



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

**AltaLink Management Ltd.
Facility Applications**

**ATCO Electric Ltd.
Facility Applications**

Jasper Interconnection Project

May 4, 2018

Alberta Utilities Commission

Decision 22125-D01-2018: Jasper Interconnection Project

Alberta Electric System Operator
Needs Identification Document
Proceeding 22125
Application 22125-A001

AltaLink Management Ltd.
Facility Applications
Proceeding 22125
Applications 22125-A002 and 22125-A003

ATCO Electric Ltd.
Facility Applications
Proceeding 22125
Applications 22125-A004 to 22125-A006

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

Website: www.auc.ab.ca

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Alberta Electric System Operator
Needs Identification Document Application

AltaLink Management Ltd.
Facility Applications

ATCO Electric Ltd.
Facility Applications
Jasper Interconnection Project

Decision 22125-D01-2018
Proceeding 22125
Applications 22125-A001 to 22125-A006

1 Decision summary

1. In this decision, the Commission must decide whether to approve a needs identification document application from the Alberta Electric System Operator, and facility applications by ATCO Electric Transmission and AltaLink Management Ltd. to construct and operate a new substation, alter an existing substation, and construct and operate a transmission line to connect the Jasper area to the Alberta Interconnected Electric System (collectively, the project).

2. The circumstances related to this proceeding are unique. The Jasper area is currently an isolated community being served by local power generation rather than through a connection to the Alberta Interconnected Electric System (AIES). A number of generating units in Jasper are nearing end-of-life conditions. In order to continue supplying electricity to the Jasper area, a decision must be made to either replace the generating units or construct transmission facilities to connect the area to the AIES.

3. In the applications before the Commission, the supply option proposed by the Alberta Electric System Operator (AESO), ATCO Electric Transmission (ATCO Transmission), a division of ATCO Electric Ltd., and AltaLink Management Ltd. (AltaLink) is to connect Jasper to the AIES by constructing a new substation, altering an existing substation, and constructing a transmission line, of which approximately 45 kilometres would be located within Jasper National Park.

4. Three parties opposed the approval of the project: the Jasper Environmental Association (JEA), the Consumers' Coalition of Alberta (CCA) and Peter Bubik. It is the JEA's position that Jasper should remain an isolated community. The JEA proposed to replace the existing generating units with new, dual-fuel (natural gas and diesel) generating units. The CCA's interest in the proceeding related specifically to the AESO's proposed treatment of the project costs. Mr. Bubik submitted that a competitive sourcing process should be followed for generation, potentially combined with energy storage, within Jasper.

5. The decision before the Commission is, at its core, whether it is in the public interest to supply Jasper with electricity through a transmission solution or to continue using an isolated generation system. After consideration of the record of the proceeding, and for the reasons outlined in this decision, the Commission confirms the AESO's assessment of the need to be

correct and finds that approval of the facility applications is in the public interest, having regard to the social, economic, and other effects of the project, including its effect on the environment.

2 How this decision is organized

6. As noted above, this proceeding is unique because, for the first time, the Commission is jointly considering a needs identification document (NID) and facility applications for a transmission project to serve an isolated community. Another factor that contributes to its uniqueness is that the transmission facilities proposed in the NID and facility applications are primarily located within Jasper National Park. Because of these singular features, additional considerations arise in the Commission's assessment of the project. To assist the reader, it is useful to begin with a brief description of the organization and content of this decision:

- a. Section 3 provides background information about how Jasper's electricity needs are currently served as well as a description of the applications that are being considered in this proceeding and the interventions filed. The process established to jointly consider the NID and facility applications for the project is also detailed.
- b. Section 4 addresses two preliminary matters, the Parks Canada approval process and the role of the JEA consultants.
- c. Section 5 provides a detailed description of the regulatory framework for this unique set of applications and the Commission's approach to considering the applications.
- d. Section 6 reviews the consultation undertaken for the project by the AESO, ATCO Transmission, and AltaLink.
- e. Section 7 sets out the reliability requirements for transmission and generation and addresses the relative reliability of ATCO Transmission's generation and transmission options and the JEA's generation option.
- f. Section 8 considers the respective land use and environmental impacts of the transmission and generation options.
- g. Section 9 assesses the cost models for ATCO Transmission's options and the JEA's alternative and provides the Commission's assessment of the economic considerations mandated by Section 27(1.1) of the *Isolated Generating Units and Customer Choice Regulation* (IGUCC Regulation).
- h. Section 10 addresses cost classification and the AESO's discretion to increase the maximum local investment.
- i. Section 11 provides the Commission's conclusion on the NID and facility applications.

3 Introduction and background

3.1 Jasper currently served by isolated generation

7. The Municipality of Jasper and the surrounding area is currently an isolated community, as defined by the IGUCC Regulation. It is currently served by ATCO Electric Distribution (ATCO Distribution), a division of ATCO Electric Ltd., and there is no transmission link connecting Jasper to the AIES. The applications currently before the Commission request approval for such a connection.

8. The Jasper area has been historically supplied from two sites within the park: the Astoria Hydroelectric Generating Station (Astoria), and the Palisades Power Plant (Palisades). These two sites generate 50-gigawatt hours (GWh) of electric energy on average, per year. Palisades is the primary energy source supplying the Jasper area. Astoria has contributed less energy to the area. There are distribution lines at the east end of the park originating from these two locations that distribute electricity to the Municipality of Jasper and surrounding areas. Those lines are owned and maintained by ATCO Distribution. Palisades is a thermal diesel and natural gas-fuelled generating plant consisting of 10 units (permanent and mobile) ranging in size from 500 kilowatts to 3.3 megawatts (MW) and a temporary rental unit with a generating capacity of 1 MW. The total installed generating capacity of Palisades is 18.160 MW.¹ At the time ATCO Transmission prepared its business case for the project, Palisades consisted of six generating units, totalling 13.98 MW, two mobile units, totalling 2 MW, and a temporary mobile unit, rated at 0.91 MW.² ATCO Transmission stated that the 2.91 MW from the mobile units are used to assist during contingency conditions and are not included as part of the installed capacity because they do not meet nitrogen oxide (NO_x) emission requirements, which permanently installed engines must meet.

9. Astoria is a hydroelectric generating plant on the Astoria River consisting of two units with a generating capacity of approximately 1.8 MW. It is currently not operational. ATCO Transmission is exploring future options at Astoria, but these were not a part of the project and have therefore not been evaluated. The transmission development proposed by ATCO Transmission will not affect Astoria's capability to produce electricity.

3.2 Applications before the Commission

10. Like most new transmission facilities in Alberta, the project requires two types of AUC approvals. The AUC must approve: (a) a NID that describes the need for the new transmission facilities under Section 34 of the *Electric Utilities Act*, and (b) the facility applications that describe the exact routing and siting of the new transmission facilities under sections 14 and 15 of the *Hydro and Electric Energy Act*.

11. The AESO filed a NID application with the Commission in response to a system access service request by ATCO Distribution. The AESO filed its application in accordance with the abbreviated needs identification document, or ANID, requirements in Section 6 of Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments*. The JEA raised concerns with respect to the AESO's use of the ANID process. In its NID, the AESO seeks approval of the need to construct a new Sheridan 2085S

¹ Power Plant Approval 22751-D02-2017.

² Exhibit 22125-X0006, Appendix E - ATCO Business Case.

Substation in the Jasper area, alter the existing Watson Creek 104S Substation, and construct a new 69-kilovolt (kV) transmission line to connect the new Sheridan 2085S Substation to Watson Creek 104S Substation.³ The process by which the AESO's NID application was developed can be summarized as follows.

12. ATCO Distribution first brought its concerns with the continued supply of electricity to the Jasper area to the AESO. The AESO then determined that there was no available mechanism in the legislative scheme to address the unique circumstances of Jasper as an isolated community other than through the submission of a system access service request.⁴ ATCO Distribution filed a system access service request with the AESO in October 2014.⁵ ATCO Distribution advised the AESO that several generating units at Palisades were approaching an end-of-life condition, which presented a unique opportunity to evaluate various supply options to replace Palisades. ATCO Distribution indicated that units CUL 368, CUL 47, CUL 330, with a cumulative capacity of 6.38 MW, are planned to be retired by 2021. As part of its system access service request, ATCO Distribution requested an increase of the "Rate DTS, *Demand Transmission Service*", from 9 MW to 12.8 MW.

13. The AESO stated that when it receives a system access service request from a market participant, it undertakes a process of assessing the market participant's distribution deficiency. Typically, a distribution deficiency report is prepared by the distribution facility owner (DFO), which provides the necessary information for the AESO to understand and assess the nature of the request for system access service and to determine the AESO's preferred option.

14. In this case, the transmission facility owner (ATCO Transmission) prepared a business case as a surrogate for the distribution deficiency report, which was then provided to the AESO in support of ATCO Distribution's system access service request.⁶ The business case advanced three options for the continued supply of electricity to the Jasper area:

- The first option proposed to connect the Jasper area to the AIES via a new transmission line and a new point-of-delivery substation (the ATCO transmission option).
- The second option proposed to continue to supply the Jasper area as an isolated community. Under this option, Palisades and Astoria would continue to serve the Jasper area using existing, new and refurbished generating units (the ATCO generation option).
- The third option proposed to combine transmission and generation. Under this option, the Jasper area would be connected to the AIES via a new transmission line and substation, and a number of existing units would be retained in the Jasper area to serve as backup generation in the event of a loss of connection to the AIES (the combined transmission and backup generation option).

15. ATCO Transmission's business case included a reliability assessment, risk evaluation and cumulative present value cost estimate for each of the three options. The business case concluded that the ATCO transmission option was the lowest cost option but carried the highest reliability risk. The ATCO generation option was the highest cost option, but had the lowest

³ The application was registered on October 28, 2016 as Application 22125-A001.

⁴ Transcript, Volume 1, page 117, lines 12-18.

⁵ Exhibit 22125-X0346, #1603 ATCO Jasper Interconnection Project SASR.

⁶ Exhibit 22125-X0006, Appendix E - ATCO Business Case.

reliability risk. The combined transmission and backup generation option was the second lowest cost option which reduced the reliability risk of the ATCO transmission option. The cost and reliability assessments in the business case were the subject of dispute between the JEA and the applicants, and are discussed in detail in sections 9 and 7 of this decision, respectively.

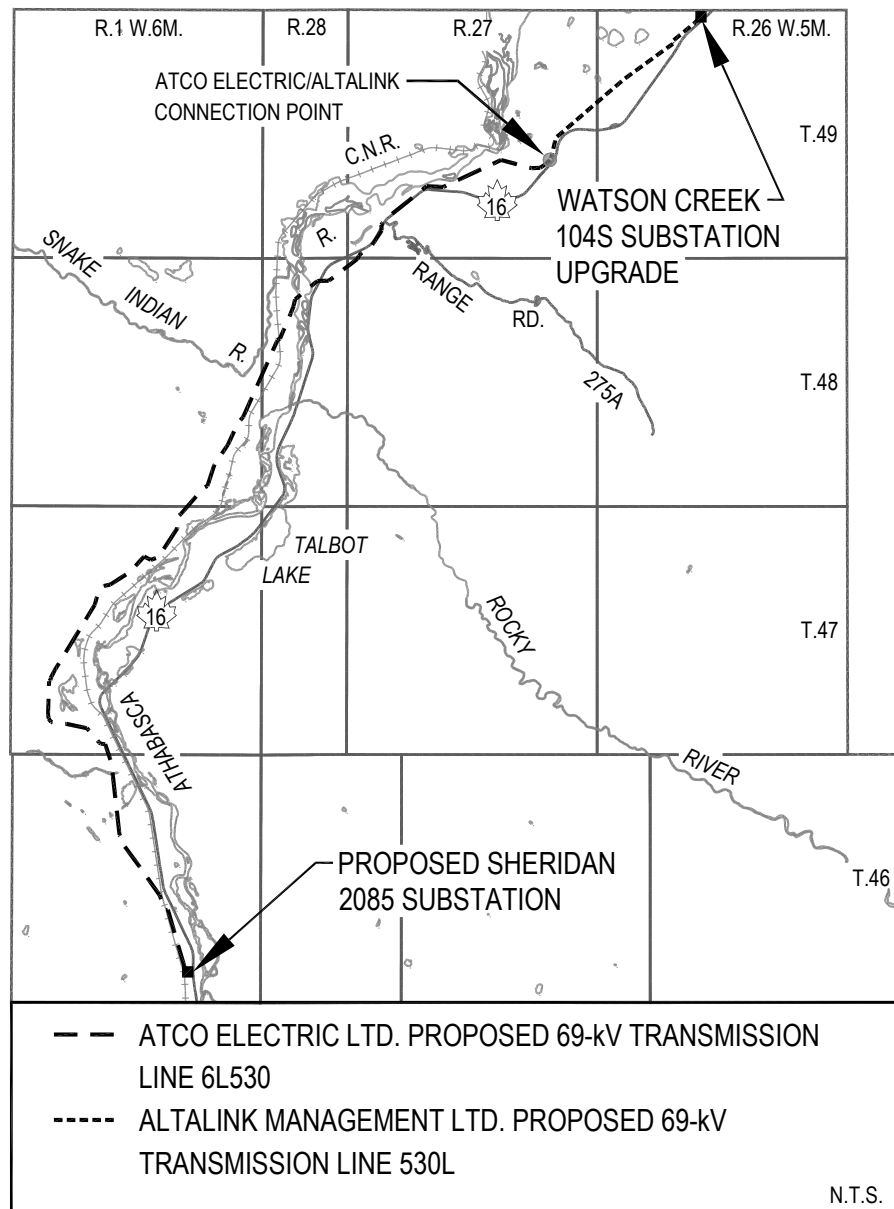
16. The AESO stated that the ATCO transmission option and the combined transmission and backup generation option were identical in terms of their impact on the performance of the transmission system, as the proposed backup generation would only supply load in the Jasper area in the event that the radial transmission connection to the AIES was lost. The AESO ruled out the combined transmission and generation option because it was the same as the ATCO transmission option from a transmission perspective, but had a higher cost. The AESO ruled out the ATCO generation option because its overall lifecycle costs were determined to be higher than the ATCO transmission option. Ultimately, the AESO proposed the ATCO transmission option as its preferred solution to supply electricity to the Jasper area.

17. AltaLink and ATCO Transmission each filed facility applications with the Commission for approval to construct the facilities to meet the need identified by the AESO. The specifics of the NID and facility applications before the Commission are as follows:

Applicant	Application	Description
Alberta Electric System Operator	22125-A001	Application for approval of the need to construct a new substation and a new single-circuit, 69-kV transmission line and to upgrade the existing Watson Creek 104S Substation, in order to serve existing load, new load and load growth in the Jasper area in response to ATCO Distribution's system access service request.
AltaLink Management Ltd.	22125-A002	Application to alter and operate the existing Watson Creek 104S Substation by adding two 138/69-kV transformers, two 138-kV circuit breakers and one 69-kV circuit breaker at the substation and expanding the substation's fenced area by approximately 37 by 41 metres.
AltaLink Management Ltd.	22125-A003	Application to construct approximately 8.5 kilometres (km) of a new single-circuit, 69-kV transmission line to be called transmission line 530L, between the existing Watson Creek 104S Substation and the boundary of AltaLink's service territory (the boundary of Jasper National Park), where it would connect with ATCO Transmission's transmission line 6L530.
ATCO Electric Ltd.	22125-A004	Application to construct a new substation, to be called Sheridan 2085S Substation, which would be located within the boundary of Palisades. The proposed substation would include the following major equipment: (i) two 69/25-kV transformers; (ii) two 69-kV circuit breakers; and (iii) six 25-kV circuit breakers.
ATCO Electric Ltd.	22125-A005	Application to construct approximately 45 km of a new single-circuit, 69-kV transmission line to be called transmission line 6L530, in Jasper National Park between the proposed Sheridan 2085S Substation and the connection point at the park boundary.
ATCO Electric Ltd.	22125-A006	Application to connect transmission line 6L530 to transmission line 530L at the boundary of Jasper National Park.

18. The above described facilities are shown on the map below.

Figure 1: Map of proposed facilities



19. Pursuant to Section 15.4 of the *Hydro and Electric Energy Act*, the Commission combined the NID and facility applications and considered them jointly in Proceeding 22125.

3.3 Procedural background

20. The Commission issued notices for the applications in Proceeding 22125 on January 6, 2017 and March 31, 2017.⁷ The notices were mailed directly to all landowners, residents and occupants within 1,000 metres of ATCO Transmission's proposed facilities and AltaLink's transmission line, within 800 metres of the existing Watson Creek 104S Substation

⁷ Exhibit 22125-X0073, Notice of Applications; Exhibit 22125-X0091, Notice of Applications: Jasper Interconnection Project.

and 200 metres of the Cold Creek 602S Substation, as well as to government agencies, industry and other interested parties. Notices were also published in the Jasper Fitzhugh on January 6, 2017 and in the Jasper Fitzhugh, The Hinton Parklander, Edmonton Journal and Calgary Herald newspapers on March 31, 2017. The Commission included information on Parks Canada's approval process in its March 31, 2017 notice. A link to the Parks Canada website relating to the project, as well as contact information to provide feedback directly to Parks Canada were also included in both notices.

21. On June 1, 2017, the Commission held a public information session in Jasper to provide interested parties with information about how to become involved in the proceeding and explain available funding.

22. The Commission received 10 statements of intent to participate from individuals, families, companies and landowner groups in response to the notices of applications. While the majority of statements of intent to participate related directly to ATCO Transmission's proposed transmission line, parties also raised concerns with the AESO's NID. The Commission received one statement of intent to participate pertaining to AltaLink's proposed facilities.

23. On August 3, 2017, the Commission issued a ruling granting standing to those persons who had demonstrated that they had rights that may be directly and adversely affected by the Commission's decision on the applications.⁸ Three subsequent rulings were issued on September 19, and October 12, 2017 to address standing to late-registered persons.⁹ The Commission's standing rulings are attached as Appendix E to this decision. The Commission granted standing to the following persons with respect to the AESO NID, the ATCO Transmission facility applications, and the AltaLink facility applications, respectively:

AESO NID application	ATCO Transmission facility applications	AltaLink facility applications
JEA Greg and Elaine Slatter Peter Bubik CCA Municipality of Jasper	Kinder Morgan Canada Inc. Greg and Elaine Slatter Municipality of Jasper	The Commission did not grant standing to any person whose intervention pertained to AltaLink's facility applications.

24. The JEA's intervention is described in Section 3.4 below. Greg and Elaine Slatter submitted a statement of intent to participate that outlined concerns with the proposed transmission line's proximity to their residence, the Pocahontas Warden Station, but did not participate further.

25. Mr. Bubik submitted a statement of intent to participate, took part in the information request process, and also provided a brief statement at the oral hearing. Mr. Bubik submitted that alternative options should be considered to supply the Jasper area, including a competitive sourcing process for potential generation supply options.

⁸ Exhibit 22125-X0136, AUC ruling on standing.

⁹ Exhibit 22125-X0167, AUC ruling on CCA standing - 2017-09-19; Exhibit 22125-X0244, Standing ruling - AWNTB; Exhibit 22125-X0245, Standing ruling - Municipality of Jasper.

26. The CCA conducted a limited intervention that included cross-examination in the oral hearing and filing argument. The CCA expressed concerns with the cost classification of the project, and generally with the project's proposed costs.

27. The Municipality of Jasper expressed concerns about reliability and environmental impacts in its statement of intent to participate, but subsequently withdrew its intervention, indicating that its concerns had been sufficiently addressed by the AESO and ATCO Transmission.

28. Kinder Morgan Canada Inc.'s (Kinder Morgan) statement of intent to participate set out its concerns with potential impacts to its pipelines in proximity to the proposed transmission line. However, the company subsequently indicated its support for the proposed project.

29. Pursuant to Subsection 9(2) of the *Alberta Utilities Commission Act*, the Commission held a hearing to consider the concerns of the registered parties with standing. The Commission originally issued a notice of hearing for Proceeding 22125 on August 3, 2017.¹⁰ The hearing was rescheduled at the request of the interveners and was ultimately held in Calgary from January 9, 2018 to January 12, 2018 before a Commission panel comprised of Panel Chair Anne Michaud, and Commission members Neil Jamieson and Carolyn Hutniak. Written argument was submitted on January 29, 2018 and written reply was submitted on February 5, 2018.

30. A list of all registered parties in this proceeding, including those who did not appear in person at the hearing, is provided in Appendix A to this decision. A complete list of hearing participants is attached to this decision in Appendix B.

3.4 The JEA's intervention

31. The JEA filed a statement of intent to participate in the proceeding and was granted standing in relation to the AESO's NID application. Jill Seaton and David Hatto represented the JEA in the proceeding, as its chair and vice-chair, respectively. The JEA raised concerns with the proposed transmission line through Jasper National Park, including whether there was a need for the project and whether there is a more cost-effective and environmentally sensitive solution. In its statement of intent to participate, the JEA asked whether ATCO Transmission had considered alternative solutions such as renewable energy technologies. It also raised concerns about the effect of the project on tourism.

32. The JEA, through its counsel, retained Bema Enterprises Ltd. (BEMA) and Insitu Power Corporation (Insitu) to prepare written evidence and testify at the oral hearing. Two expert reports drafted by BEMA with the assistance of Grid Power Design and Development Ltd. (the BEMA reports) were filed by the JEA. The BEMA reports examined and compared overall impacts, including cost, reliability, environmental and other socio-economic impacts of the potential supply options for the Jasper area.

33. More specifically, the BEMA reports developed and analyzed their own generation option (the JEA generation option) as well as their own transmission option (the JEA transmission option) to serve the Jasper area over the next 40 years. BEMA also assessed the cost, reliability and environmental impacts of the ATCO transmission option. Insitu reviewed the

¹⁰ Exhibit 22125-X0135, Notice of hearing for Proceeding 22125.

ATCO generation option and examined whether any other generation options could meet the need identified in the AESO's application. BEMA then assessed the cost, reliability and environmental impacts of the JEA generation option put forward by Insitu.

34. The JEA generation option consists of four Wartsila 12V34DF gensets, which is a generation configuration consisting of four reciprocating engines that burn natural gas and diesel fuel. Insitu stated that JEA's generation option can serve up to 16.5 MW.

35. ATCO Transmission had screened out reciprocating engines based on concerns about emissions standards and ramping capability, while Insitu and BEMA did not preclude the use of this option.

36. BEMA concluded that the JEA generation option is less costly, provides a higher reliability level, and has lower environmental and visual impacts than the ATCO transmission option.

4 Preliminary matters

4.1 Parks Canada approval process

37. A separate approval process administered by Parks Canada under federal legislation applies because ATCO Transmission's proposed 45 km transmission line and its proposed Sheridan 2085S Substation (the ATCO park facilities) are located within the boundary of Jasper National Park.

38. Section 13 of the *Canada National Parks Act* restricts any use, interest or occupation of lands within a national park except as permitted under the act or its regulations.¹¹ Section 38(a) of the *National Parks General Regulations* allows the federal Minister of Environment and Climate Change to enter into an agreement for the development, operation and maintenance of electrical services within Jasper National Park.

39. Under the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) and its *Regulations Designating Physical Activities*, the ATCO park facilities do not constitute a "designated activity" requiring an environmental assessment to be carried out.¹² However, Section 67 of CEAA 2012 requires Parks Canada to determine whether the ATCO park facilities are likely to cause "significant adverse environmental effects". Section 67 provides:

An authority must not carry out a project on federal lands, or exercise any power or perform any duty or function conferred on it under any Act of Parliament other than this Act that could permit a project to be carried out, in whole or in part, on federal lands, unless

¹¹ *Parks Act*, s 13; *National Parks General Regulations*, SOR/78-213, s 3: "A person may use or occupy public lands or other public property within a Park if that person does so in accordance with the Act, the regulations made thereunder and any agreement made between the Government of Canada and the government of the province within which the Park is situated."

¹² *Canadian Environmental Assessment Act, 2012*, SC 2012, c 19, s 52; *Regulations Designating Physical Activities*, SOR/2012-147, Schedule. The construction, operation, decommissioning and abandonment of an electrical transmission line would only be a designated activity requiring an environmental assessment if it was located in a wildlife area or migratory bird sanctuary.

(a) the authority determines that the carrying out of the project is not likely to cause significant adverse environmental effects; or

(b) the authority determines that the carrying out of the project is likely to cause significant adverse environmental effects and the Governor in Council decides that those effects are justified in the circumstances under subsection 69(3).¹³

40. If Parks Canada is of the opinion that the ATCO park facilities are likely to cause significant adverse environmental effects, Parks Canada cannot permit the project to be carried out, unless the Governor in Council decides that those effects are justified in the circumstances.

41. In this case, Parks Canada is assessing the ATCO park facilities under Section 67 of CEAA 2012 in accordance with the *Parks Canada Directive on Impact Assessment, 2015*, which requires power line projects to go through a detailed impact assessment (DIA) process. The *Parks Canada Directive on Impact Assessment, 2015* outlines the legislative and policy framework for the environmental impact analysis of projects proposed within Parks Canada's protected heritage places.

42. Parks Canada directed ATCO Transmission to conduct a DIA for the ATCO park facilities. ATCO Transmission conducted its DIA process concurrently with the Commission's approval process, and filed its final submission of the DIA to Parks Canada with the Commission on June 23, 2017.¹⁴ In order to construct the ATCO park facilities, ATCO Transmission is required to obtain all applicable regulatory approvals in addition to obtaining an approval from the Commission; this includes Parks Canada's determination on the DIA as well as a determination under Section 67 of CEAA 2012 that the project is not likely to cause "significant adverse environmental effects", or if so, that those effects are justified in the circumstances.

