route, ATCO proposed two route options, each with a route variant. ATCO's preferred Route A generally parallels existing Transmission Line 9L20, while its alternate Route C can generally be characterized as a new disturbance sited on parcel lines. Route A parallels an existing transmission line for 74 per cent of the route, whereas Route C parallels existing Transmission Line 7L143 for eight per cent of the route and is sited on parcel lines for 72 per cent of its length.

⁶⁰ Route Variant AC1 traverses northwest from Tinchebray 972S Substation and was suggested by area landowners.

⁶¹ Transcript, Volume 11, PDF page 1803.

236. There were interventions along both route options, with RAOP members generally located along Route A and LORC members located along Route C. Several interveners would be affected by both routes. RAOP submitted that Route A has greater residential impacts due to the higher presence of potential country residential and yard site locations. The group stated that farming around another set of structures would be difficult, especially where structure locations do not align. RAOP members submitted that farming around multiple circuits is more complex, involves more training, requires more time, uses more inputs (overlapped seed/spray or requiring more passes) and is less safe. This was echoed by the RAOP group's expert, Dale Fedoruk, who stated that having an additional parallel line increases operator risk and operational barriers, reduces equipment efficiencies, and increases crop input costs. RAOP members are also concerned that in combination with the existing line, the proposed CETO line would nullify their ability to subdivide their land.

237. LORC submitted that Route C would affect a larger number of residences compared to Route A. In addition, it argued that the impacts of farming around multiple transmission structures on RAOP members along Route A is more of an incremental impact given that those individuals already have experience farming around structures. If the transmission line is sited along Route C, the agricultural impacts would be a new impact. LORC members explained that they currently use the right-of-way area for hay storage, seed cleaning, farming, corrals, airstrips and equipment storage. These items would have to be moved to accommodate Route C, which would not be an issue with Route A because the existing line does not allow for these uses. ATCO stated that it would work with landowners to relocate grain bins, hay piles, corrals and other structures within the right-of-way.

238. ATCO's applications included estimates of the length of cross-cultivated land parcels bisected by its proposed routes as a measure of potential impact to farming. However, where an existing transmission line is already bisecting a cross-cultivated parcel, it was not included in this estimate. In its reply evidence, ATCO updated these estimates, based on a review of aerial imagery, to reflect the total amount of potentially cross-cultivated land crossed by its proposed routes, which included parcels that were already bisected.

239. LORC submitted that ATCO's initial estimates were more representative of the impact of the CETO project because they were based on new impacts to landowners. In cross-examination, LORC questioned ATCO's newly-exposed cross-cultivation metric by going through photo mosaics of the route and confirming land use. It also disputed ATCO's estimate for cross-cultivation along alternate Route C and the C2 Variant as being too low since it measured 5.6 kilometres of cross-cultivation on LORC members' lands only. ATCO stated that the potential for cross-cultivation is an evolving metric that can change based on a number of factors, such as landowners buying or selling property, renting land, or altering agricultural practices.

240. The follow table summarizes ATCO and LORC estimates of cross-cultivation along the ATCO routes:

Table 2. Estimates of cross-cultivation

	Preferred Route A	Alternate Route C	Alternate Route C with C2 Variant
ATCO estimated length of newly exposed cross-cultivation from Application (km)	0.81	4.06	7.23
LORC estimated length of newly exposed cross-cultivation (km)	1.144	7.28	10.288
ATCO estimated length of total impacted cross- cultivation (km)	10.602	7.88	11.088

241. A number of LORC members have individual concerns. The Lysters explained that their pedigreed seed plots would be located directly under the proposed alternate Route C and that it would be difficult to operate or relocate these plots because they are subject to strict requirements through the Canadian Food Inspection Agency and Agriculture Canada for pedigreed status. The Lysters also applied to Transport Canada for an airstrip over which the alternate route would be routed. Niki and John Thorsteinsson are concerned about landing their helicopter at their residence. Janelle and Kent Robinson run an equestrian business that caters to special needs individuals and are concerned that the line would interfere with implantable medical devices.

242. ATCO provided the following (reproduced) table comparing the metrics applicable to its preferred Route A and alternate Route C:

Table 3. ATCO comparison of Route Option A and Route Option C between points A15 and B69⁶²

Routing Factor	Route Option A Segment A15 to B69	Rout Option C Segment A15 to B69
Route length (km)	52.56	50.75
Area of right-of-way (ROW) (ha)	160.67	122.01
Number of major turns ($\geq 45^\circ$)	8	8
Number of minor turns (5-45 $^\circ$)	0	4
Length following existing transmission line (km)	38.75	4.12
Length following parcel lines (km)	12.32	36.38
Length following road allowance (km)	1.49	7.65
Length following pipeline (km)	0	2.60
Length following railway (km)	0	0
Length of cross-country (km)	0	0
Length of route with adjacent access (km) ³	25.04	29.77
Length with under-strung lines/ buried distribution lines (km)	1.00	0.58
Length of cross-cultivation (km)	0.81	4.06
RESIDENCES		
Nearest Residence (m)	140	60
Residences within 150 m of Centreline	1	4
Residences within 300 m of Centreline	6	9

⁶² Exhibit 25469-X0454.01, 25469_ATCO_AUC_2020NOV27_InformationResponseFINAL, PDF page 17.

Routing Factor	Route Option A Segment A15 to B69	Route Option C Segment A15 to B69
Residences within 400m of Centreline	8	13
Residences within 800 m of Centreline	47	39
NEWLY EXPOSED RESIDENCES		
Nearest Residence (m)		
Residences within 150 m of Centreline	0	3
Residences within 300 m of Centreline	0	7
Residences within 400m of Centreline	0	10
Residences within 800 m of Centreline	6	32
OTHER FACTORS		
Cultivated lands within ROW (ha)	75.57	59.40
Pasture lands within ROW (ha)	66.40	46.62
Grasslands within ROW (ha)	8.07	8.89
Area Treed in ROW (ha)	11.37	8.68
Area of wetlands in ROW (ha)	14.23	10.36
Area of watercourse crossings (ha)	3.9	6.9
Area of ESA's in ROW (ha)	0.94	15.88
Area of sensitive species range in ROW (ha)	321.34	244.02
Area of HRV classes in ROW (ha)	0	1.18

243. ATCO proposed Route Variant A4 as an alternative to a portion of Route A. This variant was initially ATCO's preferred route because compared to ATCO's current preferred route, it increases the amount of alignment paralleling a road allowance and impacts less length of distribution lines. ATCO changed its preference due to the presence of a sharp-tailed grouse lek, but kept Variant A4 because it considered both routes to be viable. The lek is approximately 700 metres from ATCO's preferred route and 90 metres from Variant A4.

244. ATCO also proposed Route Variant C2 as an alternative to a portion of Route C. This variant was ATCO's initial route in the area. A landowner suggested an alternative which reduced the number of cross-cultivated parcels impacts, avoided grain bin locations and is equal in length to ATCO's initial route. ATCO later adopted the landowner suggested route as part of Route C and retained its initial route as Variant C2.

5.2.5.1.2.1 Findings

245. While the Commission finds that both the preferred and alternate routes are viable and buildable routes, it considers that preferred Route A will have a lower overall impact compared to alternate Route C. Route A follows linear disturbances for a greater portion of its length than Route C. The Commission is satisfied that following existing linear disturbances such as transmission lines and roads effectively minimizes transmission line impacts, especially when compared to a greenfield option where the line creates a new disturbance.

246. The Commission also finds that Route A has lower residential impacts. There are fewer residences within 150, 300 and 400 metres of ATCO's preferred route and the nearest resident is further away than on the alternate route. When considering newly exposed residences,⁶³ Route A has significantly fewer residences (i.e., six versus 32) within 800 metres. While RAOP submitted that Route A has more potential country residential and yard site locations, ROAP did not bring forward any approved or active subdivision plans. The Commission considers such potential

⁶³ A "newly exposed residence" is a situation where a transmission line is proposed to be close to a residence and there is no existing transmission line between that residence and the proposed transmission line.

future development activities to be uncertain and places greater weight on residences as they currently exist.

247. The Commission considers that preferred Route A is slightly more affected agriculturally than alternate Route C; Route A crosses more cultivated land in its right-of-way, has more in-field structures and slightly more cross-cultivated fields, while the agricultural impacts on Route C would be new.

248. As discussed in more detail in the agricultural impacts section, the Commission recognizes that there is a greater impact to farming around multiple structures and structures placed further in-field than when structures are placed on field boundaries. Route A has more in-field transmission structures than Route C. That said, the evidence indicates that most of the agricultural land along the paralleled length of preferred Route A has fences separating the proposed CETO structures and the existing transmission line structures. The evidence also showed that in these cases, the land on either side of the combined transmission line right-of-way is generally farmed separately, not contiguously. The Commission therefore finds that land with existing transmission structures along Route A would generally be unaffected by the CETO structures because of the presence of the fences between any farming activity and the CETO structures.

249. The Commission acknowledges that the land on the other side of the fence, where the CETO structures would be sited, would be subject to a higher impact because it would have new structures to farm around; and that the presence of existing structures and the required separation distance between the two lines pushes the CETO structures further in-field. (ATCO indicated that the CETO structures would be 12.6 metres in-field and that the existing Transmission Line 9L20 structures are 15.4 metres in-field.) The Commission therefore considers that there would be a minimal increase in farming complexity along Route A because of the presence of the fence. It also observes that the distance at which the CETO structures would be located in-field is similar to the distance of existing Transmission Line 9L20 structures, currently in-field and farmed around. Conversely, along Route C, the structures would generally be placed on boundary lines, resulting in minimal impacts to farming.

250. Turning to cross-cultivated lands, Route A crosses more total cross-cultivated land (10.602 kilometres vs. 7.88 kilometres), and Route C would create more new instances of cross-cultivated impacts (7.28 kilometres vs. 1.144 kilometres). The Commission considers that under both these metrics, Route A has the higher impact. While the impact is new on Route C, Route A's 9.459 kilometres of cultivated land would require landowners to farm around two sets of transmission structures, the existing and the CETO structures. The Commission acknowledges ATCO's statement that there should be enough space between structures to continue farming the area and its commitment to work with landowners on structure placement to further mitigate impacts to farming.

251. The Commission must weigh the impacts of potential route options considering general principles, but also site-specific impacts. Doing so here, it finds that Route A has less impact on residences and parallels existing linear disturbances for a greater portion of its length. It further considers that the agricultural impacts on Route A can be minimized due to the presence of fences between the proposed and existing transmission lines, and through structure placement. The increased agricultural impacts along Route A are ultimately not sufficient to persuade the Commission that Route C is a lower impact route overall.

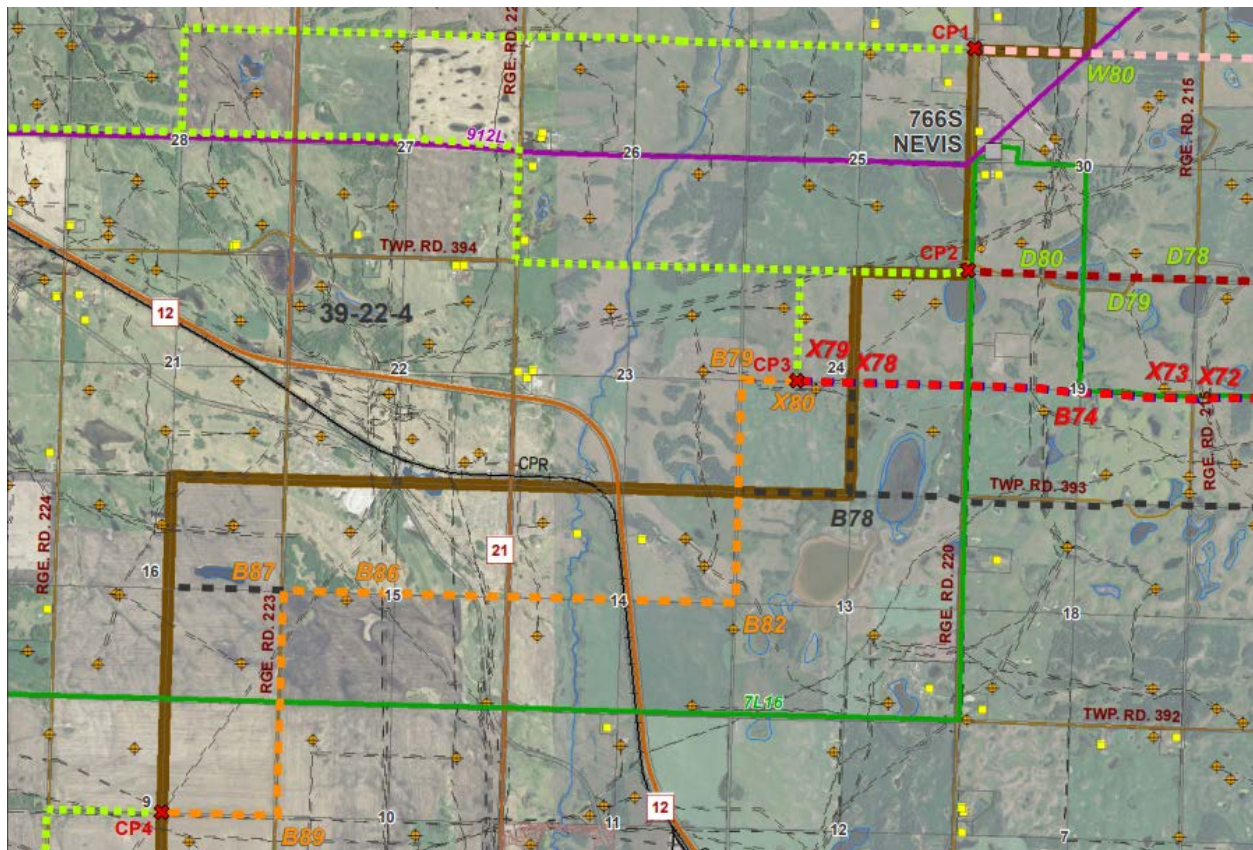
252. As discussed earlier, the Commission finds that the noise, environmental and EMF impacts do not favour one route over another, nor raise doubt that the CETO project should not be built.