43. As of the date of this decision, Parks Canada has not issued its determination on whether the ATCO park facilities are likely to cause significant adverse environmental effects. However, the Commission has considered the DIA, along with the environmental evidence submitted by interveners, as evidence relevant to the Commission's own assessment of whether the overall project, as proposed in the applications before it, is in the public interest, having regard to its effects on the environment. The Commission's findings in this decision on whether the public interest has been met are separate from the Parks Canada approval process.

44. Pursuant to Section 67 of CEAA 2012, if after assessing the ATCO park facilities in accordance with its own DIA process Parks Canada determines that the ATCO park facilities are likely to cause significant adverse environmental effects and that those effects are not justified, the project cannot proceed. Nothing in the Commission's decision can relieve ATCO Transmission from the obligation to obtain the authorization from Parks Canada required by federal legislation.

¹³ CEAA 2012, ss 2(1), 66, 67. For the purposes of section 67, an "authority" means a "federal authority" which in turn is defined to include a Minister of the Crown in right of Canada, or an agency of the Government of Canada.

¹⁴ Exhibits 22125-X0110 to 22125-X0114.

4.2 Role of the JEA consultants

45. Concerns were raised at the hearing and in argument that the JEA generation option, offered by BEMA and Insitu, was at odds with the JEA's stated mandate.

46. The JEA argued that the introduction of new linear transmission infrastructure through Jasper National Park is inconsistent with preserving its ecological integrity for future generations. The JEA submitted that significant adverse environmental impacts from the ATCO transmission option would be entirely avoided if a generation option were selected. Its statement of intent to participate stated that the JEA "would like the Commission to consider alternative ways of addressing the issues raised in this application that will have less impact on the environment."¹⁵ The JEA also raised cost concerns in its detailed statement of intent to participate.

47. ATCO Transmission submitted that, inconsistent with the JEA's environmental mandate, the JEA's consultants failed to adequately assess the environmental effects of the JEA generation option advanced in the Insitu and BEMA reports.¹⁶ ATCO Transmission argued that the JEA generation option would not meet current Alberta regulatory standards for CO₂ emissions, absent the addition of a selective catalytic reduction system, and that the addition of such a system would pose additional environmental risks that were not addressed by the JEA or any of its consultants. ATCO Transmission argued that this was an indication that the consultants engaged by the JEA were more focused on advancing proposals that benefitted their business interests than the interest of their client, the JEA.

48. When the JEA's representatives, Mr. Hatto and Ms. Seaton, were informed during the hearing that the JEA generation option would produce twice as much carbon dioxide (CO₂) when compared to the ATCO transmission option, they indicated that it would be an unsatisfactory growth in CO₂ and they were unaware of this information. Mr. Hatto and Ms. Seaton further stated that they perceived the JEA generation option as a temporary option.¹⁷ Neither the BEMA or Insitu reports indicate a position that the JEA generation option would be temporary. On the contrary, the JEA generation option would commit the Jasper area to reliance on fossil fuels for the lifecycle of that facility, approximately 40 years.¹⁸

49. Additionally, in testimony, Mr. Hatto, speaking on behalf of the JEA, confirmed that the organization does not take a position on whether the costs of the project should be classified as customer-related or system-related costs.¹⁹ However, in the written argument submitted on behalf of the JEA, the position taken was that the interim tariff classification of costs should be participant-related.²⁰

50. ATCO Transmission further submitted that despite its environmental mandate, the JEA did not provide any expert environmental evidence to challenge the methodology followed in

¹⁵ Exhibit 22125-X0106, System generated PDF for Jasper Environmental Association.

¹⁶ Exhibit 22125-X0376, Final Argument of ATCO Electric Ltd., paragraph 39.

¹⁷ Transcript, Volume 4, page 725, line 16 to page 726, line 20.

¹⁸ Transcript, Volume 4, page 729, lines 2-8.

¹⁹ Transcript Volume 3, page 685.

²⁰ Exhibit 22125-X0386, JEA Reply - Signed Version, paragraph 104.

preparing the DIA or any determinations contained in ATCO Transmission's evidence relating to the residual effects arising from the project.

51. BEMA and Insitu were asked in the hearing about the specific instructions received from their client, the JEA. BEMA stated that it was retained through counsel to the JEA, and Dan Levson became the point of contact for the other consultants, Dustin Madsen, with BEMA, Trevor Cline, with Grid Power Development and Design, and Doug Sullivan, with Insitu.²¹ The JEA's counsel received drafts of the consultants' materials, which were passed on to the JEA. The JEA's consultants never received written instructions directly from the JEA.²²

52. Mr. Levson testified that BEMA was retained through the JEA's counsel and did not receive any direct instructions from the JEA.²³ Mr. Sullivan testified that his report was commissioned by BEMA.²⁴ Mr. Levson testified that BEMA was not acting as an advocate for the JEA but that it and its consultants were retained to present independent evidence.

53. The Commission acknowledges that the role of experts in its proceedings is to provide fair, objective and non-partisan evidence. The Commission has considered in the past whether expert witnesses in its proceedings have fulfilled this duty of independence and objectivity.²⁵

54. However, the duty to provide fair, objective and non-partisan evidence must be balanced with the fact that it is the client, in this case the JEA, who has been granted standing by the Commission to participate in the proceeding, based on the direct and adverse impact to its legally recognized rights described in its statement of intent to participate. There must therefore be some reasonable connection between the expert evidence offered and the identified rights and interests of the party sponsoring that evidence. Based on the information in the JEA's statement of intent to participate, the content of the JEA's written evidence,²⁶ and the testimony of the JEA's representatives during the hearing, the Commission can only conclude that there was a significant breakdown in communication between the JEA and its consultants.

55. In rendering its determination on the applications before it, the Commission will take into account any apparent divergence between the position advanced by the JEA and the solution proposed by its consultants.

5 The regulatory framework

5.1 Isolated generation in Alberta

56. As noted previously, the applications for the project include the AESO's NID application and various facility applications filed by ATCO Transmission and AltaLink. What sets the project apart from other NID and facility applications is that for the first time, the Commission

²¹ Transcript, Volume 4, pages 807-810.

²² Transcript, Volume 4, page 810.

²³ Transcript, Volume 4, page 808.

²⁴ Transcript, Volume 4, page 807.

²⁵ Decision 3110-D01-2015: Market Surveillance Administrator allegations against TransAlta Corporation et al., Mr. Nathan Kaiser and Mr. Scott Connelly, Phase 1, Proceeding 3110, July 27, 2015, paragraphs 105-106.

²⁶ Exhibit 22125-X0286, JEA Written Evidence.

must consider NID and facility applications relating to the interconnection of an “isolated community” as that phrase is defined in the IGUCC Regulation.

57. In the subsections below, the Commission sets out general background information on how electricity is generated, transmitted and distributed in Alberta and describes the regulatory framework for these activities.

58. The generation of electricity in Alberta is deregulated. This means that any qualified person or corporation can own and operate a power plant and offer to sell the output of that plant (electricity) through Alberta’s competitive electricity market. Under this framework, decisions about whether to build new power plants and where to locate those plants are left to the power plant owners and are based on competitive market forces. The price for the electricity generated by these power plants may be established by contract or through an hourly energy auction which sets an hourly “pool price”. The cost of this electricity is included in the electricity rates charged to customers.

59. The transmission and distribution of the electricity generated by Alberta’s power plants is regulated. Transmission and distribution services are provided by regulated utilities (such as ATCO Transmission) within assigned transmission and distribution service territories. Most end-use customers in Alberta receive their electricity through this transmission and distribution system, which is often referred to as the AIES. Customers pay for transmission and distribution services through a rate approved by the Commission.

60. Some remote Alberta communities, defined as “isolated communities” in the IGUCC Regulation, are not connected to the AIES because they are located far away from existing transmission lines and it is more economic to provide electricity directly to those communities through local power plants, called “isolated generating units” and a local distribution system. These isolated generating units are owned and operated by the local distribution utility.

5.2 The statutory scheme

61. A number of acts and regulations govern the generation, transmission and distribution of electricity in Alberta, including: the *Electric Utilities Act*, the *Hydro and Electric Energy Act*, the *Alberta Utilities Commission Act* and the *Transmission Regulation*. A further consideration in this proceeding is the IGUCC Regulation.

62. The *Electric Utilities Act* sets out the legal framework for the operation of Alberta’s electricity market. It establishes the Independent System Operator (ISO, also known as the AESO) as the transmission system planner and operator, and sets out that agency’s duties, roles, and mandates. The *Electric Utilities Act* also describes the roles and duties of transmission facility owners and the owners of electric distribution systems.

63. The *Transmission Regulation*, among other things, provides direction to the AESO on the preparation and filing of NID documents and direction to the Commission on the criteria to be used when deciding whether to approve a NID. The *Hydro and Electric Energy Act* sets out the approval process for new transmission and distribution facilities and the *Alberta Utilities Commission Act* gives direction to the Commission on the criteria it must apply when deciding whether to approve such facilities.

64. Under the IGUCC Regulation, the owner of a distribution system that serves an isolated community must file an application with the Commission if it determines that it is necessary to replace an isolated generating unit or add an isolated generating unit to maintain a reliable supply of electric energy, or provide more electric energy, to the isolated community. Subsection 27(1.1) of the IGUCC Regulation states that the Commission may approve such an application if, in its opinion, it is not economic to connect the isolated community to the AIES. Section 27 states:

27(1) Where, in order to maintain a reliable supply of electric energy or to provide more electric energy to an isolated community or industrial area,

- (a) an isolated generating unit is to be replaced, or
- (b) an additional isolated generating unit is required,

an owner must apply to the Commission for approval of the replacement or additional generating unit.

(1.1) If the Commission receives an application under subsection (1), the Commission may approve the application if, in the opinion of the Commission, the connection of the isolated community or industrial area to the interconnected electric system is not economic.

65. The application of the economic consideration required by the IGUCC Regulation in this proceeding is discussed in Section 5.3 below.

5.2.1 Needs identification documents and “system access service”

66. Under Section 34 of the *Electric Utilities Act*, the AESO is required to file a NID with the Commission when it determines that an expansion or enhancement to the transmission system is or may be required to meet the needs of Alberta and is in the public interest. Subsections 34(1)(a) to (c) identify three different types of NID.

- A NID that 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.
- A NID that describes a need for improved efficiency of the transmission system, including means to reduce losses on the interconnected electric system.
- A NID that describes a need to respond to a request for system access service.

67. The phrase “system access service” is defined in the *Electric Utilities Act* as “the service obtained by market participants through a connection to the transmission system for the purpose of exchanging electric energy and ancillary services.” In accordance with sections 17(g) and 29 of the *Electric Utilities Act*, the AESO has a duty to provide system access service on the transmission system in a manner that gives all market participants wishing to exchange electric energy and ancillary services a reasonable opportunity to do so.

68. The AESO's obligation to provide system access service correlates with Subsection 5(b) of the *Electric Utilities Act*, which states that one of the purposes of that act is:

to provide for a competitive power pool so that an efficient market for electricity based on fair and open competition can develop, where all persons wishing to exchange electric energy through the power pool may do so on non-discriminatory terms and may make financial arrangements to manage financial risk associated with the pool price;

69. Subsections 34(1)(a) and (b) require the AESO to identify a system deficiency driving the need for transmission expansion or enhancement (i.e., a constraint, a condition affecting operation or performance, or an inefficiency), and propose transmission solutions to address the identified deficiency. A NID under Subsection 34(1)(c) is different because the need for transmission expansion or enhancement is triggered by a market participant's request for a transmission connection, rather than a system deficiency. Because the AESO has an express duty to provide system access, the AESO is obliged to file a NID in response to a request for such service.

70. When preparing a NID for system access service under Subsection 34(1)(c), it is unnecessary for the AESO to justify the need for the transmission connection (other than to confirm that a system access service request was made). However, in accordance with the wording of the provision, the AESO must be satisfied that the transmission expansion or enhancement proposed to address the system access service request is in the public interest.

71. The *Transmission Regulation* provides direction to the AESO on the preparation and filing of NID documents and direction to the Commission on the criteria to be used when deciding whether to approve a NID.²⁷ Under Section 38(e) of the regulation, the Commission must consider the AESO's assessment of need to be correct unless an interested person satisfies it that the AESO's assessment of the need is technically deficient or that approval of the NID is not in the public interest.

5.2.2 Facility applications to construct and operate a transmission line

72. 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 if its approval 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

²⁷ Section 11(5.1) of the *Transmission Regulation* allows the Commission to omit any requirement pertaining to a NID or modify how those requirements apply in respect of an abbreviated needs identification document, or ANID, process. Those requirements are set out in Section 6 of Rule 007.

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.²⁸

5.3 The Commission's consideration of the Jasper Interconnection Project

73. The Commission's task in this proceeding is to decide if it is in the public interest to serve Jasper's future electricity needs through isolated generation or through an interconnection to the AIES. The Commission has previously stated that its assessment of the public interest is contextual and requires reference to the object and purpose of the statutory scheme.²⁹

74. The Commission's approval of associated NID and facility applications ordinarily requires two separate but related public interest determinations. These determinations may be made in separate decisions if a NID is filed alone, or in a single decision when a NID and facility application are combined and considered by the Commission in a single proceeding, as set out in Section 15.4 of the *Hydro and Electric Energy Act*. However, because the NID and facility applications in this proceeding arise from a request for system access service predicated on the transition from isolated generation to interconnection to the AIES, Section 27(1.1) of the IGUCC Regulation imposes upon the Commission a further consideration in its public interest assessment: whether interconnection to the AIES is economic. Having regard to the statutory scheme, the term "economic", as it is used in Section 27(1.1), must be read broadly. In the Commission's view, it would be unreasonable and inconsistent with the spirit and intent of the legislative framework to interpret the economic requirement as demanding a simple comparison of the costs of interconnection with the costs of ongoing isolated generation. Rather, the Commission finds that the required evaluation must take into account the social, economic and environmental attributes of the alternatives being compared. In other words, the cost of the supply options being compared must include the costs required to effectively minimize or mitigate, to an acceptable degree, their respective social, economic and environmental impacts.

75. Section 27(1.1) of the IGUCC Regulation must also be interpreted within the context of the greater statutory scheme, particularly those provisions that emphasize the importance of an efficient electricity market based on fair and open competition and the requirement to provide system access service to all market participants so that they may have a reasonable opportunity to exchange electric energy. When read in this context, the Commission finds that in deciding between continued isolated generation and interconnection, unless interconnection is demonstrated to be uneconomic, the statutory scheme favours interconnection because it maximizes market participants' opportunities to exchange electric energy.

76. The practical implication of the economic consideration mandated by Section 27(1.1) is that the Commission must assess the relative merits of the isolated generation and transmission options, based on all of the evidence in the proceeding, before turning its mind to the merits of the NID application and associated facility applications. Adopting this approach effectively recognizes that the system access service request that obliged the AESO to prepare the NID is

²⁸ Decision 2009-028, AltaLink Management Ltd. - Transmission Line from Pincher Creek to Lethbridge, Proceeding 19, Application 1521942, March 10, 2009, paragraph 33.

²⁹ Decision 2011-436, AltaLink Management Ltd. and EPCOR Distribution and Transmission Inc. - Heartland Transmission Project, Proceeding 457, Application 1606609, November 1, 2011, paragraphs 144-148.

itself dependant upon the Commission's determination on the economics of interconnection. Accordingly, if the Commission decides that the interconnection option is not economic, the system access service request and the related NID and associated facility applications become moot.

77. This approach effectively integrates the requirement of Section 27(1.1) of the IGUCC Regulation and is also consistent with the unique nature of a NID under Subsection 34(1)(c) of the *Electric Utilities Act*. As stated above, the object of a NID under that subsection is to identify a transmission interconnection option that is consistent with the public interest. Absent from the AESO's obligations for this type of NID is the requirement to justify the need for a new transmission interconnection other than to demonstrate the existence of a system access service request. In these circumstances, the Commission can effectively harmonize its consideration of the economic implications of the isolated generation and interconnection supply options with its assessment of the AESO's preferred transmission alternative as expressed in the NID and ATCO Transmission's facility applications, in deciding whether the approval of these applications is in the public interest.

78. This holistic approach to assessing the NID and facility applications is consistent with the plain wording of Section 15.4 of the *Hydro and Electric Energy Act* which expressly empowers the Commission to combine related NID and facility applications.

79. Assessing the combined NID and facility applications in this manner does not materially change the Commission's overall evaluation of the project. In more certain terms, the Commission may reject the project if it is satisfied, based on the record of the proceeding, that the AESO's assessment of the NID for the interconnection is technically deficient or if approval of the project is not in the public interest, either because the interconnection proposed is not economic, or because the specific impacts of the route proposed cannot be effectively minimized or mitigated.

80. Having regard to the foregoing, the Commission will first assess the participant involvement programs of each of the three applicants in this proceeding. These programs are required to be conducted in accordance with the Commission's Rule 007 and are designed to allow parties to understand the nature of the project, for the applicant to identify areas of concern, and to provide an opportunity for parties to engage in dialogue to eliminate or mitigate those areas of concern. After the Commission has considered whether the AESO, ATCO Transmission and AltaLink participant involvement programs have met the requirements of Rule 007, the Commission will assess the relative reliability, costs, land use, and environmental impacts of the ATCO generation and transmission options and the JEA generation option.

6 Consultation

6.1 The AESO's participant involvement program

81. The AESO submitted that it conducted a participant involvement program in accordance with the requirements outlined in Appendix A2 of Rule 007 from May to October 2016.

82. The AESO stated that an overview of the project need and the AESO's preferred option to respond to the system access service request was placed on its website. The AESO also directed ATCO Transmission and AltaLink to assist it with providing notification to stakeholders

as part of the AESO's participant involvement program.³⁰ The efforts undertaken by ATCO Transmission and AltaLink on behalf of the AESO are described below.

83. The AESO indicated that it was not aware of any concerns or objections regarding the need for the proposed development when the application was filed.

6.2 ATCO Transmission's participant involvement programs

6.2.1 Parks Canada public engagement program

84. ATCO Transmission's consultation process with Parks Canada regarding the project began in 2013. ATCO Transmission stated that its first meeting with Parks Canada was for the purpose of discussing regulatory expectations and to determine whether a transmission line located within Jasper National Park was feasible.³¹ ATCO Transmission worked with Parks Canada to identify areas of constraint and develop conceptual routes. It also prepared a feasibility study which it submitted to Parks Canada.

85. ATCO Transmission stated that Parks Canada issued a draft Terms of Reference document to ATCO Transmission in 2013, which outlined the process that ATCO Transmission was required to follow to complete a DIA and identified the requisite environmental surveys. ATCO Transmission and Parks Canada met in April 2015. At that time, ATCO Transmission presented its business case, which was developed to explore options to replace Palisades.³² Site visits were conducted throughout the summer of 2015. In August 2015, Parks Canada issued the final Terms of Reference.³³

86. As part of its assessment process under CEAA 2012, Parks Canada directed ATCO Transmission to conduct a public engagement program in support of its DIA.³⁴ This process began in May 2016, and ATCO Transmission has stated that it would continue such engagement program until the transmission line is complete and in-service. The public engagement program consisted of two phases.

87. In the first phase, information about the ATCO park facilities was made available to interested parties. Project notification was placed on Parks Canada's webpage, public consultation occurred with interested groups, and interested Indigenous communities were consulted. ATCO Transmission submitted Version 1.0 of its DIA to Parks Canada in December 2016.

88. In the second phase, Version 1.0 of the DIA was made available for public input and comment from March 24, 2017 to April 21, 2017. Through this process, interested parties had an opportunity to review the DIA along with other information and provide comments to Parks Canada. ATCO Transmission held an open house as well as discussions with the public and Indigenous communities. ATCO Transmission received feedback from the public about operations and reliability, potential environmental effects, as well as project need and alternatives.

³⁰ Exhibit 22125-X0008 Appendix C - AESO PIP, PDF page 2.

³¹ Exhibit 22125-X0230, ATCO-Jasper-IR-Response-to-JEA-Round 1-20171009 Final, PDF page 4.

³² Exhibit 22125-X0006, Appendix E - ATCO Business Case.

³³ Exhibit 22125-X0121, ATCOElectricJasperInterconnection_IR_Response_Round_3_Appendix1.

³⁴ Exhibit 22125-X0041, Attachment3_PIP, PDF page 3.

89. The final version of the DIA, Version 3.0, was provided to Parks Canada in June 2017 and filed with the Commission. ATCO Transmission advised the Commission that the development permit for the ATCO park facilities was already with Parks Canada; Parks Canada was interested in the Commission's process; and that ATCO Transmission did not expect a determination on the development permit until the Commission decision was issued. ATCO Transmission explained that Parks Canada would look at the outcome of the Commission process and consider the need for conditions based on the information resulting from the Commission's process.

90. In its application, ATCO Transmission stated that mitigation to address concerns raised during the public engagement program about the ATCO park facilities could include adjusting the transmission line's routing, modifying structure placement, modifying project timing and/or sequencing of activities, exploring alternate right-of-way access, and developing other mitigation strategies and approaches to protect sites identified as having cultural significance.³⁵ ATCO Transmission confirmed in testimony that the transmission line's routing was altered as a result of the consultation process with Parks Canada.³⁶

6.2.2 Rule 007 participant involvement program

91. For the purposes of its facility applications to the Commission, ATCO Transmission initiated its Rule 007 participant involvement program in 2014 when it first engaged government and industry. On May 3, 2016, ATCO Transmission distributed information on the preliminary route to stakeholders, occupants, agencies and interested parties within 1,000 metres of the project. ATCO Transmission held a public information session in the town of Jasper on May 26, 2016 and conducted personal consultations from June 2016 to August 2016 with all stakeholders, occupants, agencies and other interested parties within 1,000 metres of the project as well as key stakeholders as identified and directed by Parks Canada. ATCO Transmission distributed the AESO's consultation material in May 2016 and an updated project needs overview on August 15, 2016 to all participants it identified from the outset of the participant involvement program.

92. ATCO Transmission stated that feedback obtained through the participant involvement program played an important role in project planning, and in particular in the identification of route constraints. ATCO Transmission stated that those constraints were then considered during routing analysis.³⁷

93. Through consultation with pipeline owners, ATCO Transmission agreed to reimburse owners for reasonable costs incurred for the analysis, design and installation of mitigation measures demonstrated to be necessary as a result of the proposed transmission line, and to enter into necessary crossing and proximity agreements.³⁸

94. In its application, ATCO Transmission stated that while it endeavoured to respond to all concerns expressed through the participant involvement program, there were outstanding concerns among certain interested parties. Those outstanding concerns included environmental impacts, visual impacts, reliability concerns, routing concerns, and concerns with wildlife health.

³⁵ Exhibit 22125-X0041, Attachment3_PIP, PDF page 20.

³⁶ Transcript, Volume 3, page 650.

³⁷ Exhibit 22125-X0041, Attachment3_PIP, PDF page 4.

³⁸ Exhibit 22125-X0041, Attachment3_PIP, PDF page 14.

ATCO Transmission attempted to resolve outstanding concerns through the dissemination of additional information and follow-up consultations with participants and to identify mitigation options where reasonably practicable.³⁹

6.3 AltaLink's participant involvement program

95. AltaLink conducted a participant involvement program which consisted of notification and direct consultation activities with landowners; Crown lease holders; residents; local, regional and provincial government representatives; officials and departments; industry; and Aboriginal groups. AltaLink mailed project-specific information packages to all stakeholders within 800 metres of its proposed transmission route right-of-way and Watson Creek 104S Substation expansion. The information was also mailed to stakeholders within 200 metres of the Cold Creek 602S Substation upgrade. AltaLink also provided the AESO's NID overview materials as part of its project-specific information packages.⁴⁰

96. AltaLink stated the consultation feedback helped with the elimination of preliminary routes and the selection of the preferred route. It added that it was not aware of any outstanding concerns with its proposed facilities at the time it filed its applications with the Commission.⁴¹

6.4 Commission findings

97. The Commission's Rule 007 sets out the requirement that a participant involvement program must be conducted before a facility or NID application is filed with the Commission. It is the applicant's responsibility to meet the notification and consultation requirements under Rule 007.

98. In Decision 2011-436, the Commission made the following comments with respect to effective consultation under Rule 007:

... In the Commission's view, effective consultation achieves three purposes. First, it allows parties to understand the nature of a proposed project. Second, it allows the applicant and the intervener to identify areas of concern. Third, it provides a reasonable opportunity for the parties to engage in meaningful dialogue and discussion with the goal of eliminating or mitigating to an acceptable degree the affected parties concerns about the project. If done well, a consultation program will improve the application and help to resolve disputes between the applicant and affected parties outside of the context of the hearing room.

The Commission acknowledges that even a very effective consultation program may not resolve all intervener concerns. This is not the fault of the applicant or the intervener; it merely reflects the fact that the parties do not agree. With this in mind, the Commission will consider a consultation program to be effective if it meets AUC Rule 007 requirements and has allowed interveners to understand the project and its implications for them, and to meaningfully convey to the applicant their legitimate concerns about the project.⁴²

³⁹ Exhibit 22125-X0041, Attachment3_PIP, PDF pages 10-12.

⁴⁰ Exhibit 22125-X0031, AML ATCO Jasper Interconnection – Application, PDF page 48.

⁴¹ Exhibit 22125-X0031, AML ATCO Jasper Interconnection – Application, PDF page 52.

⁴² Decision 2011-436: AltaLink Management Ltd. and EPCOR Distribution & Transmission Inc. – Heartland Transmission Project, Proceeding 457, Application 1606609, November 1, 2011, page 57, paragraphs 283-284.

99. The Commission acknowledges that the consultation program conducted by ATCO Transmission did not resolve the concerns of all interested parties. However, it considers that ATCO Transmission's consultation program met the requirements of Rule 007 and allowed interveners to understand the project and convey their concerns about it to ATCO Transmission. The Commission is also satisfied that ATCO Transmission endeavoured to respond to those concerns where reasonably practicable. The effectiveness of its overall consultation program was bolstered by the concurrent public engagement process directed by Parks Canada in support of ATCO Transmission's DIA.

100. The Commission likewise finds that the participant involvement programs undertaken by AltaLink and the AESO meet the requirements of Rule 007. Those participant programs effectively communicated the nature of the proposed project and provided interested parties with a sufficient opportunity to learn about the project and engage with the applicants with respect to their concerns.

7 Reliability considerations

7.1 Introduction

101. The relative reliability of ATCO's transmission and generation options and the JEA generation option was a major issue in this proceeding.

102. Reliability refers to the ability of an electric system (transmission, distribution or both) to deliver electricity to customers within accepted standards and in the amount desired. It is assessed by the frequency, duration and magnitude of adverse effects on electric supply, and is generally understood to be comprised of two components: adequacy and security.⁴³ Adequacy is the capability of a system to meet customer demands at all times, taking into account scheduled, and reasonably expected unscheduled outages. Security is the ability of a system to withstand sudden disturbances.

103. One of the challenges in this proceeding is that the Commission must assess the respective reliability of two different energy supply options, i.e., isolated generation vs. transmission, each of which is subject to different reliability criteria. To meaningfully compare the generation and transmission options, the Commission must first satisfy itself that those options are technically viable, in that they satisfy minimum reliability requirements. If the Commission concludes that the options meet that threshold, it may then proceed to assess their

⁴³ For example, the AESO defines "reliability", "adequacy" and "system security" in its Consolidated Authoritative Document Glossary as follows:

- "**Reliability**" means the combination of adequacy and system security.
- "**Adequacy**" means the ability of the interconnected electric system to supply the aggregate electrical demand and energy requirements of market participants receiving system access service, taking into account planned outages and reasonably expected delayed forced outages and automatic forced outages of system elements.
- "**System security**" means the safe scheduling, operation and control of the AIES on a day-to-day basis in accordance with the specified technical, security and operational standards to withstand events such as electric short circuits, unanticipated loss of AIES components and switching operations without experiencing cascading loss of AIES components or uncontrolled loss of load.

respective reliability by comparing the likely frequency and duration of adverse effects on electric supply (i.e., outages, either to the isolated generating units or the transmission line).

7.1.1 Minimum transmission reliability requirements

104. The AESO is responsible for implementing the reliability standards for Alberta's transmission system. Its duties and obligations with respect to reliability are set out in the *Electric Utilities Act* and the *Transmission Regulation*.

105. Section 17 of the *Electric Utilities Act* lists some of the AESO's duties, including the duty to direct the safe, reliable and economic operation of the AIES and make arrangements for the expansion and enhancement of the transmission system. Section 33 of that Act requires the AESO to "forecast the needs of Alberta and develop plans for the transmission system to provide efficient, reliable and non-discriminatory system access service." Subsection 20(1)(e) of the *Electric Utilities Act* empowers the AESO to make rules for planning the transmission system, including related reliability criteria and standards.

106. Section 15 of the *Transmission Regulation* provides guidance to the AESO when making rules pursuant to Subsection 20(1)(e) of the *Electric Utilities Act*. Specifically, Subsection (a) requires the AESO to plan a transmission system that satisfies reliability standards, and Subsection (b) requires the AESO to ensure that transmission facilities adhere to those reliability standards.

107. The AESO enacted its reliability standards in accordance with the legislation cited above. The standards, which are updated regularly, are comprehensive and, among other things, define the criteria used by the AESO to consider the reliability of both the bulk transmission system and radial transmission lines.

108. The minimum reliability requirements for the transmission option are set out in the Alberta Reliability Standards. The proposed Jasper transmission line is a radial line. This means that the only interconnection between Jasper and the AIES would be the proposed transmission line. The AESO described the applicable transmission planning reliability standards for radial lines as follows:

In assessing reliability, the AESO is concerned with ensuring that the Alberta Interconnected Electric System ("AIES") as a whole is not adversely impacted by a connection project. The AESO is required to comply with Alberta reliability standard TPL-002-AB1-0, System Performance Following Loss of a Single BES Element, which is intended to ensure that a reliable transmission system is planned that meets specified performance requirements with sufficient lead time. As noted in Appendix 1, subsection b) of TPL-002-AB1-0, in the event of a loss of a single element (N-1) of the AIES:

Planned or controlled interruption of electric supply to radial customers or some local network customers, connected to or supplied by the faulted system element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. [...]⁴⁴

⁴⁴ Exhibit 22125-X0268, AESO-JEA-2017SEP11-011(f), page 3.

109. Based on the above, the Commission understands that the planning requirements of the Alberta Reliability Standards permit the loss of supply to Jasper due to the loss of transmission line 530L, 6L530, or a single component within Watson Creek 104S Substation or Sheridan 2085S Substation, as long as the interconnected transmission system as a whole is not impacted.

110. None of the parties to the proceeding challenged the applicability of this planning requirement to the transmission option. Further, none of the parties suggested that the transmission option would not satisfy this requirement. The Commission consequently considers that this standard represents the minimum reliability requirement for the transmission option.⁴⁵

7.1.2 Minimum isolated generation reliability requirements

111. Under Section 105 of the *Electric Utilities Act*, the owner of a distribution facility has a duty to ensure the reliability of its distribution system and reliability of service to end-use customers. In accordance with that duty, each distribution facility owner develops planning guidelines and criteria for the purposes of reliability planning. In this case, ATCO Distribution has a duty to ensure reliable service on its electric distribution system located in the Jasper area (which includes the isolated generating units at Palisades and the local distribution system).

112. ATCO Distribution's planning criteria for Jasper's isolated generation system was described in the business case provided by ATCO Transmission to the AESO in support of the system access service request.

Criteria	Description
N-1 planning criteria	<ul style="list-style-type: none"> Remaining units can serve peak load with a 10 per cent safety margin. No loss of customer load. Equivalent generator inertia with its spinning reserve is such that loss of any generator will not cause a customer outage.
N-2 planning criteria	<ul style="list-style-type: none"> Temporary load loss is allowed. It is managed by the automatic distribution under a frequency load shedding scheme. There are eight stages of under frequency load shedding starting at 56.9 Hertz and ending at 55.8 Hertz.⁴⁶

113. The business case stated that, in accordance with the planning or reliability criteria set out above, customer load must be maintained with the loss of a single generating unit (i.e., "N-1"). ATCO Transmission also noted that, in the event of a loss of natural gas supply, Palisades is required to meet the peak town load and have a minimum of three days of diesel supply.⁴⁷

114. ATCO Transmission explained that the use of the N-1 criteria ensures that the isolated Jasper system is planned and operated with adequate capacity and inertia such that a single

⁴⁵ Exhibit 22125-X0386, JEA Reply Argument, paragraph 68.

⁴⁶ Exhibit 22125-X0006, Appendix E ATCO Business Case, page 5.

⁴⁷ Exhibit 22125-X0006, Appendix E ATCO Business Case, page 6.

contingency would not cause an entire system loss. ATCO Transmission stated that this is common practice and is similar to the Alberta Reliability Standard for the integrated systems (TPL-002-AB-0)⁴⁸ and requirements for spinning reserves (BAL-002-AB-1).⁴⁹ ATCO Transmission stated that the application of the N-2 criteria to the isolated generating units also aligns with the Alberta Reliability Standard for the integrated systems (TPL-003-AB-0),⁵⁰ and that adherence to this standard provides the flexibility to manage the level of system load, while maintaining critical load, without causing a blackout.

115. ATCO Transmission explained that the Jasper isolated system is sensitive to disturbances and has to be carefully balanced in operation. It explained that if the N-1 criterion is not adhered to, a single generator outage can cause cascading tripping of the other units in Palisades, resulting in loss of supply to all customers served by the isolated system. ATCO Transmission observed that generator outages may take some time to repair, leaving the isolated community out of power until a mobile unit is transported and set up.

116. The JEA did not object to the application of a N-1 reliability criteria to the generation options being considered by the Commission.

117. The Commission considers the application of ATCO Distribution's N-1 and N-2 planning criteria to be reasonable and finds that they represent the minimum reliability requirement for the generation options being considered in this proceeding. These criteria effectively mimic and are consistent with the Alberta Reliability Standards for planning the bulk system. The Commission is therefore satisfied that their application should generally ensure reliability levels in Jasper that are consistent with those of the bulk system.

7.1.3 ATCO Distribution's reliability requirements for service in Jasper

118. ATCO Transmission explained in its filed evidence and in testimony that ATCO Distribution has its Distribution Planning Guidelines that sets a four-hour outage restoration target. In response to a JEA information request, ATCO Transmission defined that guideline as follows: "ATCO Electric criteria for contingency response is to restore service to all critical loads within four hours of the failure of supply at a POD [point of delivery]". ATCO Transmission explained that the term "critical loads" means residential, commercial and farm customers, as well as heat, light, and glycol pumping service to industrial and oilfield customers.

119. ATCO Transmission's witness, Dustin Baptist, also discussed the four-hour target in response to a question from Commission counsel:

There's a four-hour outage time frame that's really a target for the DFO. In wintertime, if power goes out, it's not a perfect number, but that's a rough approximation for when, without power, things get pretty rough. Pipes will start to freeze in a home, or things, you know, happen in commercial industrial buildings. So the DFO targets restoration of a duration of about four hours or less.⁵¹

120. When asked by Commission counsel about the reasonableness of ATCO Distribution's four-hour outage target, Trevor Cline, one of the JEA's expert witnesses, agreed that a four-hour

⁴⁸ TPL-002-AB-0: System Performance Following Loss of a Single Bulk Electric System Element.

⁴⁹ BAL-002-AB-1: Disturbance Control Performance.

⁵⁰ TPL-003-AB-0: System Performance Following Loss of Two or More Bulk Electric System Elements.

⁵¹ Transcript, Volume 3, page 482.

target was reasonable for a generation option. However, Mr. Cline did not believe that a radial transmission line could meet that goal and provided his opinion on what would be a reasonable goal for a radial system:

Q. Okay. Well, then from your perspective, what would be a reasonable threshold or goal for a radial system?

A. MR. CLINE: I don't know if there is a black and white answer to that. I think once you move to a remote radial system whether this applies -- and in the past, they've done quite a number of analyses like this -- it comes down to a cost benefit setting a specific target and then --

Q. I'm happy with a range, sir.

A. MR. CLINE: A range? I would say anything up to three days with rotating outages would be even an acceptable level of service in a really remote area.⁵²

121. The Commission accepts that the four-hour target set out in the Distribution Planning Guidelines provides a reasonable benchmark for reliability of service to Jasper customers. The Commission observes that the JEA did not challenge the reasonableness of the target, rather it questioned whether the transmission option could meet that target.

122. Having determined the minimum reliability requirements for the transmission and generation options and the overall reliability target for service in Jasper, the Commission will now examine in the sections that follow, the ATCO transmission option, the ATCO generation option, and the JEA generation option to determine if they satisfy those requirements.

7.2 The JEA generation option

123. The generation option proposed by the JEA, which was developed by Insitu, consists of four Wartsila 12V34DF generating units, also called gensets. Insitu's evidence was that this configuration can serve up to 16.5 MW. The main characteristics of this option are described as follows:

- The configuration burns both natural gas and diesel fuel, and is capable of transitioning fuels if natural gas supply is interrupted.
- The generating units can provide the ramping capability required in order to replace a unit that suffers a forced outage.
- The generating units can accommodate motor starts, such as the Kinder Morgan load from its pumping station in the area.
- The proposal can meet applicable emissions standards by using a selective catalytic reduction post-treatment system, which strips NO_x gases from the exhaust.

124. Mr. Sullivan conceded at the hearing that the JEA generation option, which proposed using four generating units, would not satisfy the N-1 criteria when accounting for the existing load from the Kinder Morgan pumping station. The JEA submitted that this issue could be

⁵² Transcript, Volume 4, pages 840-841.

addressed, however, by adding a generating unit (for a total of five) at an additional cost of \$8 million. Mr. Sullivan also suggested that the N-1 criteria may be satisfied using the JEA's original four-unit configuration by applying frequency control to the motors at the Kinder Morgan pumping station.⁵³

125. BEMA conducted a probabilistic reliability assessment of the JEA generation option and made the following outage assumptions as part of its analysis:

- i. Each unit taking three, 7 day planned outages which are scheduled to avoid the seasonal peak load periods of winter and summer;
- ii. each unit taking five, 2 day delayed forced outages that would occur on weekends, which is a worst case because in Jasper, the peak load occurs on the weekends; and
- iii. each unit has a forced outage probability of 0.1% with a duration of between 1 and 12 hours required for emergency repair. [footnote omitted]⁵⁴

126. BEMA stated that the planned outages it used represent the worst year out of multiple years for planned outages, and noted that the higher maintenance requirements reflected in the assumed outages would occur only once every three years.

127. BEMA predicted that there would be 0.66 mean outages per year and that the worst event in 40 years would result in a seven-hour outage and average outage duration of 75 minutes. It calculated the cost impacts of the expected outages of its generation option to be \$3.9 million per year, in contrast to its estimate of \$236 million per year for the transmission option.

128. It was ATCO Transmission's position that reciprocating engines in general, and the Wartsila engine proposed by Insitu in particular, cannot effectively serve the Jasper load.

129. ATCO Transmission submitted that it had recently completed a study of the Jasper system and found that "reciprocating engines do not have the required inertia or response times to handle a distribution fault or the instantaneous load pickup resulting from a forced unit outage."⁵⁵ ATCO Transmission's witness, Mr. Baptist, explained the importance of instantaneous load pickup during cross-examination by the JEA:

The plant, or any type of isolated generation that might be proposed for Jasper, has to factor in the ability to respond to those instantaneous high loads. And then subsequently, if distribution -- a protective device operates an instantaneous offload, so it's that combination of high pickup and offload that's important for distribution fault ride through.

Also, in an isolated generation facility it is quite common for individual units to trip. When that happens, the other units that are currently operational are instantaneously called upon to supply the loss load from the unit that just tripped off. That's another case where instantaneous high load pick-up is required.

If you fail to meet these requirements such as the proposed Wartsila engines that the Insitu report had pointed out, if you fail to meet that requirement you essentially end up

⁵³ Transcript, Volume 4, pages 836-837.

⁵⁴ Exhibit 22125-X0293, BEMA Expert Report, paragraph 130.

⁵⁵ Exhibit 22124-X0331, ATCO Electric Reply Evidence, paragraph 37.

either blacking out the community or significant load reductions through under frequency load shedders.

Ignoring this fact is one of our single -- not the single but one of the largest factors in taking the Insitu report to task is that those engines proposed simply cannot do it, and reciprocating engines in general simply cannot do it. You need the inertia behind a turbine in order to meet high load pick-up.⁵⁶

130. Mr. Baptist later expanded on ATCO Transmission's concern about the operational characteristics of reciprocating engines:

Our operational experience in Jasper shows that these reciprocating engines typically do not have the required capacity to pick up load. We have that in our operational experience.

We asked the manufacturers that manufactured modern reciprocating engines to provide us their load curves and ask if they've done anything different in order to overcome that problem. We had been told by all manufacturers that no, there is no new technology that allows you to overcome that inherent problem with reciprocating engines, and therefore they still have the same problem they had years ago, that they can't -- they can't react fast enough. They simply -- if you think about it, sir, there's not enough inertia in there. The piston only goes up and down and only travels so far. A large spinning turbine has inertia behind it. That would probably be why we mentioned may -- perhaps the flywheel option, you know, to look to augment these reciprocating engines with a flywheel in our business case.⁵⁷

131. ATCO Transmission explained that it had previously examined the Wartsila 9L, an engine similar to the Wartsila engine proposed by Insitu, as a replacement for one of the existing generating units in Palisades. ATCO Transmission found that, in the event of a loss of a generator, the Wartsila 9L unit was unable to pick up dropped load fast enough to prevent a blackout or load shedding.

132. ATCO Transmission included in its reply evidence a load step curve for a Wartsila engine similar to that proposed by the JEA.⁵⁸ Mr. Sullivan testified that although the load curve was for a marine version of the engine rather than the land-based model proposed by the JEA, the curve for both would not materially differ.⁵⁹

133. At the hearing, Mr. Baptist was asked by the JEA to compare the load curve for the Wartsila 9L engine it had previously considered with the load curve ATCO Transmission included in its reply evidence:

I'm going off memory now, but I'm trying to be helpful because I remember seeing that. I don't have it with me unfortunately. But if I recall correctly, the discussion we had with our engineers was that it looked to them like the performance of this 12 V engine, the load curve, this max load step chart, Figure 1 in Exhibit 331, this new performance was worse than the engine that we had studied.

⁵⁶ Transcript, Volume 2, pages 303-304.

⁵⁷ Transcript, Volume 2, page 313, line 18 to page 314, line 12.

⁵⁸ Exhibit 22125-X0331, ATCO Electric Reply Evidence, paragraph 33.

⁵⁹ Transcript, Volume 4, pages 827-828.

When we studied the 9L engine -- it is a slightly different engine than this engine -- we concluded at that time that it was unable to meet it. This load curve is even worse or it's not able to pick up as much of a load step as that 9L engine. That's what I recall them telling me about the difference between the 9L load-step curve and this new one that matches the engine Insitu proposed.⁶⁰

134. ATCO Transmission's conclusion was that, based on its operational experience, "reciprocating engines alone are inadequate to satisfy the reliability performance expected by the customer and do not meet the standard for other communities in Alberta."⁶¹

135. It was Insitu's position that the shortcomings of reciprocating engines submitted by ATCO Transmission, although true for some generating units, are not present in all reciprocating engines. Insitu submitted that ATCO Transmission did not take into account an important characteristic of the Wartsila units that Insitu had proposed. Mr. Sullivan explained it this way:

And part of what's fundamental in having chosen this machine is that it continuously burns a small stream of diesel to enable it to instantly move to a diesel burning mode which gives it a much better step load response than you would normally get with natural gas engines.⁶²

136. ATCO Transmission disagreed with Insitu on this point, and submitted that while the Wartsila engine's ability to quickly switch from gas to diesel may be of assistance for load shedding, it does not address ATCO Transmission's load pickup concerns.⁶³

137. Insitu did not share ATCO Transmission's concern about the use of reciprocating engines and observed that reciprocating engines are widely used around the world in isolated power systems as an economic and reliable means to power remote communities and industrial facilities.⁶⁴ Mr. Sullivan was asked by Commission counsel if the Wartsila reciprocating engines it proposed for Jasper were being employed in a similar capacity elsewhere. He responded as follows:

A. MR. SULLIVAN: Yes, in British Columbia, for example, there is a plant that does not use the DF model. It uses the gas-ignited model solely. But it's the Encana Cabin gas plant where they have five of the larger brothers of this same line of machine, still 34 centimetre, but it has 20 cylinders instead of 12.

Q. So that's serving an industrial facility?

A. MR. SULLIVAN: It does serve an industrial facility that's isolated from the grid.

Q. But in terms of using this unit to serve a town or a population?

A. MR. SULLIVAN: Well, there are 1,035 of these dual fuel plants that operate around the world in 53 countries. I'm not aware of how many of those serve residential load, but I think it would be safe to venture that there's likely some that do.

⁶⁰ Transcript, Volume 2, pages 334-335.

⁶¹ Exhibit 22125-X0331, ATCO Electric Reply Evidence, paragraph 39.

⁶² Transcript, Volume 4, page 830.

⁶³ Transcript, Volume 2, pages 336-338.

⁶⁴ Exhibit 22125-X0287, Insitu Power Corporation Expert Report, PDF page 3.

Q. Okay. And do you know whether that's the sole unit that's being used to serve those loads or whether it's being used in conjunction with a turbine?

A. MR. SULLIVAN: I do not.

Q. Okay.

A. MR. SULLIVAN: But you could draw an extension from, for example, the Canadian - sorry, Canadian Off Grid Utilities Association where, when you search through their website, you know, the vast majority of isolated communities are, of course, fed by diesel power because "isolation" typically means also isolated from natural gas. Though there is a resurgence in liquified natural gas, making it possible to also use natural gas.]

So in the vast majority of cases where you're serving an isolated community, you're using diesel fuel, and the characteristics of the machine would be like the blue line on the chart that we've been discussing. So it is an interesting characteristic and fairly unique, though not the sole machine, where this is the case.⁶⁵

138. ATCO Transmission also disagreed with BEMA's reliability assessment. ATCO Transmission submitted that, based on its analysis of the Wartsila engines proposed by Insitu, in the event of any single unit trip, the remaining engines would be unable to maintain load, resulting in a complete outage to the system. On this basis, ATCO Transmission predicted that the four-unit configuration proposed by Insitu would result in at least 22.98 annual forced outages per year.⁶⁶ ATCO Transmission concluded that given the operational limitations of Insitu's reciprocating engine solution, every outage at the proposed plant would result in a blackout. ATCO Transmission estimated restoration time for each blackout to be 1.25 hours, resulting in 28.7 hours of engine forced outages annually.

139. ATCO Transmission also noted that, given the capacity of the four-unit configuration, whenever an engine is taken out for service or maintenance and the load exceeds 11 MW, there would be insufficient capacity in the remaining two units to serve the load in the event of a forced outage on one of the three remaining units. Based on this analysis, ATCO Transmission concluded that it was clear that "an additional unit would be necessary based upon the above given analysis of predicted reliability for the 4 unit Wartsila facility."⁶⁷

7.3 The ATCO transmission option

140. ATCO Transmission included a reliability assessment of the ATCO transmission option in the business case it prepared in support of ATCO Distribution's system access service request. That business case was attached to the AESO's NID. ATCO Transmission provided an updated reliability assessment in response to information requests filed by the JEA.

141. ATCO Transmission confirmed that it used a deterministic methodology for both of its reliability assessments. It stated that the use of a deterministic methodology has been accepted around the world for doing transmission line analysis.⁶⁸ In addition, the North American Electrical Reliability Corporation's reliability assessment guidebook states that while industry

⁶⁵ Transcript, Volume 4, pages 832-834.

⁶⁶ Exhibit 22125-X0331, ATCO Electric Reply evidence, paragraph 34.

⁶⁷ Ibid, paragraph 76.

⁶⁸ Transcript, Volume 2, page 390, lines 11-15.

practices generally incorporate both deterministic and probabilistic methods, its reliability standards are deterministic.⁶⁹ The North American Electrical Reliability Corporation is recognized as an electric reliability organization in Section 20 of the *Transmission Regulation*.⁷⁰

142. ATCO Transmission stated that the inputs used in its deterministic reliability assessment consisted of actual data, such as forced outage reports, and that the output produces an annual average duration and annual frequency duration.

143. In its business case, prepared in January 2015, ATCO Transmission indicated that the reliability of the ATCO transmission option would be affected by line design, routing and access. ATCO Transmission explained that outage duration would be determined by factors such as the type of failure, location of failure, location and numbers of points for off-road access.

144. In its business case, ATCO Transmission predicted good performance in terms of forecast availability with an in-service rate of 99.91 per cent and a frequency of sustained outages of less than one per year. However, it predicted that, depending upon line design, one sustained outage lasting 12.3 hours could occur every third year. It stated, “[s]uch level of risk is undesirable especially in winter during the freezing temperatures.”⁷¹ ATCO Transmission added that it would be possible to improve reliability and response time through refinement of line design and ensuring effective right-of-way maintenance access, but acknowledged that because it is a radial line, the risk of sustained outages remained.

145. ATCO Transmission updated its reliability assessment in response to information requests from the JEA. It explained that the updated assessment incorporated additional project detail and more recent reliability data. Specifically, ATCO Transmission stated that its assessment used a subset of transmission line data that most closely represents the expected reliability of the proposed line. That data set was limited to 69 and 144-kV radial lines that were less than 20 years old. ATCO Transmission predicted that the outage frequency and duration would be consistent with other 144-kV transmission lines that are less than 20 years old.

146. In response to concerns raised by the JEA that the dataset it used in its revised assessment was too small and would introduce statistical bias, ATCO Transmission stated as follows:

[ATCO Transmission] is not ignoring a statistical bias but rather is selecting the most representative existing lines for comparison due to operational and design similarities. The BEMA approach of using 25 years of data, as indicated in, does not create additional accuracy, but rather introduces more historical data on lines that are not operated or designed similar to the proposed Transmission Line. [footnote omitted]⁷²

147. ATCO Transmission’s updated reliability assessment predicted that the proposed transmission line would have a sustained outage frequency consistent with other 144-kV radial transmission lines less than 20 years old, which is 1.31 outages per year. ATCO Transmission explained that a number of factors supported this expectation:

⁶⁹ Exhibit 22125-X0362, Excerpt of the reliability assessment guidebook, August 2012.

⁷⁰ Transcript, Volume 4, page 801, lines 3-7.

⁷¹ Exhibit 22125-X0005, Appendix E ATCO Business case, Section 7.1, page 13.