253. Finally, the Commission rejects Route Variant A4 along Route A because it has a higher overall impact than Route A. More particularly, Route A is located further away from an existing sharp-tail grouse lek, is preferred by J. Felzien, and does not divide the Hendersons' land.

5.2.5.1.3 Point B69 to AltaLink's service territory

254. From point B69 westward, ATCO's preferred and alternate routes share a common alignment to connection point CP3. ATCO also proposed Route Variants A2 (to connection point CP1) and A3 (to connection point CP2), and a route extension designated as Route Option ABC (to connection point CP4), for a total of four possible connection points with the AltaLink portion of the project. The figure below shows the project area where the proposed connection points are located. On this map, the dashed red, pink, dark red and orange lines are ATCO's preferred common alignment, Route Variant A2, Route Variant A3 and Route Option ABC respectively. The dashed green routes are AltaLink's applied for routes; CP1, CP2, CP3 and CP4 are the proposed connection locations.

Figure 7. Excerpt from ATCO's project map⁶⁴



⁶⁴ Exhibit 25469-X0225, Atch6_CETO Project_Proposed Route Mosaics, PDF page 8.

255. The common alignment primarily parallels existing Transmission Line 7L143, has the fewest major turns and avoids Crown land. While this option is the longest, it has the lowest residential impacts. The common alignment has the fewest residences within 800 metres, with the nearest residences 600 metres away, and none of the residences are newly exposed. Route Variant A2 is sited primarily on parcel lines. While it is the shortest option, it has more major turns and higher impact to residences than the common alignment and divides cross-cultivated lands. This variant has the most residences within 800 metres (total and newly exposed) with the closest resident 240 metres away. Route Variant A3 follows road allowance for the majority of its length, is approximately the same length as Route Variant A2, and has the same number of major turns. While it has the fewer total and newly exposed residences within 800 metres than Route Variant A2, Route Variant A3 has more residences within 150 and 300 metres, with the closest residences approximately 110 metres away.

256. If the Commission approved AltaLink's South Alternate route or Highway 11 Alternate route for the point C49 to ATCO service territory segment of AltaLink's route (referred to as Highway 11 segment), there would be a gap between the TFOs' routes. ATCO created Route Option ABC, located within both the AltaLink and ATCO service territories, to connect the transmission lines under that scenario. Route Option ABC, would be constructed and operated by ATCO, span 7.73 kilometres, and be sited on parcel lines or follow a road allowance. There are two residences within 800 metres of Route Option ABC, the closest being 430 metres from the CETO line.

257. Terry, Murray and Cody Rowledge are affected by all routes to all connection points. They also share or rent land with Lee Chapman and Glen Morbeck, who own lands along the variants. M. Rowledge prefers ATCO's preferred Route A over the route variants located further north as the variants would affect their farming operations and divide his land. He submitted that the use of Route Option ABC is acceptable as it would not adversely affect farming operations like the variants would. The other landowners did not express a preference on the connection.

5.2.5.1.3.1 Findings

258. The Commission considers that the common preferred and alternate portion has lower overall impacts than route variants A2 and A3. It finds this route to be superior because it parallels Transmission Line 7L143 for the majority of its route, does not traverse cross-cultivated lands and has the lowest impact to residences.

259. As discussed later in Section 5.2.5.2.3.1, the Commission finds AltaLink's Highway 11 segment to be the lowest impact route. As a result, ATCO's Route Option ABC is required to connect the two TFOs' routes. The Commission considers that along Route Option ABC there is a low residential impact, with two residences between 400 and 800 metres of the transmission line, and that the siting of this segment entirely on parcel boundaries and along road allowances will mitigate agricultural impacts. For these reasons, it approves the addition of Route Option ABC, which is required to connect the AltaLink and ATCO respective sections of the CETO project.

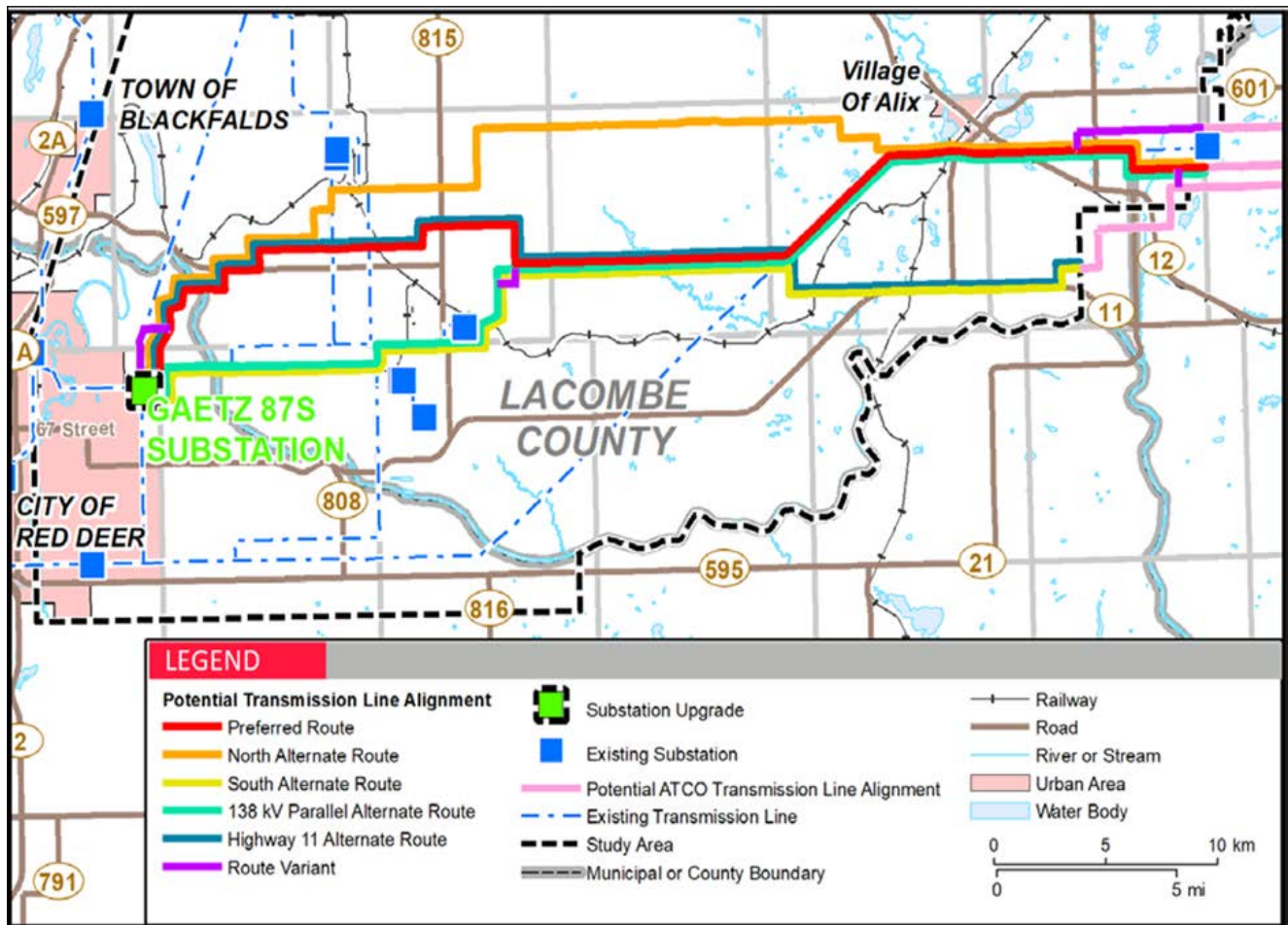
260. Further, should a dead-end structure be required where the CETO transmission line changes service territories, the Commission expects ATCO and AltaLink to co-ordinate such that only one dead-end structure is erected (in other words, that an AltaLink dead-end structure and

an ATCO dead-end structure not be used next to each other simply because of the boundary between service territories).

5.2.5.2 AltaLink Management Ltd.

261. As seen in the figure below, AltaLink proposed five routes to connect its Gaetz 87S Substation to ATCO’s 9L62/9L68 transmission line at the service territory boundary. It also proposed two route variants, the Gaetz west and the B41 variants, and two connection variants, the C85 and the Crossover variants to connect to ATCO’s transmission line at various points.

Figure 8. AltaLink’s Preferred route and Alternate routes for the CETO project⁶⁵



262. AltaLink provided the following (reproduced) table comparing the metrics between its proposed routes:

⁶⁵ Exhibit 25649-X0263, AML Central East Transfer-Out Application, PDF page 101.

Table 4. Comparison of the Preferred and Alternate routes⁶⁶

Major Aspects and Considerations		Preferred	South Alternate	138 kV Parallel Alternate	Highway 11 Alternate	North Alternate
Agricultural Considerations						
Agricultural Land Crossed by Centreline (km)	Crop (km)	24.4	17.6	21.3	20.7	28.4
	Tame Pasture (km)	4.5	0.7	4.0	1.1	4.2
	Crop - contiguously farmed or mid-field (km)	8.3	6.5	3.5	12.6	10.7
Residential Considerations						
Residences within 150 m of Centreline (#)		13	12	15	10	11
Residences within 150 m of Centreline not Separated by a Road or Transmission Line (#)		5	1	4	2	3
Residences within 800 m of Centreline (#)		86	52	78	60	86
Environmental Considerations						
Surface Water Crossed by Centreline (km)		0.5	0.3	0.5	0.3	0.3
Surface Water within 800 m from Centreline (ha)		248	114	247	114	199
Wetlands Crossed by Centreline (km)		2.4	1.3	2.0	1.6	2.2
Provincially Designated Environmentally Sensitive Areas Crossed by Centreline (km)		4.1	1.6	4.1	1.6	5.8
Electrical Considerations						
Parallel Existing Transmission Lines (km)		17.1	10.1	27.2	0.0	10.9
Distribution Lines Affected (km)		1.6	8.5	3.3	6.7	4.0
Special Constraints						
Active Oil or Gas wells within 50 m of Centreline (#)		8	0	5	3	10
Parallel Route to Pipelines within 250 m of Centreline (km)		23.3	16.2	18.5	21.1	26.5
Number of Pipeline Crossings on Centreline (#)		96	62	84	74	120
Length of Route within a Road Allowance (km)		20.6	27.3	22.3	25.6	18.2
HRVs within R-O-W Width (#)	HRV 4	0	0	0	0	0
	HRV 5	7	4	6	5	9
Cost						
Total Route Length (km)		57.9	49.3	55.0	52.3	60.4
Cost (\$M)		159	149	154	153	164

⁶⁶ Exhibit 25469-X0263, AML Central East Transfer-Out Application, PDF pages 103 and 104.

263. AltaLink submitted that the Preferred route has the least overall agricultural, residential and environmental impact to landowners, and that it would be located within a highway or government road allowance for approximately 35 per cent of its length, parallel existing transmission line infrastructure for approximately 30 per cent of its length, and be placed in a greenfield setting for approximately 35 per cent of its length.

264. In its applications, AltaLink presented its five routes in three parts: (i) Gaetz 87S Substation to point C31, (ii) point D25 to point F70 and (iii), point C49 to ATCO service territory. Part (i) contains a preferred and alternate segment to reach point C31. Part (ii) considers the North Alternate route which, if selected, would bypass a portion of part (i), and AltaLink's Preferred route from points C31 to F70. Lastly, part (iii) considers the preferred and alternate segments to a connection point with ATCO's transmission line. The Commission considered AltaLink's segments as they were proposed in its facility applications. AltaLink's preferred and alternate segment metric tables for each part were not disputed by any party and were helpful in comparing potential impacts.

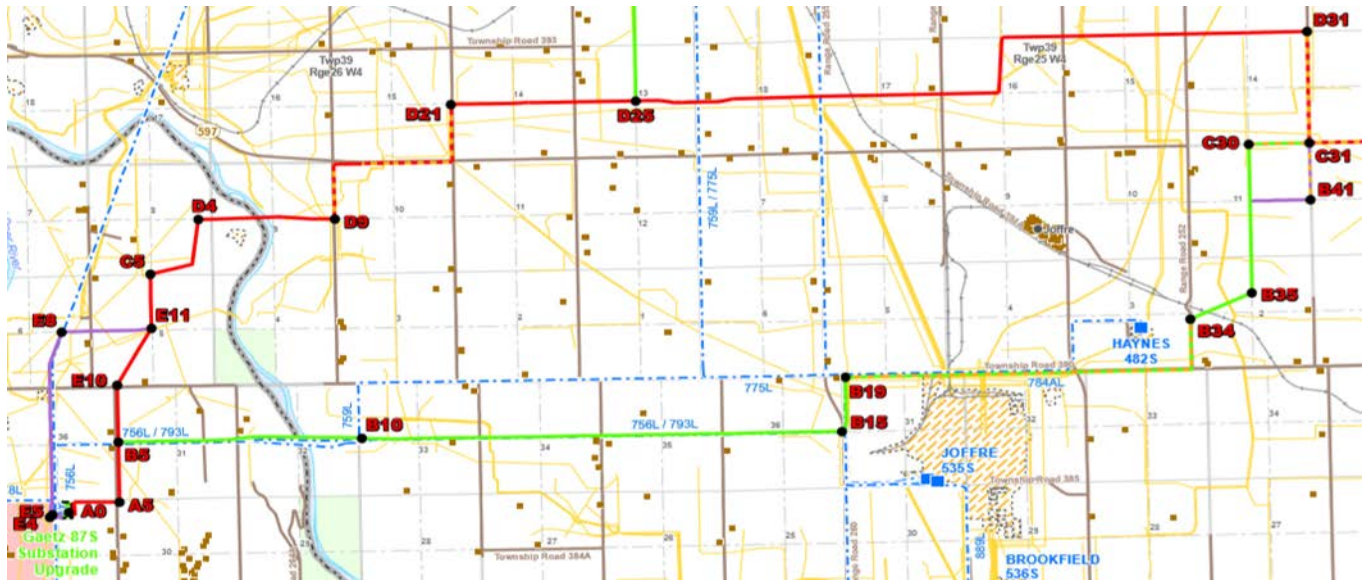
265. The table below summarizes the segments of parts (i), (ii) and (iii) that make up AltaLink's proposed routes.

Table 5. Comparison of the Preferred and Alternate routes

AltaLink route	(i) Gaetz 87S Substation to point C31	(ii) point D25 to point F70	(iii) Point C49 to ATCO service territory
Preferred	Preferred Gaetz to C31 segment	Preferred D25 to F70 segment	912L Parallel segment
South Alternate	Alternate Gaetz to C31 segment	Preferred D25 to F70 segment, from point C31 to F70	Highway 11 and ATCO segment
138 kV Parallel Alternate	Alternate Gaetz to C31 segment	Preferred D25 to F70 segment, from point C31 to F70	912L Parallel segment
Highway 11 Alternate	Preferred Gaetz to C31 segment	Preferred D25 to F70 segment	Highway 11 and ATCO segment
North Alternate	Preferred Gaetz to C31 segment, from Gaetz 87S Substation to point D25	Alternate D25 to F70 segment	912L Parallel segment, from point F70

5.2.5.2.1 Gaetz 87S Substation to C31

Figure 9. Excerpt from AltaLink's project map⁶⁷



266. AltaLink's five routes share the same alignment from the Gaetz 87S Substation to point B5 before deviating into the preferred Gaetz to C31 segment (the northern route depicted in red in the figure above) and alternate Gaetz to C31 segment (the southern route depicted in green in the figure above.)

267. The Preferred, North Alternate, and Highway 11 Alternate routes share the preferred Gaetz to C31 segment from B5 north to D25 before the North Alternate splits off to the north. The North Alternate is considered in Section 5.2.5.2.2 of this decision. The Preferred route and Highway 11 Alternate route continue to follow the preferred Gaetz to C31 segment east to D31 and south to C31.

268. The South Alternate and the 138 kV Parallel Alternate follow the alternate Gaetz to C31 segment and travel east of point B5 to point C31.

269. The alternate Gaetz to C31 segment parallels existing transmission lines for the majority of the route, whereas the preferred Gaetz to C31 route does not parallel existing transmission lines at all and primarily runs along quarter lines. AltaLink indicated that along the alternate Gaetz to C31 segment, it would match the existing transmission line spans to the extent possible.

270. AltaLink proposed two route variants between the substation and point C31, the Gaetz west and B41 variants. The Gaetz west Variant exits the substation to the west to point E5 and proceeds north to point E11 where it joins the preferred segment. It would parallel existing transmission lines 914L/1083L from points E5 to E8 and offer an additional option for the proposed transmission line to leave the substation.

271. The B41 Variant would travel east along the quarter line to point B41 and then north within an undeveloped road allowance to point C31. AltaLink stated that the variant would

⁶⁷ Exhibit 26549-0254, AML CETO - Appendix A Project Maps, PDF page 1.

increase distance of the transmission line from two residences and would avoid crossing farmland but would add two additional dead-end structures to the south segment and increase its cost.

272. The alternate Gaetz to C31 segment would cross 3.2 kilometres of contiguously farmed crop land. The Solick Group members primarily reside and farm along the alternate Gaetz to C31 segment, between points B10 and B19. The Solick Group submitted that the alternate Gaetz to C31 segment would have an impact on its members' agricultural operations and that the crossing at the Red Deer River west of point B10 would be difficult and result in environmental impacts. The representative of the group, Harold Solick, stated that its members support the Preferred route and worked with AltaLink (prior to the filing of the application) on routing the Preferred route along the edge of quarter sections owned by H. Solick just east of the Red Deer River near point D9.

273. Bradley Shackel of Brando Holstein Inc., a member of the SBD Group, testified on behalf of his parents, Willem and Sylvian Schakel who reside on the alternate Gaetz to C31 segment between points B10 and B15. He stated that the proposed line would be located approximately 50 feet north of their fenceline making it difficult to operate farm equipment. Ron Duffy, another SBD member, would have his large contiguous block of land bisected with mid-field transmission lines if the preferred Gaetz to C31 segment were approved. As discussed in Section 5.2.5.2.2, the SBD Group favoured the North Alternate route.

274. The Craigievar Group would be affected by all of the proposed segments between the Gaetz 87S Substation and point C31, however, it supported the selection of the alternate Gaetz to C31 segment based on AltaLink's metrics. Ted and Ingrid Vander Meulen reside north of the preferred Gaetz to C31 segment two quarter sections east of point D25. Craigievar Farms Ltd., Eclipse Pork Ltd. and Sterling Ventures Ltd., for whom Glenn Sharp is the principal, each own lands between points D25 and D31 by Range Road 253. The Craigievar Group submitted that the only AltaLink metric favouring the preferred Gaetz to C31 segment is the number of residences within 150 metres of the centerline of the transmission line; and that although the alternate Gaetz to C31 segment has two more residences, each is already affected by a transmission line, as opposed to the preferred Gaetz to C31 segment which would be greenfield construction and therefore create a new impact.

275. The Craigievar Group also argued that the preferred segment would have structures placed in the middle of fields as opposed to near the edge. In particular, G. Sharp, who has 17 quarter sections of land along all the AltaLink proposed routes, would have new mid-field structures placed on his lands which would affect agricultural operations. The preferred Gaetz to C31 segment would cross 7.9 kilometres of contiguously farmed crop land.

276. AltaLink provided the following table comparing the metrics between the preferred Gaetz to C31 and alternate Gaetz to C31 segments:

Table 6. Aspects of Routing Between Gaetz Substation and C31⁶⁸

Major Aspects and Considerations	Routes from Gaetz to C31 Comparison		
	Preferred Gaetz to C31	Alternate Gaetz to C31	
Agricultural and Native Prairie Impacts			
Agricultural Land Crossed by Centreline (km)	Crop (km)	16.3	13.3
	Tame Pasture (km)	0.4	0.0
	Crop - contiguously farmed or mid-field (km)	7.9	3.2 ⁶⁹
Residential Considerations			
Residences within 150 m of Centreline (#)	4	6	
Residences within 150 m of centreline not Separated by a Road or Transmission Line (#)	2	1	
Residences within 800 m of Centreline (#)	36	28	
Environmental Impacts			
Surface Water Crossed by Centreline (km)	0.1	0.1	
Surface Water within 800 m from Centreline (ha)	34.7	34.0	
Wetlands Crossed by Centreline (km)	0.4	0.0	
Provincially Designated Environmentally Sensitive Areas Crossed by Centreline (km)	0.0	0.0	
Electrical Considerations			
Distribution Lines Affected	0.4	2.1	
Parallel Existing Transmission Lines (km)	0	10.5	
Special Constraints			
Active Oil or Gas wells within 50 m of Centreline (#)	3	0	
Parallel Route to Pipelines within 250 m of Centreline (km)	15.6	10.7	
Number of Pipeline Crossings on Centreline (#)	52	40	
Length of Route within a road allowance (km)	4.4	6.2	
Technical Considerations			
Total Route Length (km)	24.6	21.6	

277. AltaLink favoured the preferred Gaetz to C31 segment because stakeholders raised concerns with the potential agricultural effects of the alternate Gaetz to C31 segment before and after the Red Deer River crossing; and that there would also be a visual impact to a residence in

⁶⁸ Exhibit 25469-X0263, AML Central East Transfer-Out Application, PDF pages 115 and 116.

⁶⁹ Does not include the 10.5 kilometres where the proposed route parallels existing transmission lines.

proximity to the Red Deer River crossing, shown as brown squares on the west side of the river in the figure below.

Figure 10. Red Deer River crossing on alternate Gaetz to C31 segment⁷⁰



5.2.5.2.1.1 Findings

278. The Commission finds that the alternate Gaetz to C31 segment has the lowest overall impact because it has less line length, more transmission lines located within the road allowance, parallels existing transmission lines for the majority of the segment, and uses fewer heavy angle or dead-end structures.

279. The Commission finds that the alternate Gaetz to C31 segment would have less of an agricultural impact than the preferred Gaetz to C31 segment. In Section 5.2.2 of this decision, the Commission determined that mid-field structure placement has a higher impact than structures placed along boundary lines. Along AltaLink's preferred Gaetz to C31 segment, the routing would cross R. Duffy's large contiguous block of land and Craigievar lands with new mid-field structures. Solick Group members located along the alternate Gaetz to C31 segment would receive mid-field structures in parallel with existing mid-field structures. While the portion of the alternate Gaetz to C31 segment which parallels an existing line has the highest impact, the preferred Gaetz to C31 segment has a higher total impact because it would cross more agricultural land and more cross-cultivated crop land. The Commission expects AltaLink to work with affected landowners on structure placement to minimize the agricultural impact.

280. In addition, the Commission finds that the Red Deer River crossing along the alternate Gaetz to C31 segment has a lower impact. Along the preferred Gaetz to C31 segment, the river crossing would result in a new disturbance because it is the only transmission line crossing the river at that location. Conversely, along the alternate Gaetz to C31 segment, the crossing would

⁷⁰ Exhibit 25469-X0264, AML CETO - Appendix A Project Maps, PDF page 6.

occur at a point where it would join existing transmission lines to cross the river, resulting in an incremental visual impact.

281. Although the alternate Gaetz to C31 segment has two more residences within 150 metres of the transmission line, this segment would be an incremental disturbance to those residences. In addition, when adjusted for newly-exposed residences (where there is not an existing transmission line or road between a residence and the proposed transmission line), the alternate Gaetz to C31 segment has a lower impact with one fewer residence within 150 metres. There are also fewer total residences within 800 metres along the alternate Gaetz to C31 segment.

282. Finally, the Commission rejects the Gaetz west and B41 variants: the Gaetz west Variant would require two crossings of an existing double-circuit transmission line, resulting in a higher cost; likewise, the B41 Variant would require two extra dead-end structures, resulting in a higher cost. No landowners supported these variants.

5.2.5.2.2 Point D25 to point F70

Figure 11. Excerpt from AltaLink's project map⁷¹



283. In this portion of the project, AltaLink proposed two segments: the preferred D25 to F70 segment (the southern route depicted in red in the figure above) and the alternate D25 to F70 segment (the northern route depicted in green in the figure above).

284. The preferred D25 to F70 segment continues east from point D25 primarily along the quarter line to point D31 where it deflects south along a road allowance to point C31. The preferred segment then proceeds east for 12 kilometres along Township Road 392 approximately one metre inside the north road allowance to point C49. It would then travel northeast from points C49 to F70, parallel the existing 912L transmission line and the proposed transmission line structures would be set approximately 24 metres northwest of the 912L structures. In Section 5.2.5.2.1.1 the Commission found the alternate Gaetz to C31 segment to be the lowest impact route. In this section, the Commission evaluates that routing to point C31, together with the preferred D25 to F70 segment from points C31 to F70, to determine whether it has a lower overall impact than the alternate.

285. The Preferred route and the Highway 11, South and 138 kV Parallel Alternate routes share the preferred D25 to F70 segment from point C31 to F70.

⁷¹ Exhibit 26549-0254, AML CETO - Appendix A Project Maps, PDF page 1.

286. The alternate D25 to F70 segment, shown in green in the figure above, deflects north from points D25 to E25 and travels north and east to point F55 before shifting in a south and east direction to point F70. From points D25 to F70, only the North Alternate route follows this route.

287. There were several interveners along the alternate D25 to F70 segment. James Heith Johannson, a member of the Craigievar Group, resides less than 150 metres from this segment. J. Johannson raised visual impact concerns. Pauline and Darrell Blacklock have multiple residences and dairy and farm facilities within 150 metres of the alternate D25 to F70 segment. The Blacklocks raised concerns that the transmission line would disrupt the dairy farm operations, potentially spread weeds and clubroot, and affect future expansion. The Blacklocks also indicated that a historic gravesite is located on the property. Craigievar Farms Ltd. and Eclipse Pork Ltd. also own land adjacent to the route, and the alternate D25 to F70 segment would bisect Craigievar Farms Ltd.'s cultivated land with mid-field structures.

288. The SBD Group opposed the preferred D25 to F70 segment. The group expressed concerns with residential, agricultural, and environmental impacts as well as potential effects on their property value and health. Bradon and Tammy Bushman, members of the SBD Group, are concerned with the number of trees that would be cleared on the north side of Township Road 392 and the impact the transmission line would have on them and their residence, including decreased property value and EMF. Their residence is located between points C31 and C49 and would be approximately 60 metres from the preferred D25 to F70 segment. They are also concerned that their bee colony would be affected. Although the SBD Group requested that the transmission line application be denied, in the event the application is approved, it requested that the Commission select the alternate D25 to F70 segment. The SBD Group submitted that although this segment would result in the Commission selecting the longest and most expensive of the proposed routes, it received the least amount of objection.

289. Expert reports were submitted by Serecon Inc. for AltaLink⁷² and the HarrisonBowker Valuation Group for the SBD landowner group.⁷³ Both reports concluded that the Bushmans' acreage would have a potential property value impact of between 0 and 5 per cent, or 10 to 15 per cent, respectively.

290. AltaLink stated that the preferred D25 to F70 segment is shorter in length, lower in cost and has fewer heavy dead-end structures. Further, the preferred D25 to F70 segment has more length that parallels existing transmission structures or is located within the road allowance, as opposed to the alternate D25 to F70 segment. AltaLink submitted a table, reproduced below, which compared the preferred and alternate segments, from point D25 to point F70.