⁷² Exhibit 22125-X0331, ATCO Electric Reply Evidence, paragraph 140.

- The proposed line will feature modern standards including stronger and larger shield and phase conductors equipped with vibration dampers, lightning shield wire, steel cross-arms, and glass or advanced polymer insulators.
- The proposed line will be designed to an increased ice loading specification to mitigate impacts of mountainous weather including rain, snow, sleet, frost and wind, and the poles it will use are approximately 40 per cent stronger than poles typically used for 144-kV radial lines.
- The proposed line will incorporate high resistance grounding and optimized shielding design to mitigate lightning concerns and will use covered conductor technology (Hendrix cable) on 95 per cent of the proposed transmission line to reduce the potential for vegetation induced outages.
- ATCO Transmission will employ enhanced, off right-of-way vegetation management to minimize vegetation induced outages and will conduct regularly scheduled and increased-frequency line patrols to proactively identify deficiencies prior to occurrence of outages.⁷³

148. ATCO Transmission also described the mock line testing it conducted on a sample of de-energized transmission line it built to the design specifications it intends to employ for the proposed Jasper line. It stated that the purpose of the test was to “test, practice and improve the construction methods and maintenance methods that will be applied on the proposed Transmission Line.”⁷⁴ ATCO Transmission explained that an additional purpose of the testing was to study potential line failures by simulating a tree falling on to the line by dropping a transmission pole against the mock line. ATCO Transmission described the tests it conducted and the results of those tests as follows:

In the first test, the pole was started close to the line to test a low-momentum strike of the mock line conductors. The second test moved the pole further from the line, but still close enough for the end of the pole to contact all 3 conductors and the shield wire. The second test involved greater momentum, but spread out the impact onto the shield wire and 3 conductors. The third and final failure test moved the base of the pole furthest from the line, such that the falling pole contacted a single covered conductor. This third test was the most likely to break the line and the mock line survived all three tests without a failure. These test results provide an indication of the strength and resilience of the proposed Transmission Line design and should provide additional confidence that the line will be capable of reliably supplying the community of Jasper for decades to come.⁷⁵

149. In its updated reliability assessment, ATCO Transmission predicted that the average outage duration for the proposed line would be consistent with other (less than 20 year old) 144-kV transmission lines that have an average outage duration of 1.99 hours per year.⁷⁶

⁷³ Exhibit 22125-X0231, ATCO Jasper IR Response to JEA (AESO), PDF page 28.

⁷⁴ Exhibit 22125-X0331, ATCO Electric Reply Evidence, paragraph 116.

⁷⁵ Ibid, paragraph 117.

⁷⁶ Exhibit 22125-X0231, AESO-JEA-2017SEP11-011(e), page 28.

ATCO Transmission explained that a number of factors contributed to this reduced outage duration, as follows:

- The proposed line will be designed to modern standards with components that are less susceptible to failure as compared to older lines.
- ATCO Transmission is developing improved emergency response and sparing plans, which will include localized storage of materials (poles, conductors, etc.), the use of mobile structures, and local technicians.
- ATCO Transmission treats radial outages with the highest response priority because radial line outages result in immediate customer outages. This generally results in shorter outage durations when compared to networked lines.
- Regularly-scheduled and increased-frequency line patrols would proactively identify deficiencies prior to the occurrence of outages or before the deficiency deteriorates.

150. ATCO Transmission summarized the results of its updated reliability assessment as follows:

The updated assessment predicts that the overall average sustained outage reliability for the transmission line option seen at the 25kV Sheridan delivery point is 2.02 outages per year with an annual outage duration of 4.85 hours (each outage average 2.4 hours) which is a significant improvement from the original reliability assessment.⁷⁷

151. ATCO Transmission stated that its outage frequency and duration estimates are conservative because they propose new preventive maintenance, such as the use of ultraviolet and infrared spectrum cameras, to proactively detect early signs of transmission line failures. Additionally, ATCO Transmission pointed out that its reliability assessment was based on bare conductor transmission lines only because it does not presently own or operate any lines that use covered conductors.⁷⁸

152. ATCO Transmission stated that the incorporation of these design features increases the reliability of the transmission line to a level that meets the reliability standards established by the DFO for its distribution system in Jasper.

153. BEMA, one of the JEA's consultants, conducted its own reliability assessment of the transmission option. However, unlike ATCO Transmission, BEMA took a probabilistic approach to assessing reliability using a Monte Carlo simulation. BEMA explained this approach as follows:

Monte Carlo simulation estimates a set of reliability indices by simulating the actual random behavior of the system. The probabilistic assessment of the generation and transmission options use the same process to prepare and perform the Monte Carlo simulations:

1. List the set of critical components that affect reliability of supply.

⁷⁷ Exhibit 22125-X0231, AESO-JEA-2017SEP11-011(h), page 30.

⁷⁸ Exhibit 22125-X0331, PDF page 51; Exhibit 22125-X0387, PDF page 30.

2. Determine appropriate planned outage rates, planned outage durations, sustained outage rates and sustained outage durations for each critical element.
3. Use a Monte Carlo approach to model outages to critical components and determine how often and how much consumption in Jasper is unserved.⁷⁹

154. The outage dataset used by the JEA in its reliability assessment was broader than the dataset used by ATCO Transmission in its revised reliability assessment. Specifically, the JEA used the same dataset that ATCO Transmission used in its original dataset which included more years of data, data from lines that were more than 20 years old and data related to networked lines (as opposed to radial lines).

155. Based on its Monte Carlo simulation, the JEA predicted that the ATCO transmission option would have an average outage frequency of 1.1 and an average of 10.1 hours of total service disruption. However, the JEA pointed out that when the range of variability in outage duration, likely to occur over 40 years, is considered, there is a 50 per cent probability that an outage of more than 75 hours or more will occur at some point over 40 years.⁸⁰

156. BEMA submitted that the smaller dataset used by ATCO Transmission in its revised reliability assessment is reflective of a statistical bias arising from its use of a very small sample size of fifteen lines and five years or less of data. BEMA concluded that:

It is extremely unlikely that during the last 3 to 5 years, the fifteen lines used by [ATCO Transmission] for their representative data would have experienced any major events like a 1-in-100 year wet snow load. Therefore, it is also a certainty that using this approach will significantly understate the range of outage durations the new line will experience over the life of the line.⁸¹

157. BEMA also stated that there were other factors unique to the proposed line that would likely result in above average failure rates and repair times:

- The proposed tree clearing for the line is narrow (10 metres) which may result in more trees falling on the line.
- There may be environmental access restrictions/delays due to its location in the national park.
- The proximity of the line to two pipelines requires additional protection measures when excavating near pipelines.
- The remoteness of the location.

158. Regarding its pipeline proximity concerns, the JEA observed that there is a five km segment of transmission line where pipeline daylighting is required on both sides of the line before any digging can be carried out. The JEA stated that this stretch would require significant

⁷⁹ Exhibit 22125-X0293, BEMA Expert Report, paragraph 122.

⁸⁰ Ibid, paragraph 134.

⁸¹ Ibid, paragraph 139.

clearing and hydrovac work before any subsurface repair work could commence, such as pole replacements, guy anchor installations or the guying of temporary or mobile structures.

159. ATCO Transmission stated that its Damage Prevention Plan sets out the requirements of working in proximity to the pipelines to minimize risk to the pipelines and to perform maintenance quickly.

160. ATCO Transmission further explained that it is also developing improved emergency response plans that will consider localized storage of materials, regularly scheduled line patrols, and localized powerline technicians and equipment that can be quickly deployed to temporarily restore power if necessary.⁸² ATCO Transmission stated that it also has mobile generating units that it could deploy in the town of Jasper to provide power on a temporary basis.

161. ATCO Transmission stated it has many radial lines across Alberta and has experience operating these lines. ATCO Transmission stated that the vast majority of line outages do not require physical repair. In the event of an outage, the first step is a line patrol. ATCO Transmission stated that ATCO Distribution personnel stationed in Jasper would patrol the line to visually verify the problem. If a pole were down, ATCO Distribution personnel would use mobile towers to lift the conductor off the ground so that it could be safely reenergized. A permanent repair would be done at a later time.

162. ATCO Transmission stated that both AltaLink and ATCO Transmission have control centres that generally receive the first indication that a fault has occurred. ATCO Transmission stated that the control centres are in regular communication and it is ATCO Transmission and AltaLink's regular practice to confirm issues and co-ordinate responses. If the issue were identified outside Jasper National Park, AltaLink would address the deficiency, and if identified within park boundaries, ATCO Transmission would do so.

163. ATCO Transmission stated that in the event of an outage, its control centre would become aware of it within seconds and would be in touch with ATCO Distribution personnel within minutes with the location of the problem. ATCO Transmission stated that it had employees on call 24/7 and theorized it would take approximately 20 minutes for the employee to drive to the location to verify the problem. If a temporary structure were required, the employee would radio colleagues to start preparations. ATCO Transmission stated it would take approximately one hour and a half to prepare the equipment and to bring it on site. The installation of a mobile tower takes approximately two hours.

164. The JEA raised concerns with ATCO Transmission's emergency response after a fault. It stated that mobile structures cannot be used on dead-end or angle structures, and stated that if pipelines were in close proximity to these structures, a hydrovac would need to be used to install replacement poles, which could take additional time. In addition, the JEA stated it was not aware of mobile structures that were not guyed, and that the guyed wires would require subsurface installation requiring hydrovac options in proximity to the pipelines. The JEA also raised concerns with respect to the accessibility of the proposed route through Jasper National Park, namely, that the lack of accessibility would increase emergency response times.

⁸² Exhibit 22125-X0094, ATCO Electric Jasper Interconnection-IR Response Round 2 Final, PDF page 10.

165. ATCO Transmission argued that the JEA's views on the emergency response times fail to account for the fact that over 50 per cent of the proposed transmission line route overlaps with pre-existing disturbed areas or disturbed areas where there are no trees, that 75 per cent of the route is located in areas that are sparsely treed or not treed at all.⁸³ Further, the JEA fails to draw a relevant distinction between ground disturbance for full line repair, as compared to the temporary restoration of power.

166. The JEA concluded that ATCO Transmission's revised reliability assessment was overly optimistic and that its original assessment was more appropriate. The JEA described the relative risks of the transmission and generation options as follows:

Unlike the existing generation, which always supplies part of the Jasper load, even for the worst events, when the radial line or critical substation components fail, it will black out the entire Jasper load until the component is repaired. With the existing isolated generation, Jasper has benefited from a high level of reliability and with a new plant would continue to benefit from a high level of reliability.⁸⁴ [footnote omitted]

7.4 The ATCO generation option

167. ATCO Transmission explained that its generation option could best be described as the "status quo", in that it would continue to operate Palisades with new generating units replacing existing units when they reach end of life.

168. As noted previously, ATCO Transmission explored a number of different generators to replace the existing generators at Palisades but found that the sole use of reciprocating gas engines does not meet reliability requirements because only new lean burn engines can be used to meet emission requirements. ATCO Transmission stated that lean burn engines cannot pick up high loads instantaneously, must be run at over 50 per cent of nominal rating, and have low inertia. The use of diesel engines is not economical and energy storage is not yet developed.

169. ATCO Transmission concluded that a gas turbine option is the best choice for an isolated generation option. ATCO Transmission confirmed that it looked at a number of generation options; however, the ATCO generation option proposed in the business case is the lowest cost option that meets the reliability criteria required by ATCO Distribution. ATCO Transmission added that the use of turbine generating units has additional benefits: they meet emission requirements without the use of a selective catalytic reduction system (as the JEA generation option would require), and do not require storage of urea.

170. ATCO Transmission included a reliability assessment of its generation option in the business case. It noted that its current generation only system has had excellent reliability over the last three years (2011-2013) and that similar reliability is expected for its proposed generation option. ATCO Transmission added that reliability is expected to be excellent given the diversity of the generating units employed and its adherence to ATCO Distribution's planning criteria.

171. The JEA stated that ATCO Transmission provided very little description of the equipment configuration, did not include the specific size and number of units, did not expand on

⁸³ Transcript Volume 3, page 623, lines 13-19.

⁸⁴ Exhibit 22125-X0380, JEA final argument, paragraph 168, references removed.

the diesel backup scenario, and did not provide descriptions on fuel price scenarios or capital costs amounts by year.⁸⁵ However, Mr. Sullivan stated as follows when questioned by Commission counsel about the viability of ATCO Transmission's generation option:

... my question is simply is ATCO's generation option technically viable?

A. MR. SULLIVAN: Of course, there's a number of aspects of this plan that are not clear and that came out, you know, quite late in the confidential undertakings.

But from what I can see, at a pre-feasibility level I would say that, yes, what they're proposing would work. The cost that's being proposed is – is outrageous, but believable for the machinery that we're talking about.⁸⁶

7.5 Commission findings

7.5.1 The JEA generation option

172. The Commission finds that the JEA generation option, as originally proposed with four generating units, does not meet ATCO Distribution's minimum reliability requirements for an isolated generation option and is incapable of reliably serving the Jasper load.

173. The Commission accepts that given the capacity of that configuration whenever the facilities' load would exceed 11 MW, (for example when an engine is taken out of service for maintenance), the remaining two units would have insufficient capacity to serve the load in the event of a forced outage on one of the three remaining units. As conceded by Mr. Sullivan, the four-unit configuration does not satisfy the N-1 planning criteria.

174. The Commission also accepts the concerns raised by ATCO Transmission with respect to the use of reciprocating engines, in general. ATCO Transmission first described its concerns with the exclusive use of reciprocating engines in the business case it filed with the AESO in support of ATCO Distribution's system access service request. It addressed its concerns with the exclusive use of reciprocating engines again in its reply evidence.

175. While the Commission accepts the JEA's evidence that reciprocating engines are widely used in isolated power systems, the JEA failed to provide a single example where similar engines were engaged for a similar purpose in a similar environment. The Commission finds this omission to be material and relevant because the JEA was aware of ATCO Transmission's specific concerns with the use of reciprocating engines to serve Jasper but failed to respond directly to that concern by providing a comparable example of their use in an isolated community.

176. The JEA's lack of evidence on this material issue is in contrast with ATCO Transmission's evidence. As noted above, Mr. Baptist explained that he had previously participated in an engineering study of the Jasper isolated system, which concluded that reciprocating engines were not able to ride through the types of distribution faults experienced on the Jasper system. He further explained that, to ride through distribution faults causing frequent outages on that system, ATCO Transmission had adjusted operations at Palisades so that a

⁸⁵ Exhibit 22125-X0287, PDF page 2-3.

⁸⁶ Transcript, Volume 4, pages 815-816.

turbine engine was always running with support from reciprocating engines.⁸⁷ Mr. Baptist's evidence on this important issue is credible, as it is based on his own experience in operating the isolated system and his direct involvement in the study of that system.

177. It is acknowledged that in response to concerns expressed by ATCO Transmission in its reply argument about the reliability of the four-unit configuration, Mr. Sullivan proposed the addition of a fifth generating unit to the JEA generation option during the hearing. This was the first admission by the JEA that a fifth generating unit might be needed and Mr. Sullivan's evidence on the topic was limited to confirming that such a configuration was available and to estimating an additional cost of \$8 million.

178. This limited evidence from Mr. Sullivan, offered late in the hearing and with no supporting documentary evidence or analysis, fails to satisfy the Commission that the five-unit configuration would be capable of reliably serving Jasper or satisfy the N-1 and N-2 reliability criteria for an isolated generation option established by ATCO Distribution.

7.5.2 The ATCO transmission option

179. None of the parties to the proceeding argued that the ATCO transmission option would not meet the minimum transmission reliability requirements set out in the Alberta Reliability Standards. The Commission agrees with the parties and finds that the ATCO transmission option meets the minimum transmission reliability standard.

180. There was considerable debate, however, between ATCO Transmission and the JEA as to whether the ATCO transmission option would satisfy the four-hour outage restoration target in the Distribution Planning Guidelines. ATCO Transmission predicted that this option would meet the four-hour target based on a deterministic reliability assessment using a restricted data set. The JEA, on the other hand, predicted that the ATCO transmission option could not meet this target based on a probabilistic approach using a much broader dataset.

181. The Commission finds that ATCO Transmission's deterministic reliability assessment of its transmission option was generally reasonable and consistent with the approach endorsed by the North American Electrical Reliability Corporation. ATCO Transmission acknowledged in its business case that its original reliability assessment did not take into account the specific routing and design of the proposed transmission line. It is also evident to the Commission that the dataset used by ATCO Transmission in its original reliability assessment included transmission facilities that have little resemblance to the line proposed.

182. The Commission is satisfied that a number of elements incorporated into the design of the ATCO transmission option would effectively reduce the frequency of outages. Those features include shield wire, vibration dampeners, the ice loading specifications to be met, enhanced vegetation management and covered conductor technology. The Commission also observes that the results of the mock line testing appear to be positive.

183. The Commission is also satisfied that ATCO Transmission incorporated a number of measures into its transmission option that would likely reduce the duration (and, in some cases, frequency) of outages. Those measures include localized storage of materials,

⁸⁷ Transcript Volume 1, pages 38-40.

regularly-scheduled line patrols, localized powerline technicians and equipment, and the use of ultra-violet camera technology to identify potential failures.

184. Moreover, although the location of the proposed transmission line is relatively remote, the evidence indicates that there are numerous points of access along the proposed route, such that ATCO Transmission will have reasonable access to the line in the event of an outage. In considering the reliability of the proposed transmission line, the Commission takes particular note of ATCO Transmission's assurance that it treats radial line outages with the highest response priority.

185. Given these unique design features, and the enhanced response approach described by ATCO Transmission, the Commission finds that it was reasonable for ATCO Transmission to base its updated reliability assessment upon data from newer 144-kV radial transmission lines. The Commission notes in this respect that the facilities in the datasets would not have incorporated the same extraordinary design standards as the proposed transmission line, which may have resulted in the predicted results being somewhat conservative. The Commission is of the view that ATCO Transmission's predicted results could have benefitted from an expansion of the data set to include reliability data for the last 10 years rather than limiting the dataset to the last five years. However, given ATCO Transmission's evidence that the average outage duration for its 72 and 144-kV radial lines that are less than 20 years old is 1.99 hours, the Commission finds that it is unlikely that the inclusion of the additional data would have materially changed the result.

186. As noted previously, ATCO Distribution has a duty under Section 105 the *Electric Utilities Act* to provide its distribution customers with safe and reliable service. In accordance with that duty, ATCO Distribution has developed Distribution Planning Guidelines and has confirmed that the ATCO transmission option satisfies its guidelines and is acceptable to it. In the event of an outage that exceeds the four-hour target, the Commission understands that ATCO Distribution will take all reasonable steps to restore safe and reliable service to its customers and acknowledges ATCO Transmission's evidence that it will mobilize portable generators to serve Jasper should that prove necessary.

7.5.3 The ATCO generation option

187. There is little information on the record with respect to the ATCO generation option. However, Mr. Baptist confirmed that its generation option was the least cost viable generation option. Further, the JEA's witness, Mr. Sullivan, confirmed that the ATCO generation option "would work".

188. There is also considerable evidence on the record of the proceeding from both ATCO Transmission and the JEA that Jasper currently experiences excellent reliability via a combination of turbine and reciprocating generators. As the ATCO generation option is a status quo approach, replacing generating units as needed, the Commission considers it reasonable to conclude that the level of reliability would likely remain the same, or possibly improve. In addition, the Commission considers that adherence to N-1 and N-2 planning criteria means that this option would inherently have superior reliability in comparison to the ATCO transmission option.

189. The Commission finds that ATCO Transmission's mix of gas turbine and reciprocating generation provides the highest reliability of the available supply options for the Jasper area. The Commission also finds that the ATCO generation option would satisfy the Distribution Planning Guidelines, specifically, the four-hour outage target.

190. In summary, the Commission finds that both the generation and transmission options proposed by ATCO Transmission would provide an acceptable level of reliability to Jasper. Both options satisfy the minimum transmission and generation reliability requirements and are likely to consistently satisfy the four-hour outage restoration target established by ATCO Distribution. However, given the ATCO generation option's adherence to the N-1 and N-2 reliability criteria, the Commission finds that the ATCO generation option would provide greater reliability than its transmission option.

191. As previously expressed, the Commission concluded that it is unlikely that the JEA's generation option whether configured as four or five units, will meet the minimum reliability planning criteria set by ATCO Distribution and be capable of reliably serving the Jasper load. In ordinary circumstances, JEA's failure to satisfy the Commission of the technical viability of its generation energy supply option would result in that option receiving no further consideration. However, given the unique circumstances and importance of this proceeding, the Commission has, in the sections that follow, considered the relative environmental impact and cost of the JEA generation option (as originally proposed and with the addition of a fifth unit) as compared to ATCO Transmission's generation and transmission options.

8 Environmental and land use considerations

8.1 Introduction

192. In this section, the Commission considers the relative merits of the proposed transmission versus isolated generation options in relation to land use considerations, including the detailed routing and site selection process undertaken by ATCO Transmission and AltaLink, potential impacts caused by the proximity of the ATCO park facilities to existing pipelines, and noise. The Commission then considers the effects on the environment resulting from the ATCO transmission option as compared to the environmental effects of the generation options proposed by each of ATCO Transmission and the JEA.

8.2 ATCO transmission line and substation

8.2.1 Land use considerations: routing and substation site selection

193. ATCO Transmission applied to construct a single-circuit 69-kV transmission line approximately 45 km in length and the Sheridan 2085S Substation within Jasper National Park (collectively, the ATCO park facilities). The typical structures would be approximately 13 to 20 metres tall with a span length of approximately 90 to 115 metres on a 10 metre wide right-of-way. Non-typical structures would be used in locations where the transmission line turns or terminates, or requires a longer span. Those structures could have taller poles or different configurations.

194. ATCO Transmission noted that the width of the right-of-way is eight metres less than the standard right-of-way width used by ATCO Transmission for a typical 72-kV transmission line. ATCO Transmission explained that the reduced right-of-way was chosen to ensure safe and

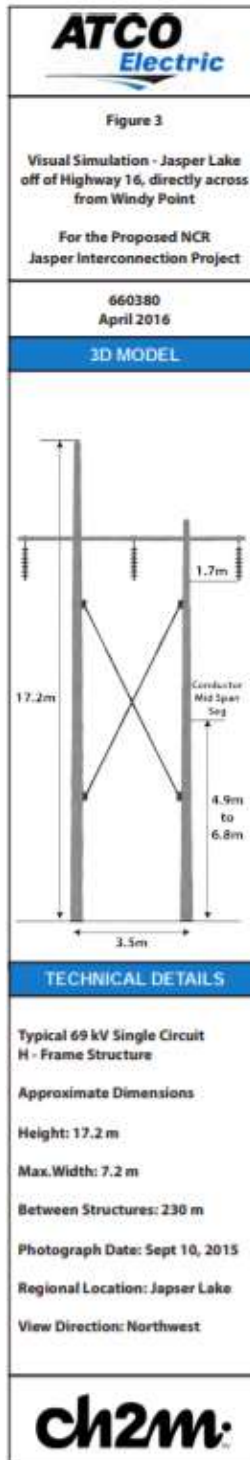
reliable operation of the line while at the same time respecting and protecting Jasper National Park. The JEA argued that the reduced right-of-way could increase the extent of potential damage to the transmission line caused by falling trees or forest fires, and could increase the time required to carry out repairs.

195. ATCO Transmission undertook an extensive consultation process with Parks Canada from the conceptual routing stage. ATCO Transmission identified key routing criteria which included minimizing impacts of land uses such as Parks Canada facilities; following existing linear disturbances to minimize new disturbances; minimizing the length of the route; minimizing impacts to Indigenous land use; minimizing impacts to visitor experience and aesthetics; and, avoidance of environmentally sensitive areas and wetlands. ATCO Transmission stated that visual impacts were taken into account for the routing of the transmission line, and that it worked with Parks Canada to identify areas of potential visual concern and made efforts to avoid areas of scenic value.

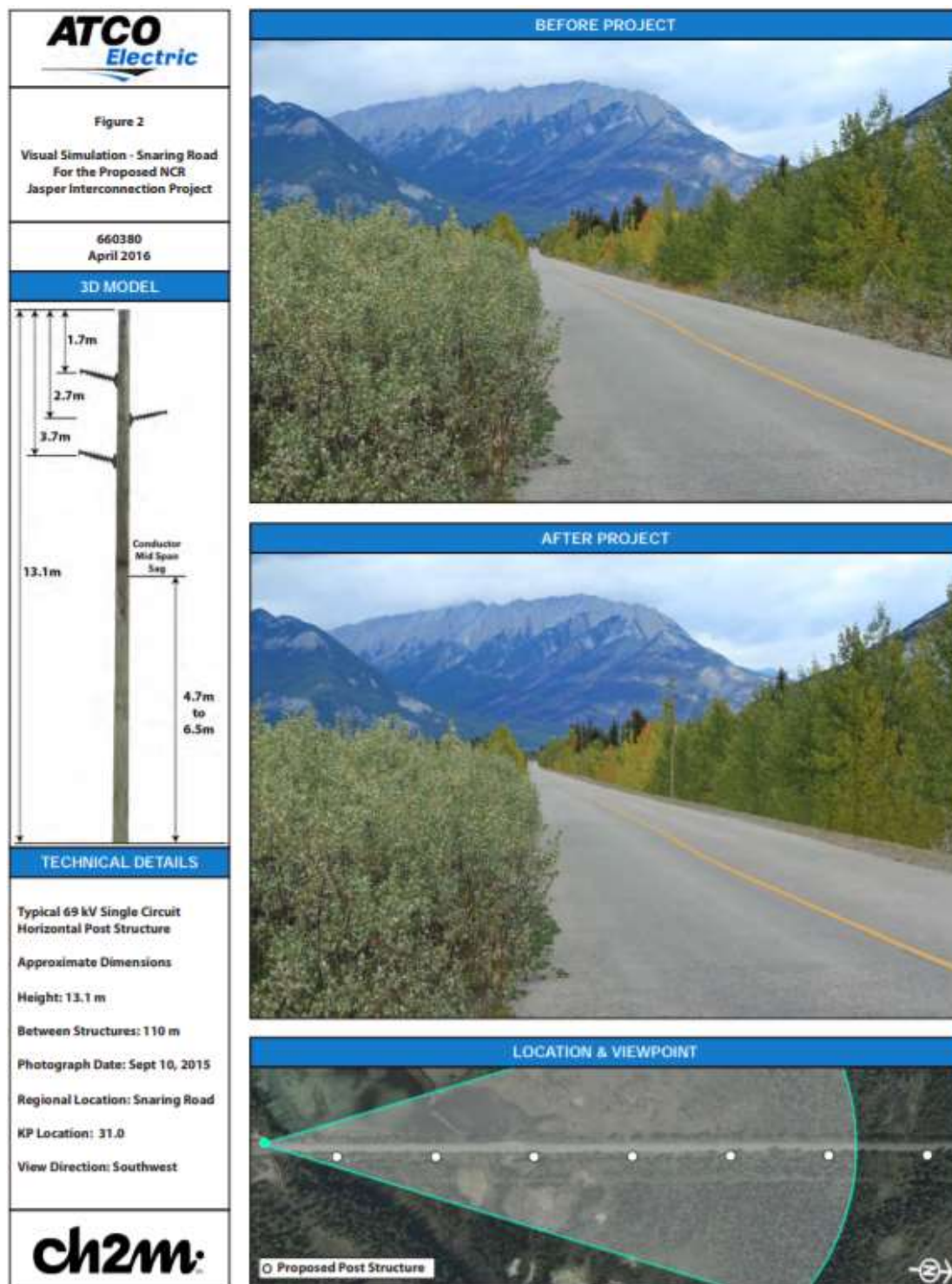
196. ATCO Transmission provided “visual simulation” photographs as part of its DIA in order to demonstrate the expected visual impact of the line at different locations.

197. For example, ATCO Transmission included a visual simulation of the view from Highway 16, directly across from Windy Point, depicting the expected impact of the proposed transmission line structures at that location, based on their locations relative to the viewpoint in the area:⁸⁸

⁸⁸ Exhibit 22125-X0113, Revised Attachment 2 DIA, Clean 2 of 2, PDF page 147.

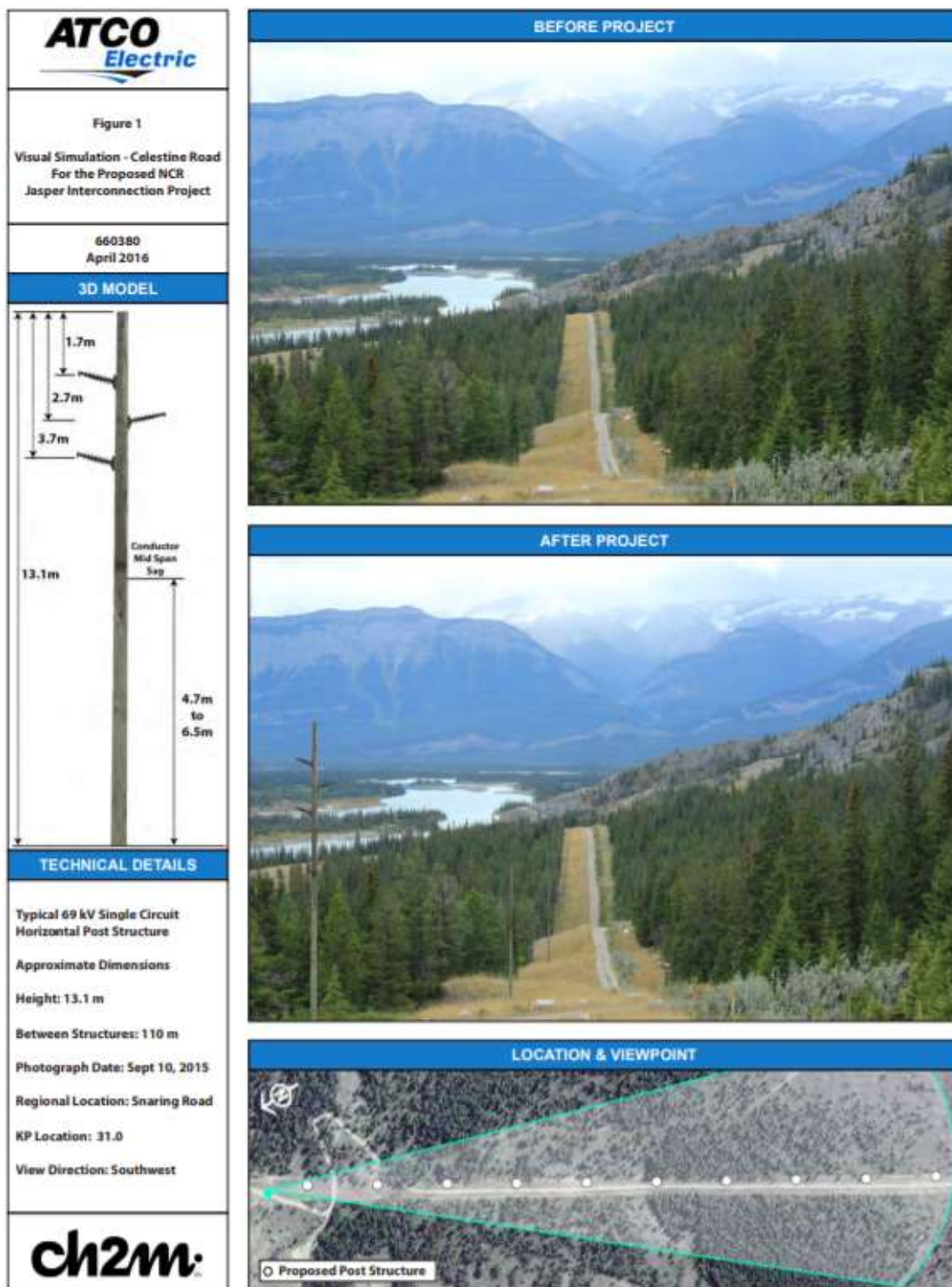


198. ATCO Transmission also provided the following visual simulation of the proposed structures to be placed along Snaring Road:⁸⁹



⁸⁹ Exhibit 22125-X0113, Revised Attachment 2 DIA, Clean 2 of 2, PDF page 146.

199. Another example included in the visual simulations was the viewpoint from Celestine Road:⁹⁰



200. The Kinder Morgan pipeline, the railway and Highway 16 were all identified as possible linear disturbances that ATCO Transmission could parallel to minimize new disturbances.

⁹⁰ Exhibit 22125-X0113, Revised Attachment 2 DIA, Clean 2 of 2, PDF page 145.

ATCO Transmission explained that Parks Canada preferred routes following existing linear developments, but suggested avoidance of Highway 16. ATCO Transmission explored the possibility of following the Canadian National Railway right-of-way instead of Highway 16; however, this routing would place the transmission line in wetland areas which would cause adverse effects to sensitive aquatic ecosystems. In consultation with Parks Canada, ATCO Transmission rejected the alignment along the Canadian National Railway right-of-way.

201. Ultimately, ATCO Transmission advanced as its preliminary route option, a route that would follow the Kinder Morgan pipeline corridor, parallel the Athabasca River, and use an existing ATCO Distribution alignment with the distribution line under-strung. ATCO Transmission also developed two variants for that preliminary route where the transmission line crossed Highway 16. The first variant would parallel an existing pipeline adjacent to Highway 16 before turning south to maintain distance from an existing recreational trail. The second variant would continue further south and parallel an existing pipeline and a recreational trail, maintaining a visual screen of trees from existing Highway 16. ATCO Transmission presented the two options to stakeholders, industries, agencies, Indigenous communities and other interested parties. After consulting with those parties on the route option for that short segment, ATCO Transmission rejected the route variant that placed the alignment closer to Highway 16.

202. ATCO Transmission also conducted a Historical Resources Impact Assessment that identified 25 sites within the proposed transmission line route. ATCO Transmission stated that all of the sites intersected by the proposed transmission line route could be mitigated through construction controls.

203. With respect to the proposed Sheridan 2085S Substation, ATCO Transmission stated that the proposed substation would be situated within the property boundary of Palisades. The substation equipment would be enclosed within an approximately 40 by 66 metre chain-link fence. ATCO Transmission stated its intention to decommission Palisades following the energization of the substation and transmission line 6L530. ATCO Transmission consulted with Parks Canada and ATCO Distribution and determined that siting the new substation within Palisades was ideal as it would be integrated with existing disturbances, occupy an area currently used by electrical facilities, and use existing infrastructure. ATCO Transmission stated that the proposed substation location has no residences within 1.5 km, is in close proximity to existing access roads, and is acceptable to Parks Canada.

204. To evaluate the noise impacts, ATCO Transmission submitted a noise impact assessment (NIA) summary form for the Sheridan 2085S Substation. There is no residence located within 1,500 metres of the substation. As such, the NIA summary form predicted the cumulative sound level at a theoretical receptor 1,500 metres east of the substation boundary. The NIA concluded that the predicted cumulative sound levels of the proposed substation would be below the permissible sound level values at the assessed receptor location.

8.2.2 Environmental effects

205. Jasper National Park is a designated national park under the *Canada National Parks Act*,⁹¹ as well as a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site. As noted in Section 4.1 above, in accordance with Section 67 of CEAA 2012, Parks Canada is the responsible authority for assessing the proposed ATCO park facilities

⁹¹ *Canada National Parks Act*, SC 2000, c 32, Schedule 1, Part 2, Section 3: Jasper National Park [*Parks Act*].

to ensure activities undertaken do not result in significant adverse environmental effects. Parks Canada is also responsible for the management of wildlife and conservation of species at risk under the *Canada National Parks Act*.⁹²

206. On behalf of the JEA, Ms. Seaton and Mr. Hatto testified about the importance of Jasper National Park being designated as part of the Canadian Rocky Mountain Parks UNESCO World Heritage Site. The JEA expressed concerns relating to the potential impacts to wildlife, wetlands, avian impacts, tree removal, invasive weeds, forest fires and windstorms. Ms. Seaton and Mr. Hatto identified the Athabasca Valley as having particular importance in terms of habitat for wildlife in Jasper National Park. They contended that a transmission line could have significant adverse effects to park wildlife and compromise the views that are important for visitor experience.⁹³

207. The JEA submitted that the JEA generation option would have less environmental impact as it would be confined to the existing Palisades footprint.⁹⁴ In contrast, the ATCO transmission option would require 53.5 km of new transmission line and would require extensive tree clearing resulting in land fragmentation in habitat that is important for vegetation and wildlife within Jasper National Park.⁹⁵

208. The JEA also argued that ATCO Transmission only presented its transmission option to Parks Canada and did not present an option of maintaining isolated generation. This removed the potential for Parks Canada to select a lower impact option. However, ATCO Transmission stated that the option of maintaining isolated generation in Jasper was communicated to Parks Canada in July 2013, November 2013 and that it was also discussed in the DIA.⁹⁶ ATCO Transmission also noted during the hearing that one of its information responses included meeting minutes with Parks Canada beginning in 2013, which indicate that alternatives to the ATCO transmission option were discussed with Parks Canada.⁹⁷

209. As part of its process for assessing the project, Parks Canada issued a Terms of Reference document to ATCO Transmission, which acted as a guiding document for the process that ATCO Transmission followed to complete the DIA.⁹⁸

210. ATCO Transmission retained CH2M Hill Canada Limited (CH2M) to assist with the preparation of the environmental section of its application and to complete the DIA report for the ATCO park facilities.⁹⁹ The DIA report was based on desktop information, supplemented by field studies completed in 2015 and 2016 for soils, wetlands, vegetation, and wildlife. The DIA describes the environmental setting of the ATCO park facilities and environmental valued components (i.e., environmental areas of concern identified for the project) identified in the Terms of Reference, which included:

⁹² Exhibit 22125-X0042, Application Text, PDF page 9.

⁹³ Exhibit 22125-X0286, JEA Written Evidence.

⁹⁴ Exhibit 22125-X0380, JEA Final Argument, PDF page 40.

⁹⁵ Exhibit 22125-X0380, JEA Final Argument, PDF page 38-39.

⁹⁶ Exhibit 22125-X0230, ATCO-Jasper-IR-Response-to-JEA-Round 1-20171009 Final, PDF pages 4 to 22; Exhibit 22125-X0112, Revised Attachment2_DIA_Clean_1of2, PDF page 38.

⁹⁷ Exhibit 22125-X0230, ATCO-Jasper-IR-Response-to-JEA-Round 1-20171009 Final, PDF pages 4-5.

⁹⁸ Exhibit 22125-X0042, Application Text, PDF page 22.

⁹⁹ Exhibit 22125-X0112 and Exhibit 22125-X0113, Revised Detailed Impact Analysis, Jasper Interconnection Project.

- landforms and soils
- vegetation
- aquatic wildlife and ecosystems
- wetlands
- wildlife and wildlife habitat (including sensitive or unique ecosystem features)
- air emissions and greenhouse gas emissions
- aesthetics and visual resources
- public/visitor safety
- visitor experience and aesthetics
- archaeological, cultural and historical resources
- socio-economic impacts
- Indigenous use and interests

211. The DIA assessed current environmental conditions within the footprint of the ATCO park facilities, identified potential impacts and recommended mitigation measures. Potential adverse effects and residual effects of the ATCO park facilities on the identified valued components that would remain following the implementation of mitigation measures were also evaluated. The DIA assessed cumulative effects and described proposed follow-up monitoring and reporting programs.¹⁰⁰ Shawn Martin, of CH2M, appeared as ATCO Transmission's witness at the public hearing.

212. ATCO Transmission prepared an environmental protection plan (EPP) that itemized and described the mitigation measures that would eliminate or reduce the potential environmental effects of the ATCO parks facilities. It provided a draft version of the EPP to Parks Canada for review. Feedback from Parks Canada was then used to further identify sensitive areas and develop mitigation measures. The EPP contains 16 appendices describing additional mitigation and contingency plans. ATCO Transmission stated that the EPP would be updated to incorporate any additional conditions resulting from regulatory approvals and permits issued by the Commission and Parks Canada.¹⁰¹

213. The JEA expressed concerns about potential impacts to species within the Athabasca Valley that are listed in the *Species at Risk Act* by the Committee on the Status of Endangered Wildlife in Canada, including the common nighthawk, olive-sided flycatchers, little brown myotis, northern myotis and the western toad. The JEA also expressed concern that a breeding bird survey was not completed for the project.¹⁰² However, Mr. Martin testified during the hearing that breeding bird surveys were not completed for the ATCO park facilities under direction from Parks Canada.¹⁰³ The Terms of Reference issued by Parks Canada required an environmental desktop review and field surveys be completed by ATCO Transmission for the proposed ATCO park facilities. The required field surveys included soil, vegetation, non-native plants, Columbian ground squirrel, wetland, nesting birds of prey, breeding bird, and archaeological, cultural, and historical resources.¹⁰⁴

¹⁰⁰ Exhibit 22125-X00110, Detailed Impact Analysis, PDF page 35.

¹⁰¹ Exhibit 22125-X0043, Environmental Protection Plan for the Jasper Interconnection Project.

¹⁰² Transcript, Volume 3, page 663 line 16 to page 664, line 2.

¹⁰³ Transcript, Volume 3, page 184, lines 16-24.

¹⁰⁴ Exhibit 22125-X0121, Terms of Reference, PDF pages 6-7.

214. During the hearing, ATCO Transmission explained that two days of site visits had been completed in July 2015 with representatives from Parks Canada. The joint site visit was conducted along the proposed route and was used to identify potential mitigation measures and gather information for detailed design discussions. The potential for visual impacts along the proposed route was also assessed on the second day of site visits.¹⁰⁵ As noted above, the ATCO transmission option through Jasper National Park was routed to parallel+ existing linear disturbances for 99 per cent of its length. Its route would parallel Highway 16, Snaring Road, Celestine Lake Road, Canadian National Railway, Kinder Morgan's Trans Mountain Pipeline and TMX Anchor Loop Project pipeline rights-of-way, ATCO Pipelines, and existing distribution line rights-of-way.¹⁰⁶

215. CH2M submitted that the DIA included a review of the Multi-species Action Plan for Jasper National Park as well as federal recovery strategies and management plans under the *Species at Risk Act*.¹⁰⁷ Construction activities for the ATCO park facilities would be scheduled to occur outside of sensitive breeding periods for migratory birds and sensitive amphibians to reduce the potential for interaction with species at risk. ATCO Transmission submitted that if a species at risk were incidentally discovered or reported during construction or operation, it would consult with Parks Canada.¹⁰⁸

216. ATCO Transmission stated that a pre-construction assessment would be completed along the proposed route to determine existing environmental conditions and identify areas of concern. The pre-construction assessment would focus on portions of the route that include sensitive terrain, high quality wildlife habitat, weeds or invasive species, steep slopes, areas prone to, or at risk of erosion, and previously disturbed areas. Supplemental environmental site assessments would also be completed within the area of Palisades prior to construction of the proposed Sheridan 2085S Substation.¹⁰⁹

217. ATCO Transmission stated that it would work with Parks Canada to return the ATCO park facilities footprint to pre-disturbance conditions using the Management Objectives and Desired End Results outlined in the Terms of Reference. A Reclamation Release Plan would be developed based on the results of pre-construction site assessments and post-construction monitoring. The Reclamation Release Plan would incorporate mitigation measures outlined in the EPP, the Best Available Methods for Common Leaseholder Activities Guidelines, and the Management Objectives and Desired End Results. The Reclamation Release Plan would be submitted to Parks Canada annually for five years until reclamation has met the Management Objectives and Desired End Results and sign off has been obtained. Reclamation activities would include assessment of drainage, soil erosion, topsoil depth and structure, rooting restrictions, soil stability, presence of invasive or non-native species, weed control activities, and vegetation sampling.¹¹⁰

218. ATCO Transmission asserted that the extensive consultation record between ATCO Transmission and Parks Canada, the development of the Terms of Reference by Parks Canada,

¹⁰⁵ Transcript, Volume 3, page 186 line 19 to page 187, line 13.

¹⁰⁶ Exhibit 22125-X0112, Revised Detailed Impact Analysis, Jasper Interconnection Project, PDF page 4.

¹⁰⁷ SC 2002, c 29 [SARA].

¹⁰⁸ Exhibit 22125-X0327, ATCO Electric's Reply Evidence, PDF page 8.

¹⁰⁹ Exhibit 22125-X0112, Revised Detailed Impact Analysis, Jasper Interconnection Project, PDF page 16.

¹¹⁰ Exhibit 22125-X0113, Revised Detailed Impact Analysis, Jasper Interconnection Project, PDF page 161.

its participation in the DIA process, and Parks Canada's attendance at the hearing demonstrate that the ATCO park facilities meet the public interest from an environmental perspective.¹¹¹

219. The JEA described concerns over the proposed three km segment of transmission line along Snaring Road and its proximity to two important wetlands. The JEA argued that a national park should be a protected area for birds and that the proposed route is in close proximity to suitable waterfowl habitat. In response, ATCO Transmission stated that a risk assessment would be conducted to identify locations along the route that would require the installation of avian markers to reduce the risk of collision. The risk assessment would consider proximity to water features, the size of the feature, tree cover, and direction of flight. ATCO Transmission stated that it would monitor for bird mortality during annual line inspections and would continue to work with Parks Canada to develop specific mitigation measures as required. The JEA noted that ATCO Transmission's intention to install avian markers on overhead shield wires would increase the visual impact of the ATCO park facilities.¹¹²

220. In response to concerns expressed by the JEA regarding tree removal along the proposed route, ATCO Transmission stated that the number of trees to be removed was likely overestimated as a result of a controlled burn that occurred in Jasper National Park in 2017.¹¹³ ATCO Transmission also indicated that the ATCO park facilities were designed to incorporate a reduced right-of-way of 10 metres, as recommended by Parks Canada, to mitigate and reduce potential impacts to vegetation and wildlife.¹¹⁴

221. ATCO Transmission argued that the evidence provided by the JEA did not identify any deficiencies in the DIA or the EPP.¹¹⁵ ATCO Transmission also stated that no expert environmental evidence or studies were submitted by any intervener to indicate that the mitigation measures proposed in the DIA and EPP would be ineffective in mitigating the environmental impacts of the ATCO park facilities. ATCO Transmission argued that the concerns expressed by the JEA have been addressed in the DIA.

222. ATCO Transmission concluded that they have completed extensive consultation with Parks Canada and have included recommended mitigations to develop a route that would reduce the potential impacts on the environment. ATCO Transmission submitted that with the implementation of the mitigation measures outlined in the EPP and in the DIA, there would be no significant impact on the environmental valued components identified by Parks Canada in the Terms of Reference document.¹¹⁶

223. With respect to the DIA, the JEA noted that after the implementation of the mitigation measures recommended for the ATCO park facilities there will be remaining adverse effects on habitat, wildlife movement patterns and human wildlife conflict. The JEA concluded that maintaining the natural features of Jasper National Park for future generations by preventing the environmental impacts of a transmission line would be in the public interest.¹¹⁷

¹¹¹ Exhibit 22125-X0327, ATCO Electric's Reply Evidence, PDF page 36-39.

¹¹² Exhibit 22125-X0286, JEA Written Evidence, PDF page 4.

¹¹³ Exhibit 22125-X0327, ATCO Electric's Reply Evidence, PDF page 9-11.

¹¹⁴ Transcript, Volume 3, page 190, lines 16-20.

¹¹⁵ Exhibit 22125-X0376, Final Argument ATCO Electric, PDF page 14.

¹¹⁶ Exhibit 22125-X0327, ATCO Electric's Reply Evidence, PDF page 11.

¹¹⁷ Exhibit 22125-X0380, JEA Final Argument, PDF page 40-42, paragraph 179 and 191.

224. Finally, the JEA noted that approval from Parks Canada for the construction of the ATCO park facilities has not yet been issued to ATCO Transmission. The JEA stated that conditions may be imposed by Parks Canada, including additional mitigation measures which may result in further project costs.¹¹⁸

8.3 AltaLink's proposed facilities

8.3.1 Land use considerations: routing and substation site selection

225. AltaLink applied to construct a single-circuit 69-kV transmission line approximately 8.5 km in length, from the Watson Creek 104S Substation to the boundary of its service territory, where it would connect with ATCO Transmission's line to the Sheridan 2085S Substation. AltaLink's transmission line would be strung on structures ranging from 9 to 25 metres tall on a 16-metre wide right-of-way.

226. AltaLink created three preliminary routes but ultimately applied for a single route that parallels existing linear disturbances, including a pipeline and a distribution line. AltaLink stated that on this route, there are no residences within 150 metres and 36 residences within 800 metres. It added that the applied-for route was strongly preferred by a majority of Indigenous communities and other stakeholders, and crossed the fewest wetlands.

227. To accommodate the new transmission line, AltaLink also applied to alter the Watson Creek 104S Substation, operating pursuant to Permit and Licence U2007-262.¹¹⁹ The alteration would consist of adding two new 138-kV transformers, two new 138-kV circuit breakers, one 69-kV circuit breaker and associated substation equipment.

228. AltaLink stated that the substation's fenceline would need to be expanded by 37 metres by 41 metres to accommodate the alteration. AltaLink stated that the Watson Creek 104S Substation and fenceline expansion is located on land owned by Trans Mountain Pipeline ULC and operated by Kinder Morgan. AltaLink stated that Kinder Morgan had no concerns with the project and it would work with Kinder Morgan to update the existing substation easement.

229. AltaLink evaluated the noise impacts of the proposed alterations to the Watson Creek 104S Substation and submitted a NIA summary form. The cumulative sound level was predicted at the most impacted dwelling, located 900 metres southwest of the facility. The NIA concluded that the predicted cumulative sound levels of the upgraded Watson Creek 104S Substation would be below the permissible sound level values at that location.

230. AltaLink also proposed the addition of one new bypass switch between transmission lines 847L and 615L, located approximately 40 metres south of the Cold Creek 602S Substation, and two supporting structures for transmission lines 847L and 615L. AltaLink stated that the proposed modifications are not anticipated to alter the existing permits and licences, and confirmed that it is not requesting a change to the existing permits and licences for the 615L or 847L transmission lines.

¹¹⁸ Exhibit 22125-X0380, JEA Final Argument, PDF pages 40-41, paragraph 183 and 190.

¹¹⁹ Substation Permit and Licence U2007-262, Application 1525876, October 2, 2007.

8.3.2 Environmental effects

231. AltaLink's proposed facilities are located outside the boundaries of Jasper National Park. As such, AltaLink prepared an environmental evaluation for the project and consulted with Alberta Environment and Parks – Wildlife Management.