⁷² Exhibit 25469-X0295, AML CETO - Appendix K Landowner Impacts, PDF pages 55-127.

⁷³ Exhibit 25469-X0664, Appendix I - Evidence of Pat Woodlock.

Table 7. Aspects of routing between D25 and F70⁷⁴

Major Aspects and Considerations		Routes from D25-F70 Comparison	
		Preferred D25 to F70	Alternate D25 to F70
Agricultural and Native Prairie Impacts			
Agricultural Land Crossed by Centreline (km)	Crop (km)	10.8	14.8
	Tame Pasture (km)	1.3	1.0
	Crop - contiguously farmed or mid-field (km)	2.4	5.0
Residential Considerations			
Residences within 150 m of Centreline (#)		6	4
Residences within 150 m of centreline not Separated by a road or transmission line (#)		3	1
Residences within 800 m of Centreline (#)		34	36
Environmental Impacts			
Surface Water Crossed by Centreline (km)		0.3	0.1
Surface Water within 800 m from Centreline (ha)		96.4	47.1
Wetlands Crossed by Centreline (km)		1.4	1.2
Provincially Designated Environmentally Sensitive Areas Crossed by Centreline (km)		1.6	3.3
Electrical Considerations			
Distribution Lines Affected		0.2	2.7
Parallel Existing Transmission Lines (km)		6.2	0
Special Constraints			
Active Oil or Gas wells within 50 m of Centreline (#)		2	4
Parallel Route to Pipelines within 250 m of Centreline (km)		10.2	13.4
Number of Pipeline Crossings on Centreline (#)		46	70
Length of Route within a road allowance (km)		13.6	11.2
Technical Considerations			
Total Route Length (km)		29.7	32.2

5.2.5.2.2.1 Findings

291. The Commission finds that the preferred D25 to F70 segment has the lowest overall impact because it has less line length, lower agricultural impact, more transmission lines located within the road allowance, parallels existing transmission lines for a portion of the segment and landowner concerns can be adequately mitigated. The alternate D25 to F70 segment is longer,

⁷⁴ Exhibit 25469-X0263, AML Central East Transfer-Out Application, PDF page 112.

within a road allowance for less of the segment, and does not parallel an existing transmission line.

292. Agriculturally, the Commission finds that the preferred D25 to F70 would result in a lower agricultural impact because it crosses less crop land and contiguously farmed fields. In Section 5.2.5.2.1.1 the Commission approved the alternate Gaetz to C31 segment, further reducing the amount of contiguously farmed land.

293. From point C31 to F70, Tammy and Bradon Bushman were the only interveners who submitted concerns to the Commission, and the evidence shows that the preferred D25 to F70 segment, and associated right-of-way and work space are not proposed to be located on the Bushmans' property. The transmission line would be located on the north side of Township Road 392 and the Bushmans are on the south side of Township Road 392. As a result, no trees are anticipated to be removed from the Bushmans' property. Moreover, the trees and road will create a separation from the residences and the transmission structures.

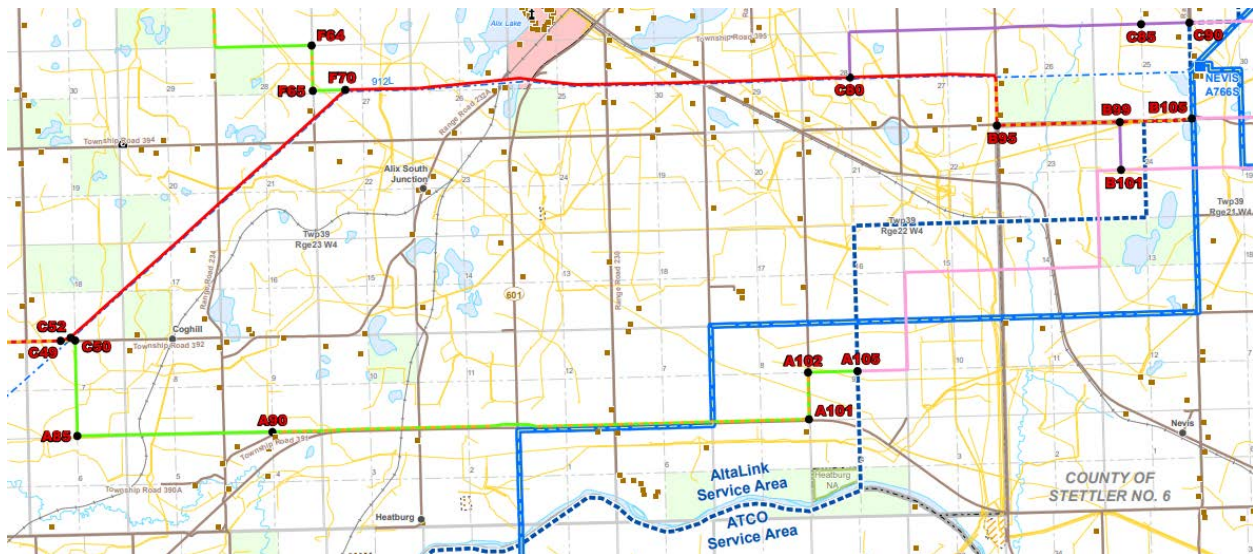
294. In response to the Bushmans' concerns about disturbance to their honey bees, AltaLink referred to research indicating that EMF does not impact bees, their ability to navigate, nor their ability to pollinate. While the transmission line may induce shocks to wood in bee hives, this can be mitigated by locating the hives further away or by grounding the hives. AltaLink committed to discuss any concerns with the Bushmans and to mitigate any issues that arise as a result of its facilities. AltaLink is not aware of any research that suggests bees would be affected by the low level of audible noise produced by the transmission line. The Commission is satisfied with the measures proposed by AltaLink to mitigate the potential visual impacts to the Bushmans, including its commitment to consult with them with respect to their bees.

295. In comparing the relative property value impacts between the preferred and alternate D25 to F70 segments, the Commission accepts the findings in the Serecon and HarrisonBowker reports that there is the potential for some negative market value impacts to certain country residential properties located directly adjacent to the proposed routes. The Commission finds that the potential impacts to property values on both routes would be similar and that the assessment of the relative impacts to property values does not favour either segment.

296. The Serecon and HarrisonBowker reports estimated that the Bushmans would have a potential property value impact of between 0 and 5 per cent, or 10 to 15 per cent, respectively. The Commission finds that proximity and visibility of the proposed transmission line are key factors and that visibility can be mitigated through the existence of visual barriers such as tree coverage. Further, existing trees and a road between the Bushmans residence and the transmission line will provide some mitigation. AltaLink has committed to work with the Bushmans on structure placement to minimize visual impacts.

5.2.5.2.3 Point C49 to ATCO service territory

Figure 12. Excerpt from AltaLink's project map⁷⁵



297. To best consider the impacts of the routing options presented by AltaLink, a common start and end point, points C49 to B101, were selected.

298. In the figure above, AltaLink's preferred segment, referred to as the 912L Parallel segment, is depicted in red while the B101 Variant is in purple. From point C49, the 912L Parallel segment would deflect northeast toward point F70, then traverse east to C80 and B99. The B101 Variant would then be utilized, traveling south from points B99 to B101. This variant would connect the 912L Parallel segment to ATCO's preferred Route A.

299. The 912L Parallel segment would parallel the existing 912L transmission line or be located within the road allowance for a majority of its length. The Preferred route and 138 kV Parallel Alternate route also use the 912L Parallel segment. The North Alternate route uses only a portion of it, starting from point F70.

300. The alternate segment, referred to as the Highway 11 and ATCO segment, is depicted in green and pink to the south in the above figure. The Highway 11 segment deflects south from point C49 to point A85 and then east through point A90 along Highway 11, primarily within the highway right-of-way and on privately-owned lands, to point A101, and finally, point A105. To reach the common end point with the 912L Parallel segment, the ATCO segment is required. (The ATCO segment is also referred to as Route Option ABC in Section 5.2.5.1.3).

301. The Highway 11 segment parallels Highway 11 for a portion of its length and has lower residential impacts. The South Alternate route and Highway 11 Alternate route use the Highway 11 segment.

302. AltaLink also developed the C85 Variant along the 912L Parallel segment which travels north from point C80 to connect with ATCO's service territory at point C90 (shown as purple on figure above in the northeast corner). It stated that this route variant would cost \$0.4 million

⁷⁵ Exhibit 26549-0254, AML CETO - Appendix A Project Maps, PDF page 1.

more and increase agricultural impacts but avoid some residences within 150 metres. It would also offer flexibility to connect to a different connection point with ATCO further north.

303. AltaLink submitted that there are greater agricultural impacts along the alternate Highway 11 and ATCO segment but greater residential impacts along the preferred 912L Parallel segment. AltaLink submitted a table, reproduced below, comparing the segments.⁷⁶

Table 8. Aspects of routing between C49 and ATCO service territory⁷⁷

Major Aspects and Considerations		Routes from C49 Comparison		
		912L Parallel Segment	Highway 11 Segment	Highway 11 Segment + ATCO Segment
Agricultural and Native Prairie Impacts				
Agricultural Land Crossed by Centreline (km)	Crop (km)	8.0	4.4	9.7
	Tame Pasture (km)	4.0	0.7	0.8
	Crop - contiguously farmed or mid-field (km)	0.0	3.1	3.1
Residential Considerations				
Residences within 150 m of Centreline (#)		6	3	3
Residences within 150 m of Centreline not Separated by a Road or Transmission Line (#)		3	0	0
Residences within 800 m of Centreline (#)		39	13	15
Environmental Impacts				
Surface Water Crossed by Centreline (km)		0.2	0.1	0.1
Surface Water within 800 m from Centreline (ha)		162.0	28.5	60.7
Wetlands Crossed by Centreline (km)		1.0	0.3	0.8
Electrical Considerations				
Parallel Existing Transmission Lines (km)		17.3	0.0	0.0
Special Constraints				
Active Oil or Gas wells within 50 m of Centreline (#)		5	0	0
Parallel Route to Pipelines within 250 m of Centreline (km)		5.7	3.5	6.3
Number of Pipeline Crossings on Centreline (#)		33	11	24
Length of Route within a Road Allowance (km)		4.1	9.2	9.2
Technical Considerations				
Total Route Length (km)		21.4	15.7	23.4

⁷⁶ The third column of Table 4-4 includes the ATCO segment which also known as Route Option ABC in ATCO's application. This route option connects the Highway 11 Alternate and South Alternate routes to ATCO's Preferred and Alternate Route.

⁷⁷ Exhibit 25469-X0263, AML Central East Transfer-Out Application, PDF page 109.

304. April and Justin Aspden reside north of the 912L Parallel segment and would be within 150 metres of the proposed transmission line. The Aspdens stated that an additional transmission line on the preferred segment would have a cumulative impact on their views and their cattle business.

305. Maureen Rodgers, who owns farmland just north of the 912L Parallel segment, submitted that the 912L Parallel segment would affect her farming operation and that the transmission line should be routed along a roadway such as Highway 11.

306. The Commission did not receive any objections to the Highway 11 segment.

5.2.5.2.3.1 Findings

307. The Commission approves the Highway 11 and ATCO segment for the following reasons, but most importantly because it has the least overall impact to landowners: it has significantly fewer residential impacts with fewer residences within 150 and 800 metres of the transmission line. When considering newly-exposed residences (where there is no existing transmission line or road between the residence and the transmission line), the Highway 11 and ATCO segment has no residences whereas the 912L Parallel segment has three. Both segments parallel existing linear disturbances, either Highway 11 or Transmission Line 9L12. The Highway 11 and ATCO segment crosses slightly more crop land and crosses contiguously farmed land (where the 912L Parallel segment does not). The Commission finds this aspect to be mitigated because the Highway 11 and ATCO segment is generally placed within a road allowance, along Highway 11 or along quarter section lines for the majority of the route. In addition, there were no interveners along the Highway 11 and ATCO segment received by AltaLink.⁷⁸

308. Should a dead-end structure be required where the CETO line changes service territories, the Commission expects ATCO and AltaLink to co-ordinate such that only one dead-end structure is erected (i.e., that two dead-end structures, an AltaLink and an ATCO structure, not be used next to the other simply because of the service territory boundary).

5.2.5.2.4 Overall findings of the AltaLink route

309. In addition to breaking down AltaLink's routing by segment, the Commission also considered the Preferred route and each of the alternate routes holistically. AltaLink's proposed routes have different deviation points and varying degrees of overlap, making an apples to apples comparison of the proposed routes difficult.

310. The Commission finds that while each of AltaLink's proposed routes are acceptable, the South Alternate route has the lowest overall impact. The Commission considers that following existing linear disturbances such as transmission lines, roads and highways is an effective approach to minimize the impacts of a proposed transmission line, especially when compared to a greenfield option where the transmission line would be a new disturbance. The South Alternate route parallels existing transmission lines 756L/793L along the south segment from point B5 until just after the NOVA Chemicals plant at Range Road 252. It then also travels east of point C31 along Township Road 392 and is located one metre inside the road allowance, to

⁷⁸ As discussed in Section 5.2.5.1.3, ATCO received an intervention from landowners concerned with the connection between the ATCO and AltaLink lines, however, they were receptive of the ATCO segment.

point C49. From there, the South Alternate route primarily parallels Highway 11 until ATCO's service territory.

311. The Commission is also persuaded by the fact that AltaLink's South Alternate route is the shortest and least expensive of its proposed routes. In addition, of the 12 residences within 150 metres of the South Alternate route, only one is not separated from the proposed transmission line by an existing transmission line or road.

312. AltaLink's South Alternate route crosses the least amount of crop land and the second least amount of contiguously farmed fields. The Commission recognizes that the paralleling of existing transmission structures within a field affects agricultural operations because the additional structure is pushed further in-field. It expects AltaLink to uphold its commitment to consult with landowners, such as the Solick Group, regarding structure spacing and placement to mitigate this impact.

5.2.6 Gaetz 87S and Tinchebray 972S substation alterations

313. To accommodate the addition of the two 240-kV transmission lines, AltaLink and ATCO applied to alter the Gaetz 87S Substation and Tinchebray 972S Substation, respectively. Both TFOs applied to alter the substation in two stages, with the start of construction triggered by the AESO's reaffirmation study.

314. AltaLink applied to alter its substation by adding two 240-kV circuit breakers during Stage 1 to accommodate Transmission Line 962L; and adding two 240-kV circuit breakers and salvaging an existing 240-kV bus tie breaker during Stage 2 to accommodate Transmission Line 986L. The alteration would occur within the existing fenced area.

315. Similarly, ATCO applied to alter the Tinchebray 972S Substation by adding a 240-kV circuit breaker during Stage 1 to tie in Transmission Line 9L62. During the Stage 2 alteration, ATCO applied to add four 240-kV circuit breakers, expand the fenced area, and alter existing Transmission Line 9L16 by changing the tie-in location to a new bay. The additional circuit breakers are required during Stage 2 to convert the substation from a ring bus configuration to a breaker-and-a-half scheme.

316. There were no objections to AltaLink's substation alteration. As discussed later, B. Perreault objected to ATCO's substation alteration, submitting that the substation alteration should not be permitted until his concerns with the existing substation are addressed.

317. The Commission finds that the alterations to Gaetz 87S Substation and Tinchebray 972S Substation proposed by the TFOs are appropriate and necessary to connect the transmission lines approved in this decision. Similarly, the alteration to Transmission Line 9L16 is minor in nature and required to connect the approved 240-kV transmission lines. The Commission is satisfied that the expansion of the fence boundary at the Tinchebray 972S Substation is necessary to accommodate the new substation equipment and that there is sufficient space for the expansion. It also recognizes that given the topography of the area, such an expansion requires updated drainage plans, which B. Perreault has objected to. His objections are addressed in Section 6.

5.2.7 The Métis Nation of Alberta

318. The MNA participated in this proceeding as the representative of more than 3,872 of its members, to whom it refers to as citizens. It stated that its members have harvesting and other rights affirmed in Section 35 of the *Constitution Act*, 1982 that may be affected by the project.

319. The MNA's participation included issuing and responding to information requests, submitting written evidence, and presenting two witnesses at the virtual oral hearing. It identified three key issues in its closing argument: the adequacy of consultation, the potential to affect Métis traditional land use and the potential to affect unknown archeological sites in the Tail Creek area. The MNA further requested that the Commission impose conditions on the proponents of the CETO project to address its potential impacts.

320. In the discussion below, the Commission addresses and makes findings on the duty to consult, including the scope and adequacy of consultation, in relation to the CETO project. The Commission also addresses the project's potential impact on Métis traditional land use and unknown Métis archeological sites in the Tail Creek area, as well as the conditions requested by the MNA.

5.2.7.1 Duty to consult

321. The duty to consult and accommodate is a legal duty with unique aspects that distinguish it from Aboriginal rights. The duty arises from the honour of the Crown and always rests with the Crown, although the Crown may delegate procedural aspects of consultation. Crown consultation is part of a process of fair dealing and reconciliation that flows from the historical relationship between the Crown and Aboriginal people.⁷⁹

322. The duty is owed to Aboriginal communities as a whole and not to individual Aboriginal persons.⁸⁰ It arises when the Crown has knowledge, real or constructive, of the potential existence of an Aboriginal right, title or interest, and contemplates Crown conduct that might adversely affect it. When assessing potential impacts to Aboriginal claims or rights, the impacts must be causally linked to the proposed Crown conduct or decision. Addressing past wrongs is not one of the purposes of Crown consultation.⁸¹

323. The scope of the duty to consult is based on a preliminary assessment of the strength of the claim or right asserted and the extent of the alleged infringement. Where the perceived breach is less serious or relatively minor, the content of the duty will be at the lower end of the scale, for example, mere notice may be sufficient. If a strong *prima facie* case for the claim is established and the potential infringement is of higher significance, deep consultation that is aimed at finding a satisfactory solution may be required; however, the duty to consult does not confer a veto power on Aboriginal groups.⁸²

⁷⁹ *Haida Nation v. British Columbia (Minister of Forests)*, 2004 SCC 73; *Mikisew Cree First Nation v. Canada (Minister of Canadian Heritage)*, 2005 SCC 69.

⁸⁰ *Newfoundland and Labrador v. Labrador Métis Nation*, 2007 NCLA 75; leave to appeal to SCC refused Docket 32468 (May 29, 2008), 2008 CanLII 32711 (SCC).

⁸¹ *Rio Tinto Alcan Inc. v. Carrier Sekani Tribal Council*, 2010 SCC 43.

⁸² *Haida Nation*, *ibid*; *Chippewas of the Thames First Nation v. Enbridge Pipelines Inc.*, 2017 SCC 41; *Clyde River (Hamlet) v. Petroleum Geo-Services Inc.*, 2017 SCC 40.

324. The Commission is a provincial administrative tribunal and regulatory agency that serves as the final decision maker for applications to construct and operate transmission lines in Alberta. Although the Commission is an independent agency and is not the Crown or an agent of the Crown, it carries out functions, and exercises executive powers, that are authorized by the legislature.

325. In some situations, in addition to triggering the obligation to hold a hearing under Section 9(2) of the *Alberta Utilities Commission Act*, an application before the Commission may trigger the Crown's duty to consult with Indigenous peoples. Crown conduct sufficient to trigger the duty to consult can include the decisions of an independent administrative tribunal such as the Commission, notwithstanding that it is not itself the Crown.

326. Where the duty to consult is triggered, the Crown may rely on steps undertaken by a regulatory agency to fulfil the duty, provided that the regulatory agency has the necessary statutory powers and duties to provide an appropriate level of consultation and, where required, accommodation. Under its constating legislation, the Commission has broad powers that enable it to require applicants to notify or consult with potentially affected stakeholders, to hold hearings, to order the production of information, to impose conditions on applicants, and to provide participant funding. For these reasons, the government of Alberta has confirmed that where the duty to consult is triggered by an application before the Commission, the government of Alberta will rely on the Commission's process to address potential impacts to Aboriginal and treaty rights. The Commission is committed to ensuring that its processes and decisions uphold Section 35.

5.2.7.2 Triggering of the duty and adequacy of consultation

327. The MNA requested that the Commission confirm that AltaLink's and ATCO's applications triggered the duty to consult the MNA on behalf of the North Saskatchewan Regional Métis Community, and describe the extent of that duty.⁸³

328. The Commission is satisfied that its decision on the applications before it in this proceeding amounts to conduct that may adversely affect the exercise of Métis harvesting or traditional cultural practices in the project area. The MNA has demonstrated that portions of the project are located within or in close proximity to lands, in particular Crown lands, that are frequented or travelled by MNA members for the purpose of harvesting or for traditional cultural practices, and that there may be some impact to those activities by the CETO project, for example, reduced access during construction. The Commission therefore finds that the duty to consult is triggered as it relates to Métis, as represented by the MNA.

329. As discussed in more detail below in Section 5.2.7.3 - Métis harvesting and traditional land use, the Commission considers that the CETO project will result in a relatively minor infringement on the exercise of Aboriginal rights by MNA members in the project area. Accordingly, it finds that the content of the Crown's duty of consultation in relation to the CETO project lies at the lower end of the spectrum, and that the consultation with the MNA was reasonable and fulfilled the duty.

330. While the MNA submitted that it was excluded from meaningful pre-application engagement, resulting in it "being pitted against AltaLink and ATCO in an adversarial process

⁸³ Transcript, Volume 20, PDF page 116, lines 12-2.

that did nothing to foster good faith discussions to resolve its concerns,”⁸⁴ the Commission finds that the MNA was adequately informed of the project and had an opportunity to voice its concerns and be heard.

331. The Commission considers that the MNA became aware of the CETO project as early as March 1, 2019, when it received correspondence from AltaLink on the CETO project and a request for feedback.⁸⁵ Between providing the MNA with pre-application materials and the filing of the CETO facility applications in September 2020, AltaLink undertook site visits and provided capacity funding to MNA Region 3 and MNA Region 4 to assist with identifying sites of historical and cultural significance to the MNA.⁸⁶ AltaLink responded to the concerns identified by the MNA and mitigation measures proposed in the traditional land use assessment reports, which included eliminating a route option from consideration.⁸⁷

332. While ATCO did not engage with the MNA prior to filing its applications, the Commission is satisfied that since the filing of the MNA’s statement of intent to participate, ATCO has sought to identify and understand the MNA’s concerns outside of the AUC proceeding process. This is reflected by engagement records detailing 18 separate communications exchanged with the MNA outside the proceeding between December 18, 2020, and March 16, 2021 that included numerous emails, a virtual meeting, a virtual route tour, and written correspondence.⁸⁸

333. In addition, the project materials initially provided to the MNA by AltaLink in March 2019 specified two distinct route segments: one to be constructed by AltaLink and another by ATCO.⁸⁹ The Commission considers that the MNA was made aware of the CETO project as early as March 2019, including ATCO’s portion of the route.

334. In its submissions, the MNA described the AUC hearing process as “unnecessarily burdensome.”⁹⁰ In this regard, the Commission considers that its process provided the MNA with adequate opportunity to participate as an intervener in the proceeding: the Commission gave the MNA direct notice of the proposed CETO project on October 13, 2020; granted it standing to participate in the proceeding on November 20, 2020; and, represented by legal counsel, the MNA formally participated in the Commission’s process, including issuing and responding to information requests, filing evidence and participating in a virtual oral hearing in which it had an opportunity to give direct evidence, cross-examine and present final argument. Participant funding was also available to the MNA through Rule 009: *Rules on Local Intervener Costs*. Finally, as a result of the MNA’s participation in the proceeding, both AltaLink and ATCO committed to additional mitigation measures (described in detail in sections 5.2.7.3 and 5.2.7.4) to accommodate the MNA’s specific concerns.

⁸⁴ Transcript, Volume 20, PDF pages 114 and 115, lines 22-2.

⁸⁵ Exhibit 25469-X0291, AML CETO – Appendix J Indigenous Relations (J-1 to J-4), PDF pages 16-23; Exhibit 25469-X0292, AML CETO – Appendix J Indigenous Relations (J-5).

⁸⁶ Exhibit 25469-X0525, AML IR Responses to MNA, PDF page 6; Transcript, Volume 21, PDF pages 12 and 13, lines 23-4.

⁸⁷ Exhibit 25469-X0263, AML Central East Transfer-Out Application, PDF pages 172-177.

⁸⁸ Transcript Vol. 21, PDF page 51, lines 16-24; Exhibit 25469-X0767.01, ATCO Reply Evidence, PDF pages 101-103.

⁸⁹ Exhibit 25469-X0291, AML CETO – Appendix J Indigenous Relations (J1-J4), PDF pages 16-23; Exhibit 25469-X0292, AML CETO – Appendix J Indigenous Relations (J-5).

⁹⁰ MNA Oral Argument, PDF page 2, paragraph 7.

5.2.7.3 Métis harvesting and traditional land use

335. The proposed CETO project is within Harvesting Area D as defined in Alberta's *Métis Harvesting in Alberta Policy (2018)* and the *Métis Harvesting Agreement*. The MNA submitted that its citizens use the project area to exercise rights-related activities including hunting, trapping, fishing, gathering, camping, travelling and spirituality, and that these activities take place on both Crown and private lands.⁹¹ The MNA expressed a concern that the CETO project would create a number of conditions that make the areas adjacent to it less desirable to MNA members for exercising harvesting rights and engaging in traditional land uses, and would result in decreased Métis harvesting and traditional land use in the area.⁹² The conditions of concern include herbicide application, electromagnetic fields, mechanical clearing, construction runoff, construction vehicles and grubbing activities, which lead to avoidance behaviors for MNA citizens.⁹³

336. The MNA identified 11 parcels of Crown and private land in proximity to the proposed project as being used for a variety of traditional land use purposes.⁹⁴ Of these 11 parcels, there is one Crown land parcel that would be traversed by the AltaLink South Alternative route, and five privately-owned land parcels that would be affected by the ATCO preferred Route A and Route Option ABC.

337. The MNA identified Crown land at Section 11, Township 39, Range 23, west of the Fourth Meridian as a parcel of interest. That parcel would be traversed by AltaLink's approved South Alternate route, which would be located along the entire south edge within the registered roadway for Highway 11, except for two structures to be set 30 metres farther north at the east edge of that section to accommodate future highway intersection improvement. The parcel is bordered on the east by Highway 601, and it is subject to a grazing lease, fenced with a locked gate, and contains a railway and eight well sites. While AltaLink acknowledged that access to some areas of the right-of-way and workspace will be restricted due to construction activities, it confirmed that it would not restrict use of the remainder of Section 11, Township 39, Range 23, west of the Fourth Meridian during construction.⁹⁵ AltaLink also confirmed that following completion of construction, MNA members would still be able to use AltaLink's right-of-way in this area.

338. Neither segment of the approved ATCO preferred Route A and Route Option ABC traverses Crown land. The MNA indicated that its members use, for traditional purposes, five privately-owned quarter sections of land that are traversed by this route.⁹⁶ ATCO noted that these privately-owned lands contain existing industrial, residential, or agricultural disturbances including a residence, transmission lines, a distribution line and pipelines. ATCO also reported

⁹¹ Exhibit 25469-X0646, MNA MNP CETO Evaluation Report Part 1 of 2 – Sections 1-4.2.5.