232. AltaLink retained CH2M to prepare an environmental evaluation for the proposed transmission line and expansion of the existing Watson Creek 104S Substation. The AltaLink Environmental Evaluation Report described the environmental setting of the project area including land use and environmentally sensitive areas, terrain and soils, vegetation species and communities, water resources, and wildlife components. AltaLink's Environmental Evaluation Report discussed and assessed the potential adverse effects of the proposed AltaLink facilities on these environmental components.¹²⁰

233. AltaLink prepared an Environmental Specifications and Requirements document that itemized and described the mitigation measures that it would implement to eliminate or reduce the potential environmental effects of its proposed facilities.¹²¹ The proposed route would parallel existing disturbances for its entire length and the substation expansion is proposed on previously disturbed land.¹²²

234. AltaLink's Environmental Evaluation Report was based on desktop information, supplemented by wildlife, wetland, watercourse, and vegetation field studies conducted in the spring and summer of 2015 and 2016 along the proposed transmission line route and substation expansion site.¹²³ Field surveys completed for the proposed AltaLink facilities included general area searches for wildlife habitat features and targeted species at risk habitat surveys. Breeding bird surveys and amphibian surveys were conducted in accordance with the *Sensitive Species Inventory Guidelines*. An aerial overflight was completed on June 24, 2015 and no wildlife habitat features were identified along the proposed route.¹²⁴

235. AltaLink stated in its application that Alberta Environment and Parks – Wildlife Management indicated during consultation that it preferred the proposed route because it would parallel existing linear disturbances for the majority of its length. The AltaLink facilities are located within the future Upper Athabasca Regional Plan area which is currently not in force. AltaLink stated it anticipated that potential adverse environmental effects could be mitigated and added that construction would occur outside of the core migratory bird nesting periods.¹²⁵

8.4 The JEA generation option

8.4.1 Environmental effects

236. The Insitu report stated that an emission compliant generation option would be possible to serve Jasper loads with the use of multiple dual fuel reciprocating engines and a selective catalytic reduction post treatment system to strip NO_x from the exhaust gas. It noted that stringent emission controls are available and can be economically achieved through post

¹²⁰ Exhibit 22125-X0017, AML ATCO Jasper Interconnection – Appendix K Environmental Evaluations, page 36.

¹²¹ Exhibit 22125-X0017, AML – Jasper Interconnection, Environmental Specifications and Requirements.

¹²² Exhibit 22125-X0031, Application, PDF page 66.

¹²³ Exhibit 22125-X0017, Environmental Evaluation, PDF page 52.

¹²⁴ Exhibit 22125-X0017, Environmental Evaluation, PDF page 101.

¹²⁵ Exhibit 22125-X0031, Application, PDF page 20 and 66.

treatment.¹²⁶ The JEA submitted that the Wartsila engine proposed in the Insitu report would meet current Alberta environmental emission standards.¹²⁷

237. The BEMA report compared the emissions resulting from supplying Jasper using the JEA generation option against supplying Jasper from the AIES. It found that emissions from the AIES would decrease as coal generation is replaced by gas-fired and renewable generation such as hydro, wind, and solar. The JEA generation option is expected to result in twice the amount of CO₂ emissions when compared with the ATCO transmission option.¹²⁸ BEMA used the AESO's corporate forecast generation mix to calculate the emissions for the ATCO transmission option and found that when connected to the AIES, it would produce 0.7 megatonnes of CO₂ over 40 years of operation. Insitu estimated that the JEA generation option would produce approximately 1.4 megatonnes of CO₂ over 40 years of operation.¹²⁹

238. ATCO Transmission submitted that it agrees with the conclusion of the BEMA report that the ATCO transmission option would result in lower greenhouse gas emissions when compared to the JEA generation option.¹³⁰ It further submitted that with respect to its transmission option, mitigation measures to reduce or eliminate effects on air quality and greenhouse gas emissions were provided in the DIA, and include equipment maintenance, dust control measures, and using best available economically achievable technology.¹³¹

239. ATCO Transmission explained that the JEA generation option would require supplemental exhaust flue gas clean-up to meet Alberta environmental requirements for NO_x emissions. It argued that there would be unnecessary environmental risks associated with the proposed selective catalytic reduction post treatment system described by the JEA and its consultants. Potential risks include ammonia slip, an increase in the volume of liquid urea, and an increase in the amount of diesel to be transported within Jasper National Park.

240. ATCO Transmission noted that an additional 286,873 litres of diesel fuel would be required for the Wartsila engine proposed in the JEA generation option. It submitted that the transport, handling and storage of 128,000 litres of liquid urea, 28,600 litres of lube oil and 1,000 litres of glycol every three to four years would be required. The JEA argued that ATCO Transmission had provided no context for the numbers provided, in order to assess the scale of the expected increase.¹³² The JEA submitted that in any event, this increase would not pose a risk to Jasper. The JEA stated that locations across Alberta are currently safely transporting, handling and storing comparable liquid volumes at industrial sites.¹³³

241. ATCO Transmission explained that a connection to the AIES would be the only option that would allow Jasper to completely meet its loads using renewable energy. It stated that the

¹²⁶ Exhibit 22125-X0287, Insitu Power Corporation Expert Report, paragraph 15-16, PDF page 4.

¹²⁷ Exhibit 22125-X0386, JEA Reply Argument, PDF page 20, paragraph 91.

¹²⁸ Transcript Volume 4, pages 724-725; Exhibit 22125-X0293, BEMA Expert Report, PDF page 5, Table 1: expected megatonnes of CO₂ over 40 years is 1.4 for generation and 0.7 for transmission.

¹²⁹ Exhibit 22125-X0293, Bema Expert Report, PDF page 1, 7, 40, and 74.

¹³⁰ Exhibit 22125-X0327.

¹³¹ Exhibit 22123-X0112, Revised Detailed Impact Analysis, Jasper Interconnection Project, PDF page 13.

¹³² Exhibit 22125-X0380, JEA Final Argument, PDF page 32, paragraph 150.

¹³³ Exhibit 22125-X0380, JEA Final Argument, PDF page 32, paragraphs 149-151.

generation option proposed by the JEA and its consultants would commit Jasper to another 40 years of fossil fuel for their electricity production.¹³⁴

242. ATCO Transmission concluded that the generation option proposed by the JEA to operate reciprocating engines with a selective catalytic reduction post treatment system within Jasper National Park does not align with the JEA's stated mandate to preserve the park for future generations. The addition of a selective catalytic reduction system would result in additional environmental risks which were not acknowledged by the JEA or its consultants.¹³⁵

8.4.2 Land use considerations

243. The JEA stated that the generation option proposed by Insitu would have minimal visual and environmental impacts because Palisades would be reclaimed and the new proposed facility would be placed in the same footprint. The ATCO transmission option would have significantly higher linear disturbances and visual impacts when compared with the generation option. The BEMA report noted that there are roads, trails and campgrounds located within the project area and the construction of a transmission line would reduce visitors' visual experience in the park.¹³⁶

244. ATCO Transmission agreed with the submission of the BEMA report that the generation option would result in fewer linear disturbances when compared to the transmission option. However, ATCO Transmission submitted that with the implementation of the mitigation measures outlined in the DIA and the EPP, the potential impact resulting from linear disturbances for the ATCO transmission option is not expected to be significant.¹³⁷

8.5 Commission findings

8.5.1 ATCO transmission line and substation

245. The Commission received considerable evidence on the potential environmental impacts of the proposed transmission line located within Jasper National Park and the mitigation measures proposed by ATCO Transmission. The evidence before the Commission is that the degree of paralleling with existing linear disturbances is a key measure in reducing the environmental impact of the project. The proposed route parallels existing linear disturbances for 99 per cent of its length and was developed in consultation with Parks Canada, including a non-standard, narrower right-of-way, to reduce the tree-clearing required.

246. The Commission considers that the route selection process followed by ATCO Transmission for its proposed transmission line was reasonable, particularly in light of its consultation with Parks Canada and the extent to which the route minimized new disturbances by following existing linear disturbances for most of its length.

247. The Commission recognizes that concerns have been raised by the JEA with respect to the visual impacts of the ATCO transmission option, particularly given the scenic nature of its proposed location through Jasper National Park. The Commission notes that ATCO Transmission has routed the proposed facilities in close consultation with Parks Canada to

¹³⁴ Exhibit 22125-X0331, ATCO Electric Reply Evidence, PDF page 63.

¹³⁵ Exhibit 22125-X0331, ATCO Electric's Reply Evidence, PDF page 21, paragraph 46.

¹³⁶ Exhibit 22125-X0293, Bema Expert Report, PDF pages 7 and 13.

¹³⁷ Exhibit 22125-X0327, ATCO Electric's Reply Evidence, Appendix 2, PDF page 14.

mitigate its environmental and visual impacts, including consulting with Parks Canada to identify and avoid areas of scenic value.

248. Having regard to the relatively small size of the proposed wooden transmission poles and the routing of the line along existing disturbances, the Commission finds that ATCO Transmission has effectively mitigated and minimized the visual impacts of the proposed line.

249. The Commission finds that the DIA report, the EPP and the field assessments completed by CH2M adequately addressed the anticipated impacts through the application of proposed mitigation measures. The DIA addressed the potential residual and cumulative impacts of the project on the environment, in accordance with the terms of reference for the DIA set by Parks Canada. The JEA provided no expert evidence to challenge the methodology followed by CH2M, or the conclusions reached in the DIA.

250. The Commission acknowledges ATCO Transmission's commitment to finalize and implement a project-specific EPP prior to the start of construction. The EPP outlines several commitments and contingency plans to avoid or reduce the project's environmental impacts. The Commission directs ATCO Transmission to uphold all of its commitments and monitor the effectiveness of its mitigation measures during the construction phase of the project.

251. The following directions will be conditions of Substation Permit and Licence 22125-D05-2018 and Transmission line Permit and Licence 22125-D06-2018:

- ATCO Transmission is directed to file with the Commission its finalized Environmental Protection Plan when available and prior to commencing construction.
- ATCO Transmission is directed to file with the Commission, within three months of the completion of construction, a report confirming compliance with the Environmental Protection Plan. In the event that ATCO Transmission has deviated from that plan, it shall provide an explanation of each deviation and the reasons for them in its report.

252. ATCO Transmission has committed to completing additional environmental site assessments prior to the start of construction. On that basis and on the basis of the surveys already conducted, the Commission finds that ATCO Transmission has made reasonable efforts to limit the effects of the project on the environment.

253. The Commission finds that the implementation of the proposed mitigation measures outlined in the DIA and the EPP are essential to minimizing the project's impacts on the environment.

254. The environmental impacts associated with the proposed ATCO transmission option relate primarily to direct impacts on the surrounding environment as a result of the construction and operation of the line. In this proceeding, the Commission must consider the relative environmental impacts of the ATCO transmission option versus the ATCO generation option, or the JEA generation option. This presents very different environmental impacts that are discussed further below. The Commission concludes that with the diligent application of ATCO Transmission's proposed mitigation measures outlined in the DIA, and with ATCO

Transmission's commitment to continue working with Parks Canada with respect to the implementation of additional mitigation measures, the environmental impacts resulting from the construction and operation of the transmission line can be effectively mitigated.

255. The Sheridan 2085S Substation is proposed to be located entirely within the property boundary of an existing facility. Accordingly, the Commission agrees with ATCO Transmission's submission that siting the new substation within the existing Palisades footprint is ideal from an environmental perspective, as it is integrated with existing disturbances.

256. Given the location of the proposed substation within an existing electrical facility and over 1.5 km away from residences, the Commission finds that the noise impacts of the proposed facility are not likely to be significant. More specifically, based on the evidence submitted by ATCO Transmission, the Commission finds that the predicted cumulative sound levels are below the permissible sound levels at all receptor locations assessed and considers that the proposed substation will comply with the Commission's Rule 012: *Noise Control*.

8.5.2 AltaLink transmission line and substation alterations

257. The Commission considers that the route selection process followed by AltaLink for its proposed transmission line was reasonable, and that the route planning and substation siting took into account applicable routing principles. The applied-for route follows existing linear disturbances, has no residences located within 150 metres, and no interveners were granted standing in relation to the facility applications filed by AltaLink.

258. The Commission is also satisfied that with the diligent application of the proposed mitigation strategies put forward by AltaLink, the environmental impacts from construction and operation of the proposed facilities can be adequately mitigated.

259. The following directions will be conditions of Substation Permit and Licence 22125-D03-2018 and Transmission line Permit and Licence 22125-D04-2018:

- AltaLink is directed to file its finalized Environmental Specifications and Requirements document with the Commission prior to commencing construction.
- AltaLink is directed to file, with the Commission, a report confirming compliance with the Environmental Specifications and Requirements document. Such report shall be filed within three months of the completion of construction and, in the event that AltaLink has deviated from the specifications and requirements, shall include an explanation of each deviation and the reasons for them.

260. The Commission finds the methodology described in AltaLink's NIA summary report to be reasonable. No evidence was submitted by interveners contesting the proposed facilities' predicted noise levels. The Commission finds that the predicted cumulative sound levels are below the permissible sound levels at all receptor locations assessed, and considers that the substation alteration will comply with Rule 012.

8.5.3 Generation options of the JEA and ATCO Transmission

261. The Commission has considered the relative environmental effects and other land use effects of the proposed transmission infrastructure as compared to a generation facility located in the Jasper area.

262. The Commission recognizes that the environmental impacts of the generation and transmission options vary considerably. The generation options are both proposed for an existing brownfield site; the site-specific impacts associated with their construction are consequently limited. However, the isolated generating options necessarily require the continued reliance on fossil fuel-based plants for the life of the facility, approximately 40 years. In addition, both generation options introduce some risk of environmental impact associated with the transport of fuel for the generating units and, in the case of the JEA alternative, the transport of other environmental contaminants.

263. The environmental impacts associated with the transmission option, on the other hand, are primarily related to its construction. The Commission finds that the direct, physical impacts that the generation options would have on the environment are less than the direct, physical impacts that would be caused by constructing and operating the ATCO transmission option, as the generation facilities could be sited within or primarily on the Palisades property.

264. However from an environmental perspective, a material advantage of the ATCO transmission option would be the elimination of a fossil fuel based generating plant and access to the AIES, which, in accordance with the *Renewable Electricity Act*,¹³⁸ will increasingly be transmitting electricity from renewable sources.

265. In contrast, continuing isolated generation in Jasper would effectively commit the Jasper area to reliance on fossil fuels for the lifespan of the generator (approximately 40 years), a result with which the JEA itself disagreed. Jasper would be wholly reliant on natural-gas generation rather than being connected to the AIES, which includes renewable generation. Further, as noted earlier, BEMA's evidence was that the generation option would result in approximately twice the amount of CO₂ emissions relative to the transmission option. The Commission accepts that the ATCO transmission option would result in lower emissions when compared to either the ATCO generation option or the JEA generation option.

266. The Commission also notes that the JEA's generation option would require post-emissions processing, such as selective catalytic reduction, in order to meet current provincial environmental emission standards. ATCO Transmission's testimony was that the use of only reciprocating engines with the addition of a selective catalytic reduction post treatment system would have some level of associated risk, including the potential for ammonia slip and an increase in the volume of liquid urea and diesel to be stored and transported within Jasper National Park.

267. The Commission must consider the environmental impacts of the proposed option in light of the relevant statutory framework. It must weigh the relative expected emissions of the two options and the site-specific impacts from construction activities in consideration of this legislated policy objective. Taking that into account, the Commission considers that the overall

¹³⁸ SA 2016, c R-16.5.

environmental impacts over an expected 40 year lifespan would be lower for the ATCO transmission option than either of the generation options.

268. Furthermore, significant evidence has been placed on the record by ATCO Transmission, in the form of the DIA, outlining the environmental effects associated with the ATCO transmission option and the mitigation measures proposed to address those effects. The JEA filed no expert evidence to contradict or question the conclusions reached in the DIA in relation to the residual environmental effects or the mitigations proposed. The best evidence before the Commission indicates that the environmental effects of the ATCO transmission option can be mitigated to an acceptable degree and that the proposed route uses existing disturbances to minimize environmental effects associated with its construction.

9 Cost considerations

269. Having assessed the relative reliability as well as the relative environmental and other land use impacts of the ATCO transmission option, the ATCO generation option and the JEA generation option, the Commission must consider the relative costs of those various options. That analysis begins with the proposal to provide service (PPS) estimate for the combined ATCO and AltaLink transmission line followed by a summary of the cost components and cost models relied on by each of the parties and the estimated costs resulting from each.

9.1 Comparing the ATCO Transmission, AESO and BEMA cost models

270. As part of its application, ATCO Transmission provided a PPS estimate in accordance with the requirements of Rule 007.¹³⁹ The PPS estimate has an accuracy range of +20/-10 per cent. ATCO Transmission estimated that its portion of the project would cost \$84 million, in 2016 dollars.¹⁴⁰ In its PPS estimate, AltaLink estimated that its portion of the project would cost \$28.5 million, in 2016 dollars.¹⁴¹ The combined PPS cost for the project was estimated at \$112.5 million, in 2016 dollars.

9.1.1 ATCO Transmission revenue requirement model

271. As described earlier, to support the ATCO Distribution system access service request, ATCO Transmission also provided a business case that examined three electricity supply options: the ATCO transmission option, the ATCO generation option and the combined transmission and backup generation option.¹⁴²

272. The estimated costs of the ATCO transmission option included:¹⁴³

- \$72.3 million (2015\$) for capital costs related to ATCO Transmission's portion of the transmission line, which would be incurred from 2014-2017.
- \$6.3 million (2015\$) for salvage and remediation of Palisades in 2017.

¹³⁹ Rule 007, Section 7.1.2 Economic assessment, TS43.

¹⁴⁰ Exhibit 22125-X0042, ATCO Electric Application, Table 7: Project cost estimates, page 13.

¹⁴¹ Exhibit 22125-X0031, AltaLink Application, Table 13-1: Cost breakdown for proposed route, page 66.

¹⁴² Exhibit 22125-X0006, ATCO Electric Business Case.

¹⁴³ Exhibit 22125-X0006, ATCO Electric Business Case, Section 5.2.1, page 8 and Section 6.1, page 11.

- \$25,000 annual capital maintenance costs starting in the year 2022.
- \$26.4 million to remove existing generation assets from rate base (amortized on a straight line basis from 2016-2020).

273. The ATCO generation option had estimated costs that included:¹⁴⁴

- \$143.3 million (2015\$) in capital and capital maintenance costs over a 40-year period.
- \$2.6 million (2015\$) in annual operating and maintenance costs (O&M). The annual cost was partially offset by the revenue received by the AESO (as stipulated under the IGUCC Regulation) from retailers serving the Jasper area.
- \$31.5 million of existing assets would remain in rate base (amortized on a straight line basis from 2016 over the remaining 30 years of asset life).

274. The estimated costs of the combined transmission and backup generation option included:¹⁴⁵

- \$78.1 million (2015\$) for capital costs related to its portion of the transmission line, incurred from 2014 through 2017.
- \$2.1 million (2015\$) to reconfigure Palisades for back-up generation, incurred in 2017 and amortized over 40 years.
- \$3.7 million (2015\$) for partial salvage and remediation of Palisades.
- \$6.9 million of existing generation assets removed from rate base (amortized on a straight line basis from 2016 through 2020).
- \$19.5 million of existing generation assets would remain in rate base (amortized on a straight line basis from 2016 over the remaining 40 years of asset life).

275. ATCO Transmission's business case evaluated the three options using a discounted cash flow analysis using revenue requirements over a 40 year term to represent ratepayer cash flows. The net present value (NPV) of each option was compared to determine the lowest cost alternative to ratepayers.

276. The net present value (2014\$) produced by the economic analysis over the 40-year period 2015-2054, is as follows:¹⁴⁶

- | | |
|----------------------------|-----------------|
| • ATCO transmission option | \$89.7 million |
| • ATCO generation option | \$168.9 million |

¹⁴⁴ Exhibit 22125-X0006, ATCO Electric Business Case, Section 6.1, page 11.

¹⁴⁵ Exhibit 22125-X0006, ATCO Electric Business Case, Section 5.4.1, pages 9-10.

¹⁴⁶ Exhibit 22125-X0006, ATCO Electric Business Case, Section 6.1, page 11.

- Combined transmission and backup generation option \$98.6 million

9.1.2 BEMA revenue requirement model

277. The JEA's consultant, BEMA, developed its own cost model to analyze the costs of a generation and transmission option. Similar to the model in ATCO Transmission's business case, the BEMA model calculated the revenue requirement for regulated costs including depreciation, interest, return on equity, operating and maintenance and income tax costs.

278. The JEA transmission option had estimated costs that included:¹⁴⁷

- \$126.5 million in initial capital for the full length of the transmission line (i.e., it includes both the ATCO Transmission and AltaLink portions of the line). The initial capital includes allowance for funds used during construction (AFUDC).
- \$2.3 million annually in capital maintenance.
- \$1.8 million annually in O&M costs.
- \$211,000 annually in incremental operating reserve cost.
- \$51,000 annually in incremental line losses.
- \$5.1 million annually in energy costs. The energy cost was calculated by multiplying the forecast energy price by the forecast energy consumed by Jasper.

279. The estimated costs of the JEA generation option included:¹⁴⁸

- \$52.4 million in initial capital costs.
- \$449,000 annually in capital maintenance costs.
- \$3.0 million annually in fuel costs.
- \$284,000 annually in carbon costs.
- \$1.8 million annually in fixed and variable O&M costs.

280. BEMA's model calculated the net present value of the costs for the generation and transmission option over the 40-year period 2019-2058 and produced the following results:

- JEA Transmission option \$281 million
- JEA generation option \$154 million

¹⁴⁷ Exhibit 22125-X0293, BEMA expert report, paragraph 92, Table 4.

¹⁴⁸ Exhibit 22125-X0293, BEMA expert report, paragraph 88, Table 3.

9.1.3 The AESO's cost model

281. The AESO did not utilize a revenue requirement model to conduct its cost comparison of the transmission line option and the full generation option. Instead, the AESO's application relied, in part, on the information contained in the business case to produce its own net present value analysis.

282. The AESO transmission option had estimated costs that included:¹⁴⁹

- \$117.5 million in capital cost (\$89 million for ATCO Transmission and \$28.5 million for AltaLink portions of the line).¹⁵⁰
- \$35,000 (2016\$) annual capital maintenance costs, starting in 2022.
- \$250,000 (2016\$) of annual line and substation operating and maintenance costs, starting in 2020.
- \$100,000 (2016\$) of annual line losses, starting in 2022.

283. The estimated costs of the AESO generation option included:¹⁵¹

- \$143.2 million (2015\$) of capital and capital maintenance costs over a 40-year period.
- \$2.7 million (2016\$) of annual non-fuel operating and maintenance costs, starting in 2020.
- \$6.8 million (on average) of annual fuel costs, starting in 2020.
- \$5.4 million (on average) of annual isolated generation credit, starting in 2020.

284. The AESO's model calculated the net present value of the costs for the generation and transmission option over the 40-year period 2016-2055 and produced the following results:

- AESO transmission option \$105.4 million
- AESO generation option \$154.5 million (includes \$44.2M isolated generation credit)

9.1.4 Commission findings

285. The three cost models received considerable debate throughout the proceeding. Differences in the assumptions used, the specific inputs, and the associated dollar amounts used by each model were highlighted, and those differences made comparing the results of the models difficult. The different models also served different purposes, which further complicated a direct

¹⁴⁹ Exhibit 22125-X0336, Cost Update 2, Excel spreadsheet.

¹⁵⁰ The updated capital cost incorporates the original PPS estimates plus the change requests from ATCO Electric (adding AFUDC and delaying in-service date). Exhibit 22125-X0336, Cost Update 2, Excel spreadsheet.

¹⁵¹ Exhibit 22125-X0336, Cost Update 2, Excel spreadsheet.

comparison. The AESO summarized the challenge of comparing the results of the models in its argument:¹⁵²

Without debating the validity of methodologies used by each of ATCO DFO and the JEA, each of the cost estimates offers a different perspective and serves a different purpose. The ATCO DFO cost estimates were provided from a utility revenue requirement perspective for the purpose of determining if it was prudent to continue to operate the Palisades facility relative to a transmission facility to serve Jasper. The JEA's cost estimate was provided to compare the preferred transmission connection alternative to the JEA's proposed isolated generation facility.

The AESO's two cost estimates also serve different purposes. As briefly discussed above, the capital cost estimates assisted the AESO in making an appropriate transmission system planning decision while also meeting the benchmarking requirements of Rule 007. The AESO's non-typical NPV analysis was provided to compare the preferred transmission connection alternative with the other supply options identified in the ATCO Business Case. These NPV cost comparisons were in turn used to inform the AESO in its assessment of the preferred transmission connection alternative for [independent system operator (ISO)] tariff purposes, specifically for the purpose of determining the maximum local investment available for connecting Jasper to the transmission system. [footnotes omitted]

286. The following table provides a summary of the results for the transmission option and the generation option produced by each model:

Table 1. Net present value comparison of the different models

	Generation	Transmission line	Difference
ATCO	\$168.9 million	\$89.7 million	\$79.2 million
JEA	\$154 million	\$281 million	(\$127 million)
AESO	\$154.5 million	\$105.4 million	\$49.1 million

287. Given the different purposes of the models and the considerable debate about the inputs to the models, the results of the cost models are not easily comparable and therefore have limited use. However, that is not to say that the cost information does not contribute to the Commission's understanding of whether it is cost effective to serve Jasper with a transmission line connection to the AIES, or otherwise assist the Commission in its consideration of the AESO's preferred transmission connection alternative under the NID application.