⁹² MNA Closing Argument, PDF page 10, line 51.

⁹³ Transcript, Volume 20, PDF page 108, lines 4-24.

⁹⁴ Exhibit 25469-X0747, MNA Response to AUC Information Requests and Appendix A-B – Part 1 of 2 (12 March 2021); Exhibit 25469-X0748, MNA Response to AUC Information Requests Appendix C – Part 2 of 2 (12 March 2021).

⁹⁵ Exhibit 25469-X0759, AML Reply Evidence, PDF page 54, paragraph 199.

⁹⁶ NW 35-39-15-W4M, NW 20-39-21-W4M, NE 19-39-21-W4M, and NW and SW 13-39-22-W4M as indicated in Exhibit 25469-767.01, PDF pages 105-107.

that no traditional land use was identified by any landowners or occupants during the consultation process.⁹⁷

339. Based on the characteristics of the parcels identified by the MNA as areas of interest and the project area in general, the Commission considers that any impact of the approved project on Métis harvesting and traditional land use will be minimal, temporary in nature and can be reasonably mitigated. Both the AltaLink and ATCO approved routes follow existing linear disturbances for significant portions of their length, which is consistent with the MNA's expressed preference for a route that prioritizes avoiding Crown and undisturbed land. Also consistent with the MNA's expressed preference, construction schedules for both TFOs contemplate winter construction to minimize environmental impact. The Commission encourages AltaLink and ATCO to engage with the MNA to further mitigate impacts should winter construction not be possible.⁹⁸ It is also satisfied that the environmental effects of the project can be mitigated to a reasonable degree if the TFOs adhere to the commitments discussed in Section 5.2.3. Lastly, both TFOs confirmed that once construction is complete, neither will restrict public access to the right-of-way.⁹⁹

340. Throughout the proceeding, the Commission sought to better understand the MNA's site-specific concerns and the potential site-specific impacts of the CETO project on the exercise of Métis rights. While the MNA identified 11 parcels of interest in the project area that it stated were utilized by as many as six anonymous survey respondents who are members of the MNA, this information did not contain the level of specificity required for the Commission to develop a deeper understanding of specific sites, within the identified parcels, that MNA members utilize, how and when they are used, how they are accessed, whether there is suitable land available nearby for the same or similar purpose, and how the CETO project might affect their use of the lands and the continued exercise of their Section 35 rights.

341. Furthermore, the MNA witnesses who compiled information from MNA members were not traditional land users themselves and were unable to answer questions about site-specific uses and impacts posed by Commission counsel during the hearing.¹⁰⁰ The limited evidence submitted by the MNA in this regard contributed to the Commission's assessment that the CETO project will result in a relatively minor infringement on the exercise of Aboriginal rights by MNA members in the project area and its finding that the scope of consultation lies on the lower end of the spectrum.

342. The MNA submitted that proceeding timelines, coupled with constraints imposed by the COVID-19 pandemic, severely limited what information it could collect.¹⁰¹ The Commission does not accept that these factors account entirely for the MNA's failure to provide more detailed information to support its intervention in this proceeding. As stated earlier, the MNA became aware of the CETO project as early as March 2019 and was granted standing to participate in the proceeding on November 20, 2020. The deadline for intervenor written evidence was February 17, 2021. The Commission therefore considers that the MNA had sufficient time to

⁹⁷ Exhibit 25469-X0767.01, ATCO Reply Evidence, PDF page 101, paragraph 448.

⁹⁸ Transcript Volume 19, PDF page 33, lines 15-21; Exhibit 25469-X0216.01, Atch-1_CETO Project_Application Text, PDF page 17, paragraph 72.

⁹⁹ Exhibit 25469-X0767.01, ATCO Reply Evidence, PDF page 108, paragraph 462; Exhibit 25469-X0759, AML Reply Evidence, PDF page 54, paragraph 199.

¹⁰⁰ Transcript, Volume 14, PDF pages 60-64.

¹⁰¹ Transcript, Volume 20, PDF page 115, lines 3-9.

co-ordinate with at least one Métis traditional land user prior to filing its evidence or to seat a Métis traditional land user as a witness during the virtual oral hearing that commenced on April 14, 2021.

343. The MNA requested that the Commission impose the following conditions on the CETO project pertaining to traditional land use:¹⁰²

- That ATCO and AltaLink be required to provide notice of construction activities to the MNA in any areas identified as being important to the MNA, and that, where reasonably possible, ATCO and AltaLink work with the MNA to accommodate traditional uses during construction.
- That ATCO and AltaLink be required to provide resources to the MNA so that it may deliver independent information sessions to address its members' concerns with the potential impacts of the CETO project.

344. Both AltaLink and ATCO made commitments to provide notice of construction activities and accommodate traditional land uses during scheduled construction. AltaLink committed to providing the MNA with construction updates to mitigate access concerns and to allow harvesting of traditional plants on the right-of-way outside of construction windows.¹⁰³ It also committed to ongoing consultation with the MNA and working with the MNA should new issues arise.¹⁰⁴ ATCO committed to providing the MNA with advance notice of its construction schedule and to work with the MNA to accommodate traditional land uses during construction.¹⁰⁵

345. The Commission considers that the commitments made by AltaLink and ATCO are reasonable and responsive to the MNA's concerns around construction notification and accommodating traditional land uses during construction. The Commission expects the applicants to follow through with these commitments, as required under Rule 007, and does not find it necessary to include these commitments as conditions of approval.

346. Concerning the provision of funding for independent information sessions, ATCO agreed to support an information session by providing its in-house professionals.¹⁰⁶ AltaLink did not make a similar commitment. Although the Commission considers the facilitation of general transmission line education for Métis membership to be a worthwhile endeavor, it does not consider this to be the sole responsibility of the facility applicants in this proceeding, nor an activity whose benefit would be confined to the CETO project. While the Commission expects ATCO to follow through on its commitment to make in-house professionals available to attend a session if requested by the MNA, it does not consider that providing funding to procure an independent third party to host information sessions to be a necessary condition of approval.

347. The Commission is satisfied that MNA members use the project area for harvesting and other traditional land uses. That said, it does not expect the CETO project to significantly alter the current conditions in the project area or result in incremental avoidance behaviors among MNA harvesters in any significant way. The approved route follows existing linear disturbances

¹⁰² Transcript, Volume 20, PDF pages 117 and 118.

¹⁰³ Exhibit 25469-X0525, AML IR Responses to MNA, PDF page 7.

¹⁰⁴ Transcript, Volume 19, PDF page 34, lines 17-22.

¹⁰⁵ Exhibit 25469-X0767.01, ATCO Reply Evidence, PDF page 112, paragraph 484.

¹⁰⁶ Exhibit 25469-X0767.01, ATCO Reply Evidence, PDF page 119, paragraph 527.

for a significant length and minimizes impact to Crown and previously undisturbed lands. The project will also have minimal environmental impact as discussed in sections 5.2.3 and 5.2.4, is expected to comply with the applicable requirements for noise and is not expected to result in significant changes to electromagnetic field levels.

348. The Commission recognizes that there may be some temporary access restrictions to certain portions of the right-of-way during project construction, however, these restrictions will be temporary and the impacts on MNA members will be reasonably mitigated by the commitments made by AltaLink and ATCO related to notification of construction and accommodating traditional land use. Similarly, the Commission finds that any impact to long term traditional land uses will be minimal and reasonably mitigated by winter construction, engaging with the MNA to mitigate impacts should winter construction not be possible, and allowing right-of-way access once construction is complete.

5.2.7.4 Métis historical resources

349. The MNA raised concerns about potential impacts to unknown archaeological sites in the Tail Creek area. It filed evidence about the potential to encounter archaeological sites in that area that are connected to the historical Métis community around Buffalo Lake.¹⁰⁷ Although the MNA recognized the role of Alberta Culture and Status of Women¹⁰⁸ (ACMSW) under the *Historical Resources Act* as it relates to historical resources, it submitted that archaeologists are not trained to recognize Métis historical sites.¹⁰⁹ The MNA further submitted that potential adverse impacts of the CETO project on Métis historical resources would not be fully mitigated by winter construction, given that construction in any season will cause some ground-breaking and that ground-breaking has the potential to disturb or destroy historical resources.¹¹⁰ The MNA requested that the Commission impose the following four conditions to address Métis historical resources in the project area:¹¹¹

- That a Métis cultural heritage monitor trained by the MNA be present during all activities undertaken in the Tail Creek area, including in and around the historical cart trails identified in the affidavit of Kisha Supernant.
- That AltaLink and ATCO be required to develop protocols with the MNA for notifying the MNA if potential Métis historical resources are discovered in the project area.
- That AltaLink and ATCO be required to consult with the MNA with a view to agreeing on reasonable mitigation measures if potential Métis historical resources are discovered in the project area.
- Alternatively, the MNA requested that Route Option ABC be chosen so that Métis cultural heritage resources at Tail Creek will be protected by ATCO's commitments.

350. The Commission acknowledges the authority of ACMSW in relation to historical resources pursuant to the *Historical Resources Act* and considers that the Commission's discretion and authority in such matters is limited. Based on the approved route, Tail Creek will

¹⁰⁷ Exhibit 25469-X0627, Affidavit of Kisha Supernant.

¹⁰⁸ Formally known as Alberta Culture, Multiculturalism and Status of Women.

¹⁰⁹ Transcript, Volume 14, PDF pages 65 and 66, lines 7-10; Transcript, Volume 20, PDF page 120, lines 2-8.

¹¹⁰ Transcript, Volume 20, PDF pages 112 and 113, lines 21-2.

¹¹¹ Transcript, Volume 20, PDF pages 119-122.

be crossed by a segment of ATCO's Route Option ABC. ATCO has committed to contacting ACMSW to include the Tail Creek crossing in the project's historical resource impact assessment. The Commission will not impose alternative or additional requirements for the protection of historic resources; doing so would be beyond the Commission's jurisdiction and would constitute an unwarranted intrusion on ACMSW's expertise and authority.

351. Notwithstanding the above, the Commission acknowledges that ATCO has committed to having a Métis cultural heritage monitor on-site at the Tail Creek crossing and to notifying the MNA if Métis historical resources are discovered in the project area, in accordance with the applicable law and as permitted by the historical resources regulator. ATCO has also committed, to the extent allowed by provincial law, to engage with the MNA regarding reasonable mitigation measures in the event that a Métis historical resource is discovered.¹¹² As stated above, AltaLink has likewise committed to ongoing consultation with the MNA and working with the MNA should new issues arise. The Commission considers these commitments to be reasonably responsive to the MNA's concerns regarding unknown historical resources, both around Tail Creek and in the project area generally, and expects AltaLink and ATCO to uphold their respective commitments to the MNA in this regard, or otherwise follow the directions given by ACMSW.

5.2.8 Participant involvement program

352. Many interveners expressed concerns that the consultation undertaken by either AltaLink or ATCO was inadequate; some reported that a concern was incorrectly transcribed into the consultation record or that a response to a concern was insufficient.

353. AltaLink stated that stakeholders are mailed consultation records for review and for an opportunity to correct any errors and that its participant involvement program, conducted to inform stakeholders of the project, gives them an opportunity to raise concerns, ask questions, provide site-specific feedback and options for how AltaLink can mitigate their concerns. In response to an information request from the Commission, AltaLink provided a list of commitments it made to stakeholders.

354. ATCO indicated that it undertook a comprehensive participant involvement program, made proactive efforts to promote both an understanding of the project and the route selection process, and further, that consultation feedback affected its routing decisions. ATCO reviewed the evidence filed by interveners and responded to each intervener concern with consultation in its reply evidence. It submitted that it is not possible to address each and every concern raised by a stakeholder and that its participant involvement program was satisfactory in meeting the requirements of Rule 007.

355. The Commission finds that the participant involvement programs undertaken by ATCO and AltaLink meet the requirements of Rule 007. The Commission recognizes that many stakeholders had concerns about the participant involvement program for the proposed transmission line. The Commission is of the view, however, that the participant involvement programs were sufficient to communicate to potentially affected parties the nature, details and potential impacts of the project. It is also satisfied that the participant involvement programs gave potentially affected parties an opportunity to ask questions and to express their concerns.

¹¹² Exhibit 25469-X0767.01, ATCO Reply Evidence, PDF pages 117 and 118, paragraphs 516-521.

6 Erosion around the Tinchebray 972S Substation area

356. Brian Perreault's land is located immediately east and south of the Tinchebray 972S Substation. B. Perreault asserted that since its construction, the Tinchebray 972S Substation has significantly changed the drainage patterns on his lands, resulting in washout, erosion and flooding. He also stated that access to significant portions of his land has been lost.

357. B. Perreault submitted that since the construction of the Tinchebray 972S Substation and Halkirk transmission lines, he has attempted to work with ATCO to develop solutions to address his concerns, however, ATCO has not taken responsibility for, nor repaired the damage caused to his lands. He added that ATCO is not in compliance with its existing *Water Act* licence, as demonstrated by the recurrent flooding on his land. B. Perreault wishes to understand how ATCO intends to address the problems associated with the Tinchebray 972S Substation before it is allowed further access to his lands to expand the Tinchebray 972S Substation. B. Perreault retained Craig Felzien to prepare a field assessment report and provide commentary on ATCO's reports and drainage plans.

358. Notwithstanding ATCO's view that much of B. Perreault's drainage concerns are outside the scope of this proceeding, it submitted evidence in response to his concerns. ATCO retained Golder and Stantec to evaluate the drainage of the land and identify potential solutions to address B. Perreault's concerns. In its report, Stantec concluded that the coulees around the substation are in an area susceptible to significant groundwater elevation variability and that groundwater plays a contributing role to the observed erosion.

359. ATCO submitted that the expansion of the substation's footprint in Stage 2 of the CETO project presented an opportunity to redesign the drainage plan to address existing erosion issues and develop a new stormwater management plan. ATCO submitted revised drainage plans to address the flooding around the substation, committed to repairing erosion on parts of B. Perreault's land and installed temporary erosion control measures.