288. As stated earlier, the practical implication of Section 27(1.1) of the IGUCC Regulation is that the Commission must assess the relative merits of the isolated generation and transmission options before turning its mind to the merits of the NID application. Therefore, the Commission will first explore the question of whether a connection to the interconnected electric system for

¹⁵² Exhibit 22125-X0378, AESO Argument, paragraphs 71-72.

Jasper is economic, and then turn its mind to an assessment of cost relative to the AESO's preferred transmission connection alternative.

9.2 Economic consideration mandated by Section 27(1.1) of the IGUCC Regulation

289. As noted, ATCO Transmission's business case in support of ATCO Distribution's system access service request was used by the AESO as a surrogate for a distribution deficiency report when it considered the request. The AESO made the point in its argument that "[t]his was done in the context of the unusual circumstances of addressing a system access service request to serve an isolated community like Jasper."¹⁵³ The AESO explained that it utilized the business case to prepare a NPV analysis, which is non-typical for a NID application. The AESO relied on its NPV analysis to compare the preferred transmission connection alternative with the other supply options identified in the ATCO business case.¹⁵⁴

290. The business case used annual revenue requirements, evaluated them in terms of cumulative present value over a 40-year period and provided a NPV calculation for each option. The Commission found the business case and the cumulative present value analysis it contained to be very helpful in its evaluation of the economic consideration mandated by Section 27(1.1) of the IGUCC Regulation. The cost information typically supplied for a NID application, as required by Rule 007, would not have been sufficient to consider this question. The revenue requirement model allowed a comprehensive assessment of the cost of each of the options.

291. As stated previously, BEMA constructed its own revenue requirement model to produce a net present value calculation for the transmission option and the generation option. However, as shown in Table 1 above, the two models, which used a similar approach, produced completely opposite results. The ATCO Transmission business case concluded that its proposed generation option would cost \$79.2 million more than its proposed transmission option, whereas the BEMA model concluded that the JEA generation option would cost \$127 million less than the JEA transmission option.

292. A considerable amount of time was spent in this proceeding debating the inputs into the models and how they should be costed. In some instances, agreement was reached on what the correct input and associated cost should be, but there were many other instances where consensus could not be reached. There were also questions about whether the JEA generation option is a technically viable alternative (even with the addition of a fifth engine),¹⁵⁵ as discussed earlier. The Commission does not intend to make a determination in all instances where consensus could not be reached. To do so would not be productive or necessary, when the main question before it is the economic consideration mandated by Section 27(1.1) of the IGUCC Regulation. The Commission will however address some of the more significant contested assumptions, below.

293. Notwithstanding the conflicts described, the Commission did find the JEA's analysis helpful where it attempts to reconcile the results of the ATCO Transmission and BEMA models by identifying, and making adjustments for, uncontested errors and omissions in ATCO Transmission's cost model. The JEA's analysis was provided in tables 1 and 2 of its argument,

¹⁵³ Exhibit 22125-X0378, AESO Argument, paragraph 12.

¹⁵⁴ Exhibit 22125-X0378, AESO Argument, paragraph 72.

¹⁵⁵ Transcript, Volume 4, pages 836-838.

reproduced below.¹⁵⁶ The reconciliation begins with the difference in NPV between the ATCO generation option and the ATCO transmission option, as shown in Table 1.

Table 2. BEMA's corrections for errors and omissions

Change	Impact (\$M)	Difference
Cost difference, ATCO generation option and ATCO transmission option	n/a	-79.2
Correct omission of 2014-2016 costs	20.5	-59.7
Addition of salvage for new assets	1.5	-58.2
Use PPS estimate for transmission option	22.5	-35.7
Add AFUDC	14.0	-21.7
Add incremental operating reserves cost	4.0	-17.7
Pool price premium over average annual pool price	5.0	-12.7

294. After accounting for the JEA's correction of uncontested errors and omissions, the remaining difference indicates that the cost of the ATCO transmission option remains \$12.7 million lower than the cost of the ATCO generation option. The JEA suggested that this difference between the two options was insignificant given the other impacts (not related to cost) of the transmission line option.

295. The JEA further outlined some contested adjustments, which it considered were unreasonable assumptions in the ATCO Transmission cost model:¹⁵⁷

Table 3. BEMA's contested adjustments

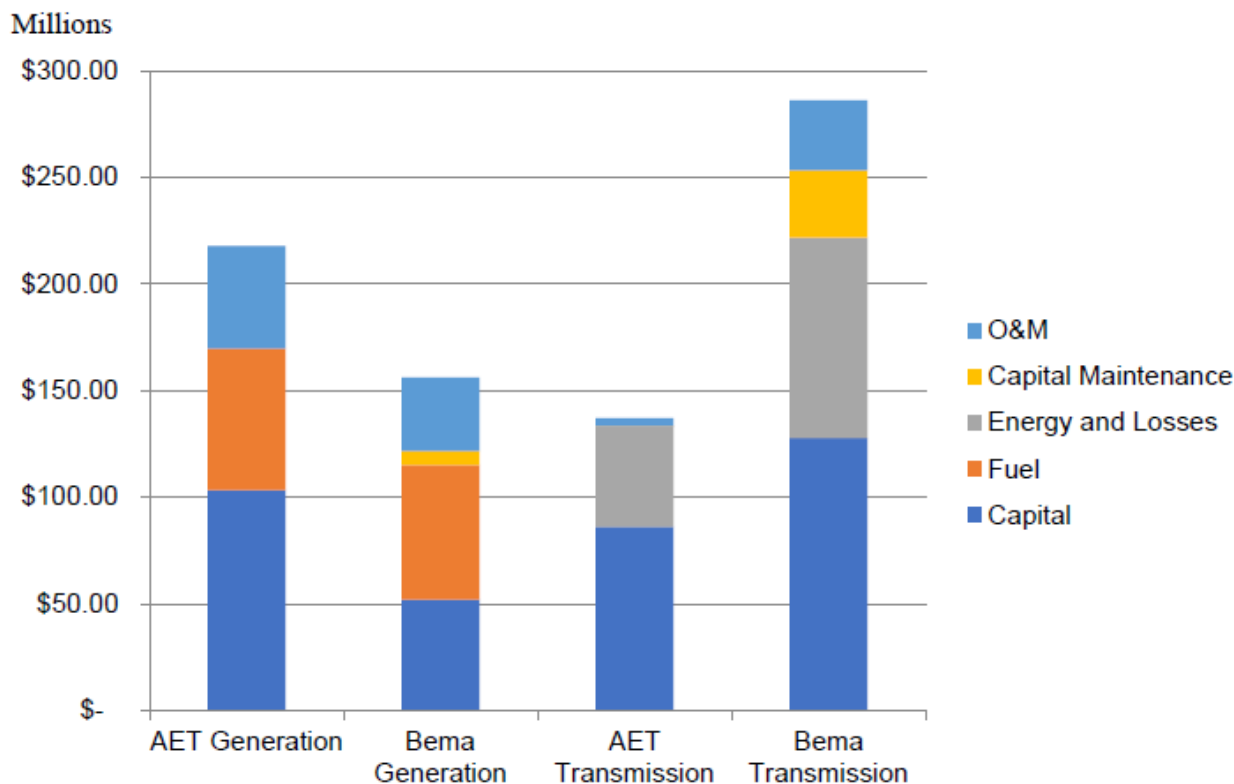
Change	Impact (\$M)	Difference
Cost difference	n/a	-12.7
Correct inconsistent energy, natural gas and carbon price forecasts	29.8	+17.1
Use capital maintenance based on average costs in ATCO Electric's fleet	20.4	+37.5
Use O&M costs based on average costs in ATCO Electric's fleet	23.3	+60.8

¹⁵⁶ Exhibit 22125-X0380, paragraph 102, Table 1 and paragraph 104, Table 2.

¹⁵⁷ Exhibit 22125-X0380, JEA Final Argument, paragraph 109, Table 3.

296. The JEA provided the following figure in its argument to illustrate the indicative difference, by major cost component, between the ATCO Transmission and BEMA revenue requirement models.¹⁵⁸ The uncontested adjustments described in Table 2 are reflected in the ATCO transmission option shown in Figure 2 and the contested adjustments described in Table 3 are reflected in the BEMA transmission option shown in Figure 2. The ATCO generation option, shown in Figure 2, represents the total cost of generation without deduction for the isolated generation credit.

Figure 2 - Indicative differences between the ATCO Transmission and BEMA models



297. While the adjustments for errors and omissions listed above reflect solely the JEA's view, the Commission considers that it was a useful exercise. It clearly demonstrates the extent of the debate in this proceeding around the inputs and assumptions that should be incorporated into the revenue requirement model, and it also demonstrates that a transmission line to connect Jasper with the AIES is a cost effective option.

298. It is important to point out that ATCO Transmission does not agree with all of the uncontested adjustments put forward by BEMA and has addressed each of the JEA's adjustments in its reply evidence and argument.

299. Nevertheless, the JEA's analysis demonstrates that ATCO Transmission's proposed transmission option, when assessed solely from a cost perspective, is economic relative to either of the generation options as a means to supply Jasper with electricity. After adjustments for uncontested errors and omissions, the cost of the transmission line option remains below the cost of either of the generation options. This is further demonstrated by Figure 2, where the cost of

¹⁵⁸ Exhibit 22125-X0380, JEA Final Argument, paragraph 130, Figure 1.

the ATCO transmission option is shown to be lower than both the ATCO generation option and the JEA generation option.

300. In terms of the contested adjustments suggested by BEMA shown in Table 3 above, the Commission does not consider that these further adjustments are supported by the evidence. In addressing the \$29.8 adjustment for inconsistent energy, natural gas and carbon price forecasts, ATCO Transmission submitted that its reply evidence demonstrates that the BEMA energy forecast is the outlier when compared to all other forecasts on the record.¹⁵⁹ ATCO Transmission explained that BEMA did not correctly account for ATCO Transmission's use of an all-in fuel cost that included not only the raw cost of natural gas, but also delivery costs, diesel fuel consumption, and contingent amounts that account for carbon levy costs.¹⁶⁰ Lastly, there was considerable debate about whether to allocate energy costs as a cost to the transmission option, as recommended by BEMA, or to account for it as a credit to the generation option, as recommended by ATCO Transmission and the AESO. The Commission accepts the testimony of the AESO when it explained its reasons for including energy costs as a credit under the generation option:

Q. MR. MOUSSEAU: I'm going to move on, move over to the AESO for a minute or two, and I'm going to be referencing something from the Bema report, which is Exhibit 293, and I'm looking at paragraph 84. It's a short section, and I'm going to read it to you, but I'll let you get there.

There Bema states: (as read) "The AESO and [ATCO Transmission]'s approach is also confusing in that it is not calculating the costs actually borne by consumers because it is treating most of the energy costs under the transmission option as a credit to the generation option."

And I just wanted to know whether the AESO could explain why it included the energy cost as a credit under the generation option?

A. MR. MARTIN: We treated the energy cost as a credit against the generation option for consistency with the isolated generating units and customer choice regulation, and to reflect the costs that are recovered under the transmission tariff. The consumers in Jasper actually pay the same amount for the electricity they receive under ATCO Electric's distribution tariff and under whatever service they're receiving from the retailer they've used.

The AESO then receives, under the isolated generating units regulation, a payment from the retailers reflecting the cost of the energy used by consumers in Jasper at pool price, which is credited against the cost of the operation of the isolated generating units. Those costs, net of credits, are recovered through the AESO tariff, so we treated those exactly in that manner, applying the credit against the cost of the generating units.¹⁶¹

301. The Commission also acknowledges JEA's response to a Commission information request, which indicated:

¹⁵⁹ Exhibit 22125-X0331, ATCO Electric reply evidence, paragraph 167 and Figure 4.

¹⁶⁰ Exhibit 22125-X0387, ATCO Electric reply argument, paragraph 59.

¹⁶¹ Transcript, Volume 3, page 501, line 22 to page 503, line 8.

For clarity, the AESO's treatment of the energy costs does not affect the cost comparison between the options. It only affects the total cost calculated for each option.¹⁶²

302. The Commission accepts the evidence put forward by ATCO Transmission and the AESO with respect to the forecasts used and the associated costs. Consequently, it does not consider the \$29.8 million adjustment to be reasonable.

303. With respect to the JEA's \$20.4 million adjustment for capital maintenance and \$23.3 million adjustment for O&M costs, ATCO Transmission submitted in its reply argument that the use of forecast costs based on ATCO Transmission's gross capital maintenance and O&M costs as a percentage of gross Property, Plant and Equipment (PP&E) would have no correlation to the capital maintenance and O&M costs that will be required for the proposed transmission line.¹⁶³ ATCO Transmission submitted that its approach was to provide a detailed capital maintenance estimate based on planned activities and to estimate O&M costs using an activity-based, bottom-up approach that incorporates its years of experience operating transmission assets.¹⁶⁴

304. The Commission considers that ATCO Transmission's method of estimating these costs, as described, provides a more accurate estimate than basing the estimate on a ratio of PP&E. For this reason, the Commission finds that the \$20.4 million for capital maintenance costs and the \$23.3 million adjustment for O&M costs are not reasonable.

305. The Commission observes that when these adjustments are not accounted for in the BEMA transmission bar graph shown in figure 2, the cost of the JEA transmission option falls more in line with the cost of the ATCO transmission option.

306. As stated previously, the Commission is primarily interested in using the analysis of costs to make a determination on whether a transmission line interconnection is economic, as cost is one of the factors it must evaluate in terms of the economic requirement set out in Section 27(1.1) of the IGUCC Regulation. Based on its review of the cost information on the record, the Commission finds that the connection of Jasper to the interconnected electric system is economic from a cost perspective.

10 Other matters

10.1 System-related versus participant-related cost classification

307. The provisions related to cost classification are included in Section 8, Construction Contributions for Connection Projects, at Subsection 3 of the ISO tariff. The AESO explained that, in accordance with the AESO tariff, it had determined that all costs associated with the proposed transmission development were classified as participant-related.¹⁶⁵ However, it exercised its discretion with respect to the project and increased the maximum local investment

¹⁶² Exhibit 22125-X0321, JEA-AUC-2017DEC08-005, page 9 of 21.

¹⁶³ Exhibit 22125-X0387, ATCO Electric reply argument, paragraph 66.

¹⁶⁴ Exhibit 22125-X0376, ATCO Electric argument, PDF pages 29-30, paragraph 73.

¹⁶⁵ Exhibit 22125-X0001, AESO NID application, Section 2.3, page 6.

available to the project, with the result that all costs for the transmission line option will be recovered from all ratepayers in Alberta.

308. ATCO Transmission submitted that discussions between itself and the AESO on the appropriate cost classification for the project have been ongoing since the project's inception in 2014 and that the two parties disagree. ATCO Transmission considers that the classification should be system-related and not participant-related as the AESO has determined.¹⁶⁶

309. ATCO Transmission explained that Palisades was built pre-deregulation and, in accordance with the IGUCC Regulation, the assets have been considered a proxy for transmission. As such, all Commission-approved costs related to these assets have been included in the tariff that ATCO Transmission charges to the AESO for transmission services and are then averaged across all Alberta ratepayers through the ISO tariff. ATCO Transmission argued that, to be consistent with this treatment, the replacement of assets that are a proxy for transmission assets should be classified as system-related costs.¹⁶⁷

310. In ATCO Transmission's view, the AESO's terms and conditions lack a mechanism to deal with scenarios like the project, where generation assets for an isolated community are replaced by a transmission line that connects the isolated community to the AIES. As a result, a transmission facility owner cannot initiate a system project with the AESO. Rather, ATCO Distribution is required to file a system access service request with the AESO to initiate the project. ATCO Transmission is concerned with this process and indicated that it would seek a Commission ruling on the matter in Proceeding 22093, the AESO's 2017 ISO tariff update application.¹⁶⁸

311. ATCO Transmission further elaborated on its concern related to Section 8 of the ISO tariff in its response to the AESO's comments on its motion in Proceeding 22093.¹⁶⁹

The current provisions of Section 8 clearly are not appropriate for dealing with the unique circumstances of projects that interconnect isolated generation plants. Moreover, Section 8 as currently written actually results in a perverse outcome whereby choosing the more expensive alternative of replacing end-of-life isolated generation with new isolated generation results in costs continuing to be borne by all customers through the transmission tariff, as has historically been the case; whereas choosing a more cost effective interconnection option results in costs being borne by the DFO and its customers.

312. The CCA submitted that the interim treatment of the cost classification should align with the AESO's determination that the costs should be classified as participant-related. The CCA argued that "it is not aware of any compelling evidence to overturn the AESO's October 28, 2016 statement that 'in accordance with the ISO tariff, the AESO has determined that all costs associated with the Proposed Transmission Development will be classified as participant-related'."¹⁷⁰

¹⁶⁶ Exhibit 22125-X0044, AET cost consideration, Attachment 14, paragraph 1.

¹⁶⁷ Exhibit 22125-X0044, AET cost consideration, Attachment 14, paragraph 2.

¹⁶⁸ Exhibit 22125-X0044, AET cost consideration, Attachment 14, paragraphs 6 and 7.

¹⁶⁹ Exhibit 22093-X0048, ATCO Electric responses to AESO comments on motion, page 1, first bullet.

¹⁷⁰ Exhibit 22125-X0381, CCA Argument, paragraphs 29 and 30.

313. In testimony, Mr. Hatto on behalf of the JEA did not take a position on whether the costs for the project should be participant-related or system-related.¹⁷¹ In reply argument, the JEA submitted that it agreed with the AESO's and CCA's positions that the interim tariff classification should be participant-related.¹⁷²

10.1.1 Commission findings

314. While the AESO's decision to exercise its discretion with respect to maximum local investment relates to the AESO's classification of costs, the Commission will address the two issues separately. The former will be addressed here and the latter in the next section.

315. The Commission understands ATCO Transmissions's submissions in this proceeding and in Proceeding 22093 to suggest that the ISO tariff terms and conditions require amendment in order to grant it the relief it seeks in terms of cost classification. The Commission agrees and, consistent with its previous ruling in Proceeding 22093, the AESO's cost classification determination that all costs associated with the project are participant-related is approved on an interim basis, pending the final determination of the terms and conditions, related to Section 8, in the AESO's 2018 ISO tariff application.

10.2 The AESO's discretion to increase the maximum local investment available

316. The local investment for the project was set by the AESO to be equal to the present value of net costs forecast to be recovered through the ISO tariff to serve Jasper as an isolated community. The amount that the AESO calculated was based on ATCO Transmission's estimate of the future costs of providing isolated generation to Jasper, less the future pool price payments for electric energy received by the AESO from retailers purchasing energy on behalf of customers in Jasper.¹⁷³ This calculation was provided in Table 1 of Appendix G and the net result is a maximum local investment allowance of up to \$159.5 million.¹⁷⁴ The total local investment that the AESO applied to the project was the lesser amount of maximum local investment or the net present value of the costs for connecting to the AIES.¹⁷⁵ The net present value of the transmission line option is estimated at \$108.7 million, as such, the full cost is covered by local investment.¹⁷⁶

317. The JEA submitted that in choosing to exercise its discretion, the AESO has applied an investment policy that covers all of the costs and effectively treats the transmission option as if it were a system-related cost, with all of the transmission costs borne by all ratepayers. The JEA stated that the fact that the AESO exercised its discretion in this case has to be tested in this proceeding.¹⁷⁷

318. The JEA recommended that the level of local investment that results from the AESO exercising its discretion should be determined at a more realistic estimate of generation costs and

¹⁷¹ Transcript Volume 3, page 685, lines 7-10.

¹⁷² Exhibit 22125-X0386, JEA Reply Argument, paragraph 104.

¹⁷³ Exhibit 22125-X0004, Application, Appendix G, page 2.

¹⁷⁴ Exhibit 22125-X0004, Application, Appendix G, Table 1, page 3. This number was subsequently updated to \$154.5 as shown in Exhibit 22125-X0336, AESO Cost Update 2, comparison tab.

¹⁷⁵ Exhibit 22125-X0004, Application, Appendix G, Table 1, page 3.

¹⁷⁶ Exhibit 22125-X0004, Application, Appendix G, Table 1, page 3. This number was subsequently updated to \$105.4 as shown in Exhibit 22125-X0336, AESO Cost Update 2, comparison tab.

¹⁷⁷ Exhibit 22125-X0380, JEA Argument, paragraph 207.

suggested something close to the Insitu generation cost estimate. Alternatively, if the cost difference still favours the transmission line option, the transmission line cost should be capped at the PPS estimate plus 20 per cent, and any costs occurred above this amount should be borne by ATCO Transmission shareholders.¹⁷⁸

319. The CCA explained that the decision of the AESO to exercise its discretion with respect to the maximum local investment effectively reduces the participant-related costs to zero, and results in the full cost of the project being, in essence, equivalent to a system cost that will be borne directly by ratepayers across the system.¹⁷⁹ The CCA submitted that the logical forum for determination of the maximum local investment level for the project is in conjunction with classification of costs in the AESO's 2018 ISO tariff application.

10.2.1 Commission findings

320. The AESO's ability to exercise its discretion with respect to maximum local investment is found in Section 8(10) of the ISO tariff, which states:

The ISO may exercise discretion in the application of the construction contribution provisions in the ISO tariff, including the determination of costs to be system-related in certain circumstances that might, under strict application of the construction contribution provisions, have been classified as participant-related.

321. The Commission recognizes the AESO's ability to exercise its discretion with respect to the construction contribution provisions in the ISO tariff, however the Commission must consider whether, in doing so, the AESO has disadvantaged one group of ratepayers over another. In ordinary circumstances, if costs were classified as participant-related and a DFO was required to pay a construction contribution above the maximum local investment, that contribution would be recovered from the ratepayers within the DFO's service territory. Alternatively, if the full costs are classified as system-related or covered in full by the maximum local investment, the costs are recovered from all ratepayers across the system.

322. However, in this case, Jasper is an isolated community, and the cost of isolated generation to serve Jasper is recovered through the ATCO Transmission Transmission Facility Owner tariff, pursuant to the IGUCC Regulation. As such, these costs are recovered from all ratepayers across the system.

323. The AESO has proposed to set the maximum local investment equal to the lesser amount of the NPV of estimated costs to connect Jasper to the AIES and the NPV of costs forecast to be recovered through the ISO tariff for isolated generation. The end result is that the AESO has established a maximum local investment level equal to or less than the amount ratepayers are expected to pay for isolated generation in the absence of a transmission line. In this case all ratepayers are required to pay for isolated generation, pursuant to the IGUCC Regulation, therefore, ratepayers are better off as long as the NPV of the transmission line is less than the NPV of continued isolated generation.

324. In testimony, the AESO explained that there was one other instance in Alberta that predates the AESO and the AESO's NID process, where an isolated community was provided an

¹⁷⁸ Exhibit 22125-X0380, JEA Argument, paragraphs 212 and 213.

¹⁷⁹ Exhibit 22125-X0381, CCA Argument 22125, paragraph 8.

interconnection to the electric system. The AESO referenced Exhibit 222125-X0213.01 and read into the record:¹⁸⁰

The AESO understands that the Cranberry Lake - Kidney Lake 144-kV project referred to by ATCO Electric was treated by the AESO's predecessor as a connection project with all costs deemed customer related in accordance with the AESO tariff in 2001. That would have required a \$7.64 million construction contribution for its connection to the transmission system as it continues onto the next page. However, in consideration of the savings that would result from the conversion of the isolated community to a transmission-connected service, the requirement for construction contribution was waived.

325. During the hearing, Commission counsel asked the AESO whether, in light of the fact that it had to exercise its discretion to increase the maximum investment available, its approach to calculating the maximum local investment in the case of isolated communities should be incorporated into the AESO tariff terms and conditions on a go-forward basis. Mr. Martin's responded as follows:¹⁸¹

A. MR. MARTIN: I would suggest not. I think the isolated communities are quite different in various aspects, including the size of the load being served, including the extent of their isolation, and the actual environment that they're in.

It seems to me that it would be more reasonable to do a case-by-case assessment of each isolated community that is being considered for service through a connection to the interconnected electric system rather than try to predict what might happen at a point in time and then establish some predetermined treatment that may or may not be appropriate.

Q. Thank you, sir. And I take it, then, if you were to be faced with similar circumstances in the future, it would be something that the AESO would have to look at on a -- on a case-by-case basis?

A. MR. MARTIN: Yes. And I think that's one of the reasons why we have the opportunity to exercise discretion in circumstances covered under the tariff.

326. In the unique circumstances of this project, and for the reasons described above, the Commission finds that setting the maximum local investment equal to the lesser amount of the NPV of estimated costs to connect Jasper to the AIES and the NPV of the estimated future costs to provide isolated generation to Jasper, less the future pool price payments for electric energy received by the AESO from retailers, is in the public interest.

11 Whether the project is in the public interest, having regard to the cost, reliability, and environmental effects of the proposed options

327. As previously stated, the Commission's task in this proceeding is to determine whether approval of the project is in the public interest, having regard to the unique context of the NID and facility applications that comprise Proceeding 22125.

328. In the sections above, the Commission considered the generation and transmission options proposed by ATCO Transmission and the generation option proposed by the JEA from

¹⁸⁰ Transcript, Volume 2, page 457, line 24 to page 458, line 15.

¹⁸¹ Transcript, Volume 3, page 508, line 25 to page 509, line 18.

the perspectives of technical capability, reliability, land use and environmental impacts, and relative project cost. The Commission's findings on those sections are summarized in the following table.