360. B. Perreault and C. Felzien disagreed that ATCO's redesigned drainage plan will prevent further erosion. They stated that water on the ATCO and adjacent Jackson lands has to be slowed down and stored for a period of time to attenuate the volume and velocity of the flow that is causing the erosion. B. Perreault submitted that the substation expansion should not be permitted until past erosion issues have been addressed and there is sufficient confidence that the new drainage plan will prevent further erosion when the substation is expanded.

361. ATCO submitted that the Commission does not have to adjudicate ATCO's compliance with its existing *Water Act* licences or new drainage designs in the CETO proceeding as both are out of scope. ATCO stated that it has provided B. Perreault with conceptual plans, revised site drainage plans and has agreed to provide a copy of its *Water Act* application for his review prior to submitting it to AEP.

6.1.1 Jurisdiction

362. B. Perreault submitted that the Commission should consider the public interest of approving the expansion of the substation before past impacts have been addressed. He stated that the Commission is the regulatory body responsible for ensuring that impacts of utility projects on their neighbours are mitigated.

363. ATCO submitted that in considering the public interest, the Commission can consider the impacts of a utility project on neighbouring landowners and that it has demonstrated that the Tinchebray 972S Substation expansion has been designed to limit impacts to neighbouring properties, including B. Perreault's. ATCO submitted that reclamation is addressed in its right-of-way agreement with B. Perreault and provides that any disagreement related to compensation for damages may be submitted to the Surface Rights Board (SRB) and, if outside the SRB's jurisdiction, then arbitration. ATCO submitted that approval of the final drainage design and any amendments thereto are properly within the jurisdiction of AEP and outside the scope of AUC approval in this proceeding. ATCO stated that AEP has both the legislative authority and the technical expertise to adjudicate ATCO's existing *Water Act* licence and *Water Act* application, and to address B. Perreault's concerns therewith, within its regulatory processes.

364. B. Perreault submitted that because the erosion from the water coming from the substation site is not subject to ATCO's right-of-way agreement, there is no arbitration clause or other means of claiming for erosion damages other than from the Commission. He argued that in *Fort McKay First Nation v Prosper Petroleum Ltd.* (Prosper),¹¹³ the Court of Appeal of Alberta cautioned tribunals like the AUC not to narrow the scope of their considerations during decision making or rely on other decision makers to address the matters before them.

365. ATCO submitted that in *Prosper*, the court was clear that a statutory decision-maker must operate within the bounds of its legislative jurisdiction. In discharging its public interest mandate, the Commission is entitled to rely on AEP's jurisdiction and process under the *Water Act* in considering whether B. Perreault's concerns regarding drainage will be appropriately addressed.

366. ATCO submitted that the new drainage design is subject to approval by AEP under the *Water Act* and that the appropriate drainage design will ultimately be determined by AEP through a process that B. Perreault can participate in.

6.1.1.1 Findings

367. Most of the evidence associated with B. Perreault's concerns dealt with erosion observed after the completion of the previously approved Halkirk transmission project which included the construction of the Tinchebray 972S Substation.¹¹⁴ B. Perreault submitted erosion reports of the substation lands and his lands, updated drainage plans, and critiques of those plans. Although as discussed below the Commission acknowledges that B. Perreault was invited to participate in this process to address his outstanding complaint, it finds that this evidence does not assist it in deciding whether approval of the CETO project is in the public interest, or which routes have the lowest overall impacts. While Stage 2 of the CETO project, if approved, requires the expansion of the Tinchebray 972S Substation, the approval of future drainage design is beyond the scope of the applied-for expansion.

368. The Commission considers that AEP is the appropriate regulator to address the alleged erosion caused by surface water runoff from the substation lands and the claim that ATCO is not

¹¹³ 2020, ABCA, 163.

¹¹⁴ Halkirk Wind Energy Connection, Proceeding 1092, Applications 1607024-1 and 1607065-1 to 1607065-5, February 28, 2012.

operating in compliance with its *Water Act* licence, because these issues relate directly to a license issued under AEP authority. In addition, it would be inappropriate to condition an approval on matters not directly related to the application before it.

369. Likewise, the Commission is not in a position to review or approve future drainage plans for the Tinchebray 972S Substation site. It agrees with ATCO that AEP has both the legislative authority and the technical expertise to adjudicate this issue under the *Water Act*.

370. While the Commission recognizes that B. Perreault's concerns have gone unresolved for some time, it also recognizes that ATCO has considered his concerns and has attempted to work with B. Perreault throughout the CETO proceeding. ATCO has acknowledged that some erosion was caused by changes to the land when the Tinchebray 972S Substation was constructed and has committed to repairing this erosion. While B. Perreault did not indicate his support of ATCO's proposed mitigation measures, it appears to the Commission that his participation in the CETO process has assisted him in reaching some resolution with ATCO, including ATCO expediting some of its repairs. As described in more detail below, other avenues exist for B. Perreault to have his concerns addressed, including AEP's *Water Act* amendment process in which he will have an opportunity to participate.

6.1.2 Brian Perreault's request for adjournment and additional reclamation

371. Brian Perreault requested that the Commission adjourn ATCO's application to expand the Tinchebray 972S Substation until he has had meaningful engagement with ATCO regarding the current erosion damage from the existing site and that the proposed changes in drainage design have been considered within a defined AUC process.

372. ATCO submitted that it is not aware of any precedent that would support holding ATCO's application in abeyance pending the outcome of a separate regulatory process and that such a request is not properly before the Commission.

373. B. Perreault also requested that the damage to his land resulting from the Tinchebray 972S Substation be repaired prior to any substation expansion occurring. B. Perreault stated that the Commission should not issue an approval for the expansion of the Tinchebray 972S Substation until the matter has either been resolved between the parties or AEP has made a decision on the water licence amendment. ATCO submitted that this request was not appropriate because it gives B. Perreault control over the development of the substation as access to his land must be granted for repairs to occur. In addition, ATCO indicated it was not aware of any defined process that the Commission could order to consider the proposed changes to the drainage design.

374. B. Perreault requested that at a minimum, ATCO build two cattle/wildlife crossings and remediate the erosion after the first cattle/wildlife crossing to allow him to regain access to his land. Although ATCO did not commit to constructing the cattle/wildlife crossings, to address B. Perreault's erosion concerns, ATCO installed temporary erosion control measures in March 2021, prior to the yearly spring runoff, and plans to complete drainage civil engineering work in 2021. ATCO submitted that it has made an ongoing effort to work with B. Perreault to complete reclamation activities. It anticipates that outstanding reclamation work will be completed this year, if B. Perreault is willing to provide access to his lands and ATCO is permitted to erect temporary fencing to keep livestock out of the areas in question.

6.1.2.1 Findings

375. The Commission denies B. Perreault's request to adjourn its consideration of the Tinchebray 972S Substation expansion until meaningful engagement with ATCO has occurred. Such a condition is not sufficiently measurable or enforceable to properly form a condition of approval. In addition, it is AEP and not the Commission that has the expertise and jurisdiction to assess the current erosion damage from the existing site and the proposed changes to the drainage design. The Commission agrees with ATCO that it is inappropriate and unnecessary for the Commission to place this proceeding in abeyance pending the outcome of AEP's process.

376. The Commission also finds that it is unnecessary to withhold approval of the substation expansion until damage to B. Perreault's land has been repaired. It is satisfied with ATCO's commitment to repair erosion damage on B. Perreault's land, and observes that this work is anticipated to be completed in 2021, well before the substation site is expanded. The Commission agrees that conditioning the substation expansion on such repair work being completed would give B. Perreault control over the substation development and is unnecessary. It expects ATCO to honour its commitment to repair the damage on B. Perreault's land. The Commission does not consider it appropriate to impose a condition requiring that ATCO build two cattle/wildlife crossings nor one to repair damage on the Perreault lands, because the erosion is not associated with the components of the CETO project. It encourages ATCO and B. Perreault to continue to work together in reaching a solution that is agreeable to all parties, either directly or through the AEP process.

377. The Commission acknowledges that erosion has taken place on B. Perreault's land and that it may be associated with the initial construction of ATCO's Tinchebray 972S Substation. It also recognizes that B. Perreault has an outstanding complaint with the Commission's Market Oversight and Enforcement group that was placed in abeyance with a recommendation that he participate in this proceeding. However, the Commission's process to consider the applications in this proceeding is limited to consideration of the developments applied for and their associated impacts; it is unable to consider the technical development of the drainage design because this matter is beyond its jurisdiction. The appropriate drainage design will ultimately be determined by AEP, the *Water Act* regulator, in a process that B. Perreault can participate in. The Commission considers that B. Perreault may challenge ATCO's compliance with its *Water Act* licence or test its drainage plan through that process. Should B. Perreault be dissatisfied with the outcome of the AEP process and unable to reach a resolution with ATCO, he may file a complaint with AEP or reopen the Commission's Market Oversight and Enforcement proceeding, currently held in abeyance.

7 Conclusion

378. In summary, the Commission finds AltaLink's South Alternate route to have the lowest overall impact and its approval to be in the public interest. The South Alternate route, consisting of the alternate Gaetz to C31 segment, preferred D25 to F70 segment from point C31 to point F70, and the Highway 11 and ATCO segment,¹¹⁵ parallels existing linear disturbances, and has low residential and agricultural impacts compared to the other routes.

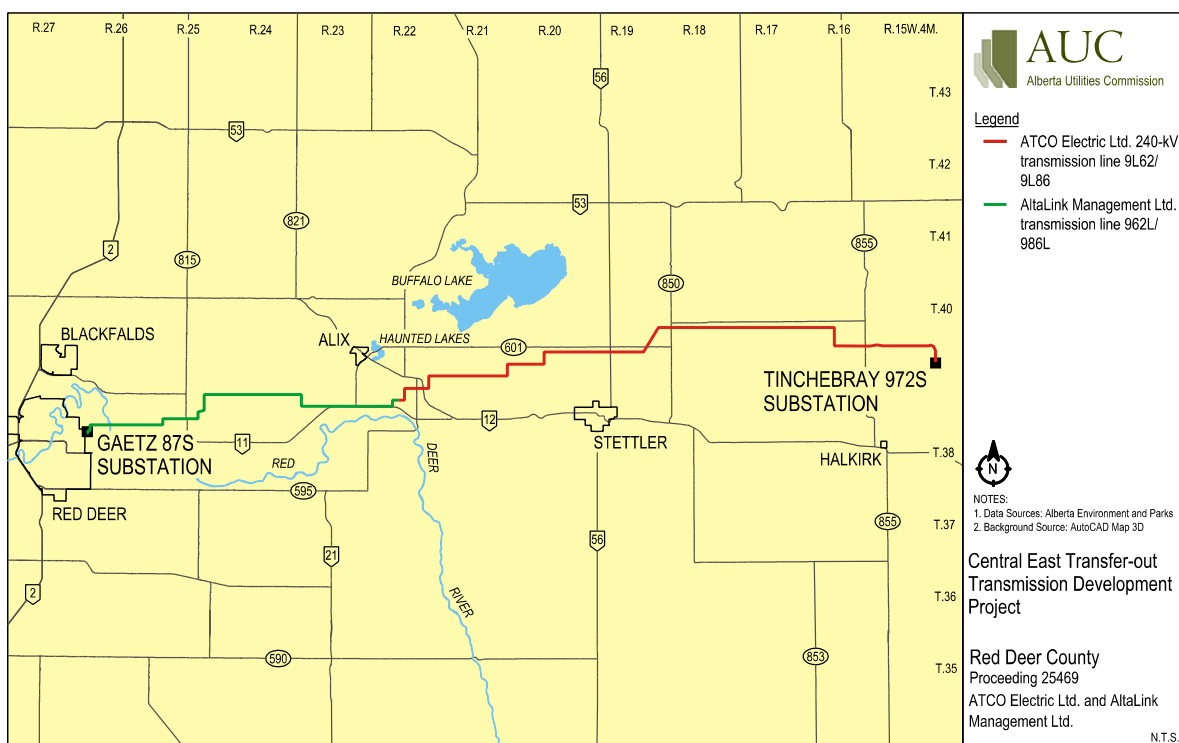
¹¹⁵ AltaLink's "ATCO segment" and ATCO's "Route Option ABC" refer to the same route segment, ATCO will construct and operate this segment.

379. The Commission finds ATCO's Route A to have a lower overall impact than Route C and its approval to be in the public interest. Route A follows existing linear disturbances for much of its route and has lower residential impacts, especially when considering the newly-exposed metric.

380. The Commission finds construction of ATCO's Route Option ABC¹¹⁶ to be required to connect the ATCO and AltaLink transmission lines. This route has low residential impacts and was unopposed.

381. The approved route of the Central East Transfer-out Transmission Development Project is depicted in the following figure.

Figure 13. Approved route of the Central East Transfer-out Transmission Development Project



382. In conclusion, for the reasons stated and subject to all of the conditions outlined in Section 8, the Commission approves the applications submitted by the Alberta Electric System Operator, ATCO Electric Ltd. and AltaLink Management Ltd. The AESO's NID application contains all of the information required by the *Electric Utilities Act*, the *Transmission Regulation* and Rule 007. The Commission finds that pursuant to Section 38 of the *Transmission Regulation*, no interested person has demonstrated that the AESO's assessment of the need is technically deficient or that approval of the NID would not be in the public interest.

383. The Commission is likewise satisfied that the ATCO and AltaLink facility applications meet the requirements of Rules 007 and 012 and that approval of the project is in the public

¹¹⁶ Ibid.

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*.

384. As set out earlier in this decision, the Commission approved the AESO's Option 1 of its proposed transmission development, the construction milestones and the proposed staging (Configuration 1). The TFOs shall, upon direction from the AESO and the Commission that the construction milestones have been reached, begin construction of the project. In Stage 1, the TFOs shall construct double-circuit structures with conductors strung on both sides. The conductors will be tied together as transmission lines 9L62 and 962L. The Gaetz 87S and Tinchebray 972S substations shall be altered as proposed by the TFOs in Stage 1.

385. In Stage 2, the transmission lines will be untied and energized as separate transmission lines 9L62/962L and 9L86/986L. ATCO shall alter existing Transmission Line 9L16 to terminate at a new tie-in location to accommodate the untied conductor. The TFOs shall alter their respective substations as applied for in the Stage 2 development.

8 Conditions of approval

386. The Commission imposes the following conditions of approval for the CETO project. Conditions that require subsequent filings with the Commission will be tracked as directions in the AUC's eFiling System.

(a) Conditions of Needs Identification Document Approval 25469-D02-2021 that require subsequent filings with the Commission by the Alberta Electric System Operator:

- The AESO shall, on a yearly basis at a minimum, determine and inform the Commission whether a reaffirmation study is warranted based on the incremental generation volumes that have met the AESO's certainty criteria.
- A reaffirmation study report determined to be warranted by the AESO shall be filed with the Commission and indicate whether the congestion assessments confirm that congestion is forecast to occur greater than 0.5 per cent of the time annually or whether an increased milestone monitoring range of incremental generation can be accommodated.
- If Stage 1 of the Central East Transfer-out Transmission Development Project listed above is not in service by December 31, 2025, the AESO must inform the Commission whether the need to expand or enhance the transmission system as approved remains and whether the technical solution approved continues to be the AESO's preferred technical solution.
- If Stage 2 of the Central East Transfer-out Transmission Development Project listed above is not in service by December 31, 2030, the AESO must inform the Commission whether the need to expand or enhance the transmission system as approved remains and whether the technical solution approved continues to be the AESO's preferred technical solution.

- (b) Conditions of Needs Identification Document Approval 25469-D02-2021 that do not require subsequent filings with the Commission by the Alberta Electric System Operator:
- Construction of the development at each stage cannot commence until confirmation from the AESO and the Commission that the construction milestone for each stage, as defined in the AESO's needs identification document application for Central East Transfer-out Transmission Development approved by the Commission in Proceeding 25469, has been met.
- (c) Conditions that will be included in Permit and Licence 25469-D03-2021 and Permit and Licence 25469-D04-2021, and require subsequent filings with the Commission by ATCO Electric Ltd.:
- ATCO shall submit an updated version of its project-specific environmental protection plan, which includes a snake protection protocol, at least 60 days prior to the start of construction in Stage 1.
 - ATCO shall submit an updated version of its project-specific environmental protection plan, which includes a snake protection protocol, at least 60 days prior to the start of construction to decouple the transmission lines in Stage 2.
- (d) Conditions that do not require subsequent filings with the Commission by ATCO Electric Ltd.:
- The commencement of construction of Transmission Line 9L62 is conditional upon receipt by ATCO of confirmation from the Alberta Electric System Operator (AESO) and the Commission that the construction milestone for Stage 1, as defined in the AESO's needs identification document application for the Central East Transfer-out Transmission Development Project approved by the Commission in Proceeding 25469, has been met.
 - The commencement of construction of Transmission Line 9L86 is conditional upon receipt by ATCO of confirmation from the Alberta Electric System Operator (AESO) and the Commission that the construction milestone for Stage 1 as defined in the AESO's needs identification document application for the Central East Transfer-out Transmission Development Project approved by the Commission in Proceeding 25469, has been met.
 - The alteration of Transmission Line 9L16 is conditional upon ATCO receiving confirmation from the Alberta Electric System Operator (AESO) and the Commission that the construction milestone for Stage 2, as defined in the AESO's needs identification document application for the Central East Transfer-out Transmission Development Project approved by the Commission in Proceeding 25469, has been met.
 - ATCO shall have received formal notice from the AESO and the Commission that the construction milestone for Stage 1 as set out in the AESO's NID has been met, prior to commencing Stage 1 alteration of the Tinchebray 972S Substation.

- ATCO shall have received formal notice from the AESO and the Commission that the construction milestone for Stage 2 as set out in the AESO's NID has been met, prior to commencing Stage 2 alteration of the Tinchebray 972S Substation.
- (e) Conditions that will be included in Permit and Licence 25469-D07-2021 and Permit and Licence 25469-D08-2021 and require subsequent filings with the Commission by AltaLink Management Ltd.:
- AltaLink shall submit an updated version of its project-specific environmental protection plan, which includes a snake protection protocol, at least 60 days prior to the start of construction in Stage 1.
 - AltaLink shall submit an updated version of its project-specific environmental protection plan, which includes a snake protection protocol, at least 60 days prior to the start of construction to decouple the transmission lines in Stage 2.
- (f) Conditions that do not require subsequent filings with the Commission by AltaLink Management Ltd.:
- The commencement of construction of Transmission Line 962L is conditional upon receipt by AltaLink of confirmation from the Alberta Electric System Operator (AESO) and the Commission that the construction milestone for Stage 1, as defined in the AESO's needs identification document application for Central East Transfer-out Transmission Development approved by the Commission in Proceeding 25469, has been met.
 - The commencement of construction of Transmission Line 986L is conditional upon receipt by AltaLink of confirmation from the Alberta Electric System Operator (AESO) and the Commission that the construction milestone for Stage 1, as defined in the AESO's needs identification document application for the Central East Transfer-out Transmission Development Project approved by the Commission in Proceeding 25469, has been met.
 - AltaLink shall have received formal notice from the AESO and the Commission that the construction milestone for Stage 1 as set out in the AESO's NID has been met, prior to commencing Stage 1 alteration of the Gaetz 87S Substation.
 - AltaLink shall have received formal notice from the AESO and the Commission that the construction milestone for Stage 2 as set out in the AESO's NID has been met, prior to commencing Stage 2 alteration of the Gaetz 87S Substation.

9 Decision

387. Pursuant to Section 34 of the *Electric Utilities Act*, the Commission approves the need outlined in Needs Identification Document Application 25469-A001 and grants the Alberta Electric System Operator the approval set out in Appendix 1 – Needs Identification Document Approval 25469-D02-2021 – August 10, 2021.

388. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 25469-A002 and grants ATCO Electric Ltd. the approval set out in Appendix 2 – Transmission Line Permit and Licence 25469-D03-2021 – August 10, 2021, to construct and operate Transmission Line 9L62.

389. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 25469-A003 and grants ATCO Electric Ltd. the approval set out in Appendix 3 – Transmission Line Permit and Licence 25469-D04-2021 – August 10, 2021, to construct and operate Transmission Line 9L86.

390. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 25469-A004 and grants ATCO Electric Ltd. the approval set out in Appendix 4 – Transmission Line Permit and Licence 25469-D05-2021 – August 10, 2021, to alter and operate Transmission Line 9L16.

391. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 25469-A007 and grants ATCO Electric Ltd. the approval set out in Appendix 5 – Substation Permit and Licence 25469-D06-2021 – August 10, 2021, to alter and operate Tinchebray 972S Substation.

392. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 25469-A009 and grants AltaLink Management Ltd. the approval set out in Appendix 6 – Transmission Line Permit and Licence 25469-D07-2021 – August 10, 2021, to construct and operate Transmission Line 962L.

393. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 25469-A010 and grants AltaLink Management Ltd. the approval set out in Appendix 7 – Transmission Line Permit and Licence 25469-D08-2021 – August 10, 2021, to construct and operate Transmission Line 986L.

394. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 25469-A008 and grants AltaLink Management Ltd. the approval set out in Appendix 8 – Substation Permit and Licence 25469-D09-2021 – August 10, 2021, to alter and operate Gaetz 87S Substation.

395. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission approves Application 25469-A005 and grants ATCO Electric Ltd. the approval set out in Appendix 9 – Connection Order 25469-D10-2021 – August 10, 2021, to connect Transmission Line 9L62 to AltaLink Management Ltd.'s 962L transmission line.

396. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission approves Application 25469-A006 and grants ATCO Electric Ltd. the approval set out in Appendix 10 – Connection Order 25469-D11-2021 – August 10, 2021, to connect Transmission Line 9L86 to AltaLink Management Ltd.’s 986L transmission line.

Dated on August 10, 2021.

Alberta Utilities Commission

(original signed by)

Anne Michaud
Vice-Chair

(original signed by)

Cairns Price
Commission Member

(original signed by)

Vera Slawinski
Commission Member

Appendix A – Proceeding participants

Name of organization (abbreviation) Name of counsel or representative
Alberta Electric System Operator Brenda Hill Laura Estep
ATCO Electric Ltd. Jeff Sansom Deirdre Sheehan
AltaLink Management Ltd. Zora Lazic Brenden Hunter
Dwayne Felzien
Gerard and Donna Fetaz
Pauline and Darrell Blacklock Nickolas Bailey
J. Heith Johannson Michael Niven
Jason Felzien
Wade Yakelashek Ifeoma Okoye
Doreen Blumhagen
Dean Payne
Neil and Deneen Brown
Murray Rowledge
Harold Solick

Name of organization (abbreviation) Name of counsel or representative
Glen Morbeck
Terry Rowledge
Ted Vander Meulen Michael Niven
Ron and Marilyn Potter
Jean Payne
Albert Rairdan
Danny Brown
Brian Perreault Debbie Bishop
Nicole Thorsteinsson
County of Stettler No. 6
Cody Rowledge
Mark and Ann Siford
Lee Chapman
Ron Duffy Michael Niven
Tammy Bushman Michael Niven

Name of organization (abbreviation) Name of counsel or representative
April Aspden Patrice Brideau
Justin Aspden Patrice Brideau
Brian Fletcher Ifeoma Okoye
Landowners Opposed to Route C Daryl Bennett
Craigievar Farms Ltd. Michael Niven
Eclipse Pork Ltd. Michael Niven
Bradley Schakel
Sterling Ventures Ltd. Michael Niven
Norman Lyster
Cheryle Lyster
Sara and John Schultz
Consumers Coalition of Alberta Bema Enterprises Ltd.
Capital Power Corporation Brittney Morgan
Jack Bruning

Name of organization (abbreviation) Name of counsel or representative
Métis Nation of Alberta Riley Weyman
Ermineskin Cree Nation Carol Wildcat
NOVA Chemicals Andrea Brack
Tsuut'ina Nation Violet Meguinis
Blood Tribe Kainaiwa Mike Oka
Laurie and Dale Nagel
Route A Opposition Group Ifeoma Okoye
Lorne and Linda Haner Ifeoma Okoye
Colby Miles Ifeoma Okoye
Edward and Janet Fletcher Ifeoma Okoye
Roger and Malora Lee Ifeoma Okoye
Dale McNabb Ifeoma Okoye
Debbie and Betty Henderson

Name of organization (abbreviation) Name of counsel or representative
Erick and Sheryl Osterud Ifeoma Okoye
Calvin Nixon Ifeoma Okoye
Jack Brodsky Ifeoma Okoye
Mike and Christine Nicols Ifeoma Okoye
Dale and Lorna Gordon LaRose Ifeoma Okoye
Garret Hoppins Sean FitzGerald
SBD Group Bill McElhanney
Maureen Rogers

Appendix B – Oral hearing – registered appearances

Name of organization (abbreviation) Name of counsel or representative and witnesses
<p>Alberta Electric System Operator (AESO) Laura Estep Fatima Shariff</p> <p>Dennis Frehlich Ata Rehman Lei Xiong Jin Hao David Johnson</p>
<p>ATCO Electric Ltd. (ATCO) Deirdre Sheehan Stephanie Ridge</p> <p>Chris Storey Dustin Baptist Rajat Goutam Derek Ebner Meghan Chisholm Robert Telford Gabor Mezei Benjamin Cotts</p>
<p>AltaLink Management Ltd. (AltaLink) Brenden Hunter</p> <p>Keith Turriff Brian Townsend Sean Heffernan Joe Gilbert Glen Doll Shawn Martin Gabor Mezei</p>
<p>April and Justin Aspden Patrice Brideau</p> <p>April Aspden</p>
<p>Brian Perreault Debbie Bishop</p> <p>Brian Perreault Craig Felzien</p>
<p>Consumers' Coalition of Alberta (CCA) James Wachowich, Q.C.</p> <p>Dan Levson Trevor Cline David Butler</p>

<p>Name of organization (abbreviation) Name of counsel or representative and witnesses</p>
<p>Craigievar Group Michael Niven, Q.C. Ryan J. Barata Jasdeep Nijjer</p> <p>J. Heith Johannson Glenn Sharp Ingrid Vander Meulen Ted Vander Meulen</p>
<p>Landowners Opposed to Route C (LORC) Daryl Bennett</p> <p>Dwayne Felzien Donna Fetaz Gerard Fetaz Norman Lyster Brett Penosky Keith Rairdan Silas Chapman Diana Walgenbach Taylor Hunt</p>
<p>Métis Nation of Alberta (MNA) Zachary Davis Riley Weyman</p> <p>Germaine Conacher Kisha Supernant</p>
<p>Route A Opposition Group (RAOP) Ifeoma Okoye</p> <p>Brian Fletcher Lorne Haner Roger Lee Malora Lee Kelly Miles Cliff Wallis Dale Fedoruk Corey Lange Pat Woodlock Paul Héroux</p>

<p>Name of organization (abbreviation) Name of counsel or representative and witnesses</p>
<p>SBD Group Bill McElhanney, Q.C. Alexander Yiu Bradley Schakel Ron Duffy Jack Bruning Braden Bushman Dale Fedoruk Ron Howard Cliff Wallis Pat Woodlock Paul Héroux Dr. Anthony Miller</p>
<p>Harold Solick</p>
<p>Darrell Blacklock Nickolas Bailey</p>