	ATCO Generation	JEA Generation	ATCO Transmission
Technically viable	Yes	Uncertain	Yes
Reliability	Most reliable	4-unit configuration does not meet N-1. Reliability of 5-unit configuration uncertain.	Meets ATCO Distribution's reliability guidelines but some risk of long term outage remains.
Land use and environmental impacts	Minimal footprint risk, continued reliance on fossil fuels, fuel transportation risk.	New footprint, continued reliance on fossil fuels, fluid transportation risks and emissions.	Linear disturbance but uses existing disturbances effectively.
Project cost	Highest	Unclear but likely more or equal to transmission	Lower than ATCO Generation, equal to or lower than JEA Generation.

329. Having made the above findings, the Commission can now render its decisions on:

- i. whether the transmission option is economic, as that term is used in Section 27(1.1) of the IGUCC Regulation;
- ii. whether an interested party has demonstrated that the NID is technically deficient or that its approval is not in the public interest; and
- iii. whether approval of the routing and siting of the proposed transmission option is in the public interest having regard to its social, economic and environmental effects.

11.1 The transmission option is economic

330. The Commission found earlier that the term “economic”, as it is used in Section 27(1.1) of the IGUCC, must be read broadly. It concluded that the relative cost of the generation and transmission options being compared under that section must reflect the costs required to provide market participants with an acceptable level of reliability and to effectively minimize or mitigate, to an acceptable degree, their respective social, economic and environmental impacts.

331. The Commission further finds that, even when the above factors are accounted for, a decision that interconnection is economic for the purposes of Section 27(1.1) does not require that a transmission option cost less than an isolated generation option. Rather, given the emphasis in the statutory scheme on the importance of system access service to facilitate reasonable opportunities for the exchange of electric energy, as long as the costs of a viable transmission option are not materially greater than the costs of an isolated generation option, the transmission option will be economic for the purposes of Section 27(1.1).

332. The Commission is satisfied that the ATCO generation option will meet or exceed ATCO Distribution’s reliability standards and its Distribution Planning Guidelines. None of the parties to the proceeding suggested otherwise. Also uncontested is that the estimated cost of ATCO generation option, which includes the costs of environmental mitigation, is materially higher than either the ATCO transmission option or the JEA generation option.

333. The Commission is also satisfied, for the reasons set out above, that the ATCO transmission option is capable of providing an acceptable level of reliability to Jasper. Specifically, the Commission finds that the ATCO transmission option satisfies the minimum reliability requirements set out in the Alberta Reliability Standards and that this option is likely to consistently satisfy the four-hour outage restoration target established by ATCO distribution. The Commission takes some comfort in ATCO Distribution’s acceptance of the predicted reliability of the transmission option and the fact that, in the unlikely event of an extended outage, ATCO Distribution will be obligated to ensure safe and reliable service through other means, including the use of portable generating units.

334. As set out earlier in this decision, the JEA generation option, as originally proposed with four generating units, does not meet the minimum reliability requirements for generation established by ATCO Distribution. Likewise, the Commission remains unconvinced that the five-unit configuration, proposed by the JEA late in the hearing and with no supporting documentary evidence or analysis, would satisfy the N-1 and N-2 reliability criteria for an isolated generation option established by ATCO Distribution. Further, the Commission accepts ATCO’s evidence that reciprocating engines are unable to ride through the types of distribution faults experienced on the Jasper system and that effective operation of the Jasper system relies on the continued operation of a turbine operation with support from reciprocating engines.

335. However, even if the JEA generation option satisfied ATCO Distribution’s reliability standards, the Commission is not convinced, on a balance of probabilities, that the cost of such an alternative would be materially less than the transmission option, rendering the ATCO transmission option uneconomic. To the contrary, the Commission’s conclusion, as set out in Section 9.2, is that the connection of Jasper to the AIES is economic from a cost perspective and the projected costs of that option include the costs to effectively minimize or mitigate its environmental impacts. Moreover, this conclusion was based on a comparison of the costs of the

ATCO transmission option and the costs of the original four-unit configuration proposed by Insitu. With the addition of another generating engine and associated costs, the difference between the JEA generation option and the ATCO transmission option is likely to be even higher.

336. The Commission finds that the ATCO transmission option, endorsed by the AESO in its NID and described in the ATCO Transmission and AltaLink facility applications, is the lowest cost, viable option that can provide an acceptable level of reliability in the Jasper area. The Commission further finds that the environmental effects of the transmission option can be adequately mitigated as detailed in the DIA, as can the other identified land use impacts. Accordingly, the Commission finds that the connection of Jasper to the AIES is economic for the purposes of Subsection 27(1.1) of the IGUCC Regulation.

11.2 Whether the AESO's assessment of the need is correct

337. In Decision 2004-087, the Commission's predecessor the Alberta Energy and Utilities Board established a two-stage process for the consideration of NID applications under Section 34 of the *Electric Utilities Act*.¹⁸²

338. In the first stage, the Commission 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. With respect to system access service requests under Section 34(1)(c), a determination of the need to provide system access service must consider any potential constraint to the AIES and an assessment of overall system performance on the AIES that may result from providing the requested access.¹⁸³

339. In the second stage, the Commission must assess whether the enhancement or expansion proposed by the AESO is reasonable and in the public interest. The Commission considers that this assessment must consider whether the transmission alternative proposed by the AESO is in the public interest having regard to its technical capability, economics or costs, and any high level land-use issues and environmental effects.

340. As the Commission understands it, the JEA's position is that approval of the NID is not in the public interest because the AESO's preferred alternative, the transmission option, is not the lowest cost option and because the high level land use and environmental impacts associated with the transmission option are unacceptable. The JEA filed considerable expert evidence on the first issue and no expert evidence on the second issue.

11.2.1 The need to expand or enhance the transmission system

341. As explained earlier, the AESO filed its NID in response to a request for system access service from ATCO Distribution, in accordance with Section 34(1)(c) of the *Electric Utilities Act*.¹⁸⁴

¹⁸² Decision 2004-087: Alberta Electric System Operator Needs Identification Document Application Southwest Alberta 240-kV Transmission System Development Pincher Creek – Lethbridge Area Addendum to Decision 2004-075, Application 1340849, October 14, 2004, page 13.

¹⁸³ Decision 2004-087, page 13.

¹⁸⁴ Exhibit 22125-X0001, PDF page 3.

342. In the hearing, the AESO explained its view that when it receives a system access service request, the need in that case is for the AESO to respond to that request. The AESO must then determine whether an expansion or enhancement to the transmission system is required to respond to that need. The AESO in this case made efforts to understand the distribution system deficiency identified by ATCO Distribution, and in so doing looked at supply options that involved generation, transmission or a combination. However, the AESO is obligated to provide system access service to a market participant, and ultimately the only way the AESO could proceed was with a transmission line option that provides a physical connection to the AIES.¹⁸⁵

343. After the AESO has determined whether an expansion or enhancement to the transmission system is required to respond to the need (in this case being the system access service request), the NID application is filed, describing the need and the transmission facilities required, as was the case in this proceeding.

344. With respect to the scope of the need, the business case showed that the six generating units that then constituted Palisades had a nameplate rating of 13.98 MW. ATCO Transmission explained that four of those generating units, with a combined capacity of 7.38 MW were near end of life with planned retirements by 2021.

345. The business case indicated that there is a shortfall of generation under single and double contingency planning criteria. The business case assumed the area peak load would grow from 9 MW to 12.8 MW when the Kinder Morgan pumping station load returned to its contracted amount. It also forecasted a load growth of 0.2 per cent per year beyond 2017.

346. The JEA did not dispute ATCO Transmission's assessment that some of the equipment at Palisades is nearing its end of life. However, it challenged the timing and urgency of the required replacement. The JEA argued that ATCO Transmission's assertion of the urgency of the project is driven by Kinder Morgan's intentions to resume full operations at its pumping station in the area. The JEA submitted that the evidence on Kinder Morgan's intentions should be given little weight by the Commission.

347. The JEA disputed the 12.8 MW peak load request. The JEA stated that Jasper's historical peak loads between 2010 and 2015 ranged from 7.3 to 9.5 MW and that the system access service request sought a total of 10 MW by January 2017 and an increase of 4 MW by January 2021. The JEA stated that between now and 2021, Palisades has a nameplate rating of 12.98 MW, which is sufficient to meet historic loads and to satisfy ATCO Distribution's system access service request.¹⁸⁶ According to the BEMA report filed by the JEA, it appeared that the 12.8 MW reflected the sum of contracted load without taking into account the fact that the contracted load levels will not all be consumed simultaneously. The JEA criticized this, indicating that the NID should address coincident load and not the total non-coincident load, which would overstate the peak load required.¹⁸⁷

348. ATCO Transmission confirmed in response to an information request that Trans Mountain Pipeline and ATCO Distribution are parties to an existing Electric Service

¹⁸⁵ Transcript Volume 2, pages 444-446.

¹⁸⁶ Exhibit 22125-X0380, PDF page 8.

¹⁸⁷ Exhibit 22125-X0293, PDF page 44.

Agreement¹⁸⁸ under which the Trans Mountain Pipeline has a contracted maximum demand of 3,750 kilovolt-amperes. ATCO Transmission stated that in 2013, Trans Mountain Pipeline voluntarily worked with ATCO Distribution on an operating plan to minimize its load to assist in managing generation reliability within Jasper during a generator outage. To accomplish this, Trans Mountain Pipeline ran alternative pumping stations that were not dependent on generation from Jasper over the short-term, but with the intention of eventually returning to normal operations.¹⁸⁹ ATCO Distribution confirmed that in 2006 to 2008, prior to this reduction, the peak demands were 12.0, 12.3 and 12.2 MW respectively and that absent the reduction, the peak winter load in 2016 would have been 12.8 MW.¹⁹⁰ ATCO Transmission also confirmed that the capacity sought by ATCO Distribution in its system access service request is reflective of coincident peak load.¹⁹¹

11.2.2 The technical solution proposed by the AESO

349. At the hearing, the AESO clarified that it is limited in how it can respond to a request for system access service where the market participant is not connected to the AIES. The AESO has a duty under sections 17(g) and 29 of the *Electric Utilities Act* to provide system access service on the transmission system in a manner that gives all market participants wishing to exchange electric energy and ancillary services a reasonable opportunity to do so. As stated in the AESO's argument, in accordance with Section 34 of the *Electric Utilities Act*, the AESO does not have the jurisdiction to direct or propose the development of generating facilities through a NID, which inherently considers only expansions or enhancements to the capability of the transmission system.¹⁹²

350. In the circumstances of a system access service request, which included a request to evaluate options for the continued supply of electric energy to Jasper, the AESO examined the supply options available to Jasper beyond a transmission-only option. However, the AESO clarified that this examination was primarily used to inform the AESO's treatment under the ISO tariff of the maximum investment level associated with the preferred transmission connection alternative selected by the AESO. This examination was not conducted for the purpose of assessing whether an isolated generation or backup generation option could be selected as a viable technical solution that would be capable of meeting the need identified.¹⁹³

351. In testimony, the AESO was asked what its response would have been if, hypothetically, its analysis had indicated that the generation-only option was, for example, superior from an economic perspective. Mr. Kruger explained the process as follows:

I would first like to reiterate that the AESO can not propose or direct the use or development of generating facilities for the purpose of a NID application. So there's one situation that we'd have to contend with, is that even if a supply-only option, that is generation only -- excuse me, a generation-only supply option was clearly superior based on economics, the AESO could not propose that or direct that in a NID.

¹⁸⁸ Exhibit 22125-X0231, PDF page 37, referencing the Electric Service Agreement between Trans Mountain Pipeline and ATCO Electric Distribution dated June 1, 1997.

¹⁸⁹ Exhibit 22125-X0231, PDF page 37.

¹⁹⁰ Transcript, Volume 1, pages 65-68.

¹⁹¹ Exhibit 22125-X0378, PDF page 15.

¹⁹² Exhibit 22125-X0378, AESO Written Argument, paragraph 19.

¹⁹³ Exhibit 22125-X0378, AESO Written Argument, paragraph 28.

I would follow that up by saying that if the AESO were to find that a generation-only option was economically superior, if you wish, what the AESO would do in all likelihood is, at minimum, take it back and discuss it with the market participant that submitted the system access service request.

Now, this is a hypothetical and I don't know exactly what the AESO would do other than that. And then what we would wait to hear from the market participant is how this information impacts their system access service request or their decision to have submitted one to the AESO.

The market participant would be in a situation where they need to determine whether they wish to proceed with the generation-only option or whether they wish to sustain their system access service request. If the system access service request is rescinded or withdrawn, then the AESO would presumably proceed to terminate the project in accordance with the AESO connection process. But if the market participant wishes to sustain that system access service request, then I think the AESO would still be obligated to provide that system access service. And if you're dealing with an isolated community like Jasper, that would mean the AESO would have to propose a physical connection.¹⁹⁴

352. As explained by John Martin on behalf of the AESO, the primary choice facing the market participant (in this case, ATCO Distribution) is to decide whether to sustain and continue its request for system access service, or pursue another option such as generation-only. This choice is informed by the price signal provided by the ISO tariff. In accordance with that framework, the AESO considered the available options to inform its treatment of the maximum investment level associated with the preferred transmission connection alternative under the ISO tariff.¹⁹⁵

353. The AESO examined two connection alternatives for a transmission line. Alternative 1 consisted of the following:

- Constructing a new 69/25-kV point-of-delivery substation (Sheridan 2085S Substation), including two 69/25-kV, 25-megavolt ampere (MVA) transformers, two 69-kV circuit breakers, three 25-kV circuit breakers and associated substation equipment. This would be developed by ATCO Transmission.
- Construction of a new 69-kV transmission line to connect the Sheridan 2085S Substation to the existing Watson Creek 104S Substation. This would be developed by both ATCO Transmission and AltaLink.
- Altering the Watson Creek 104S Substation by adding two 138/69-kV, 25-MVA transformers, two 138-kV circuit breakers and a 69-kV circuit breaker.

354. With respect to Alternative 1, ATCO Distribution submitted that two 69-kV circuit breakers at the Sheridan 2085S Substation are needed to meet its reliability requirements. The AESO determined that two 138-kV circuit breakers are required at the Watson Creek 104S Substation for reliability purposes.

¹⁹⁴ Transcript Volume 2, pages 447-448.

¹⁹⁵ Transcript Volume 1, pages 90-91; Transcript Volume 2, pages 448-449.

355. Alternative 2 was similar to alternative 1, but only added one 69/25-kV, 25-MVA transformer to the Sheridan 2085S Substation and one 69/25-kV, 25-MVA transformer to the Watson Creek 104S Substation. The AESO ruled out alternative 2 because ATCO Distribution advised the AESO that one transformer at the Sheridan 2085S Substation would not meet the recommendation for load restoration in accordance with its Distribution Planning Guideline. In addition, the AESO determined that the addition of a single transformer at the Watson Creek 104S Substation would not provide sufficient reliability to meet ATCO Distribution's request for system access service.

356. Accordingly, the AESO selected alternative 1 as its preferred alternative for transmission development. The AESO conducted a connection assessment, consisting of power flow and voltage stability analyses to assess the impact of its proposed transmission development on the AIES. The connection assessment found that the AESO's proposed transmission development and associated load would not adversely impact transmission system performance.¹⁹⁶

357. With respect to the costs of the AESO's preferred transmission alternative, as noted above, the Commission has considered the question of whether a connection from the Jasper area to the AIES is economic. In this section, the Commission assesses the cost of the AESO's preferred transmission alternative proposed in the NID. The AESO submitted that from a cost perspective, there are three key facts the Commission should focus on in the context of determining whether to approve the NID:

- The capital cost estimate for the preferred transmission alternative is substantially lower than ATCO Transmission's cost estimate for continued isolated generation to serve Jasper.
- The JEA's capital cost estimate for the preferred transmission alternative is less than ATCO Transmission's isolated generation supply option.
- ATCO Transmission has consistently confirmed that Insitu's proposal to use reciprocating natural gas units for isolated generation in Jasper will not meet reliability requirements for an isolated distribution system and do not meet ATCO Distribution's planning guidelines.¹⁹⁷

358. The AESO concluded that the capital cost savings is material and for this reason, the AESO's proposed transmission development is in the public interest.¹⁹⁸

359. The JEA's consultant, BEMA, testified that it had also conducted a high-level analysis of a distribution option that would connect Jasper to the AIES using two 25-kV distribution lines operating in parallel, but built on separate routes. BEMA explained that it sought information to conduct its own modelling but ATCO Transmission refused to provide the requested information on the basis that it was not relevant to this proceeding. Therefore, BEMA modelled the distribution alternative based on the limited information available and assumptions on the

¹⁹⁶ Exhibit 22125-X0001, PDF page 10.

¹⁹⁷ Exhibit 22125-X0378, AESO Written Argument, paragraphs 74 to 77.

¹⁹⁸ Exhibit 22125-X0378, AESO Written Argument, paragraph 79.

existing distribution loads based on experience.¹⁹⁹ BEMA submitted that the total estimated capital cost for the distribution alternative is \$34.3 million.²⁰⁰ In argument, the JEA stated:

A 25-kV underground option likely results in a lower cost than the overhead transmission option and it follows that it would certainly be less than a buried transmission line option. However, the lack of information provided by [ATCO Transmission] regarding [ATCO Distribution]'s distribution system prevented further in-depth analysis of this option and accordingly BEMA cannot recommend this option at this time.²⁰¹

360. The JEA suggested that the transmission line should be buried and postulated that if the added efficiencies and lower maintenance costs over a 40-year life expectancy were taken into account, the cost of a buried transmission line could be very close to an overhead transmission line.²⁰² However, in argument, the JEA concluded that a networked buried distribution line would be even less expensive and would meet the need.²⁰³

361. In its reply evidence, ATCO Transmission suggested that because BEMA uses a similar covered conductor configuration as ATCO Transmission, and ATCO Transmission has already provided a PPS quality estimate per kilometre of line for covered conductor:

...a rough order of magnitude estimate for line construction costs could be created as: \$848,000/km x 3 circuits x 48km = \$122 million. This considers direct costs only. Indirect and owners costs would further increase this estimate. In [ATCO Transmission]'s experience, underground cable in Jasper would be similar or more expensive than the \$848,000/km. Even with shared rights-of-way in some cases and the additional facilities costs at Watson Lake, a high-level review of the realistic construction costs shows that this option does not require further consideration.²⁰⁴

11.2.3 The AESO's use of an abbreviated NID

362. The AESO submitted an abbreviated needs identification document (ANID) in accordance with Section 6.2 of Rule 007. Rule 007 states that the AESO may submit an ANID for "[a] project responding to a generation or load system access service request at an estimated cost of less than \$5 million for system-related cost."²⁰⁵ The AESO stated that it proceeded by way of an ANID in this case because it was in response to a system access service request, and the AESO classified the costs of the project as participant-related in accordance with the ISO tariff.

363. The JEA took issue with the AESO's choice of using the ANID process, noting that the AESO's application only meets the requirements for an ANID under Rule 007 if the AESO assumes its cost classification prevails in its upcoming ISO tariff application. The JEA further argued that the rate impact of the AESO's application in this proceeding is identical to a system cost classification because the AESO exercised its discretion to increase maximum investment levels. The JEA submitted that the AESO was not justified in filing an ANID application rather than a full NID application under Rule 007.

¹⁹⁹ Exhibit 22125-X0293, paragraph 307.

²⁰⁰ Exhibit 22125-X0293, paragraph 321.

²⁰¹ Exhibit 22125-X0380, paragraph 216.

²⁰² Transcript, Volume 4, page 734, lines 15-24.

²⁰³ Exhibit 22125-X0380, paragraph 217.

²⁰⁴ Exhibit 22125-X0331, paragraph 159.

²⁰⁵ Rule 007, Section 6.

364. The AESO argued that, to the extent the Commission was to determine either in this proceeding or any other, that the NID should have proceeded by way of a full NID, but for one requirement of Rule 007 – that the AESO must publish a notice of the NID in local newspapers--its participant involvement program substantively met all of the Rule 007 requirements of a full NID application.²⁰⁶

11.3 Commission findings

11.3.1 The need to expand or enhance the transmission system

365. As noted earlier, Section 38(e) of the *Transmission Regulation* states that the Commission must consider the AESO's assessment of the need to be correct unless an interested party satisfies it that the AESO's assessment of need was technically deficient or that approval of the NID would not be in the public interest. For the reasons that follow, the Commission finds that no person has demonstrated that the AESO's assessment of the need for the project was technically deficient or that approval of the NID would not be in the public interest.

366. The Commission acknowledges that NID applications in response to a request for system access service are distinct from NID applications for which the AESO has identified a constraint or need for efficiency in the transmission system. In this case, the need is the request for system access service, as supported by the business case prepared by ATCO Transmission on behalf of ATCO Distribution.

367. With respect to the scope of the need, it was undisputed that a number of units in Palisades were reaching their end of life, and that some action was required to ensure the continued supply of electric energy to the Jasper area. The disagreement between the parties was a matter of timing, and the proposed solution to meet the need identified.

368. Given the evidence demonstrating that four of the six generating units in Palisades would be reaching end of life by 2021, the Commission finds that it was prudent and proactive for ATCO Transmission to assess whether the needs of the Jasper area were best served by the continuation of isolated generation from Palisades. The evidence before the Commission supports the timing of the need identified.

369. As noted above, the JEA disputed the 12.8-MW peak load request, based on historical peak loads between 2010 and 2015 and that the NID addressed total non-coincident load, thus overstating the peak load required. The Commission considers that the evidence provided by ATCO Transmission in relation to the expected load in the Jasper area supports the AESO's assessment of the need. ATCO Transmission confirmed the contracted maximum demand to which Kinder Morgan is entitled under an existing agreement, and showed that peak loads in 2006-2008 were 12 MW or higher, prior to a voluntary operating plan being agreed upon by Kinder Morgan to minimize its load. In raising its concerns with respect to the timing of the need, the JEA placed some reliance on uncertainty surrounding Kinder Morgan's intentions with respect to its facilities. However as noted by ATCO Transmission, Kinder Morgan is entitled to its maximum contracted demand. The Commission finds that the evidence supporting the 12.8-MW peak load is credible.

²⁰⁶ Exhibit 22125-X0378, AESO Written Argument, paragraph 85 and 90.

11.3.2 The technical solution proposed by the AESO

370. The Commission agrees with the AESO's interpretation of its responsibilities under Section 34 of the *Electric Utilities Act* as discussed earlier and in turn, with the AESO's proposal for a transmission-only option. As articulated in those sections, under the *Electric Utilities Act*, the AESO cannot propose a generation alternative in order to supply the Jasper area.

371. As an alternative to the transmission option preferred by the AESO in its NID, the JEA proposed a buried transmission line option, suggesting that if added efficiencies and maintenance costs over its life were considered, the cost of the buried line would be close to an overhead transmission line. The Commission does not consider that an underground transmission option was sufficiently developed in this proceeding to be considered a viable option. Therefore, the Commission will not consider this option further.

372. The JEA's consultant also conducted a high-level analysis of a distribution option that would connect Jasper to the AIES via two 25-kV distribution lines. The Commission does not consider that the distribution line option alternative was sufficiently developed to be considered a viable option. In particular, the Commission acknowledges ATCO Transmission's evidence that the limited cost information offered does not include indirect costs, nor is there any evidence on the costs that may need to be incurred to mitigate potential social or environmental impacts potentially caused by locating two 25 kV distribution lines and operating them in parallel on separate routes.

373. The Commission finds that there is only one viable alternative for consideration before it as part of the NID, and that the AESO's preferred transmission alternative is the least cost alternative that meets the AESO's technical requirements and has sufficient reliability to meet ATCO Distribution's request for system access service.

374. As noted in Section 11.2, the Commission has historically conducted a two-stage analysis for considering NID applications, the second stage of which requires an assessment of whether the enhancement or expansion proposed by the AESO is reasonable and in the public interest. As part of this analysis, the Commission has historically assessed the preferred solution against the alternative options proposed by interveners, from the perspective of technical capability, economics or project costs, and high level land use and environmental issues. The Commission's assessment of these factors has been conducted in detail in preceding sections and supports that the enhancement or expansion proposed by the AESO is in the public interest.

11.3.3 The AESO's use of an abbreviated NID

375. With respect to the JEA's concern that an ANID process was used rather than a full NID application, the Commission considers that the process used was adequate in the circumstances. Rule 007 allows an ANID to be filed for a transmission development that is responding to a system access service request with an estimated cost of less than \$5 million, or a system-related cost. The AESO classified the project as participant-related in accordance with the ISO tariff, and as such, the application as filed met the requirements of an ANID under Rule 007.

376. Further and in any event, the Commission notes that the AESO's application met the requirements under Rule 007 for a full NID application, with the exception that a notice was not published in local newspapers. From a practical perspective the Commission considers that there is no difference between the NID and ANID process in this case, as the notification program

carried out with respect to the project included publication in local newspapers. The applications were considered jointly under section 15.4 of the *Hydro and Electric Energy Act*, and accordingly the AESO requested ATCO Transmission and AltaLink to assist in the notification and consultation. Both ATCO Transmission and AltaLink included the AESO's consultation material in their consultation packages and at the information sessions. The Commission also notes that a number of project related news articles appeared in the Jasper Fitzhugh newspaper. Lastly, the notice issued by the Commission in this proceeding included publication in local newspapers.

11.3.4 Conclusion

377. For the reasons above, the Commission finds that no person has demonstrated that the AESO's assessment of the need was technically deficient, or that approval of the NID would not be in the public interest.

11.4 Approval of the facility applications is in the public interest

11.4.1 Commission findings

378. The Commission's public interest determination under Section 17 of the *Alberta Utilities Commission Act* requires it to consider whether the ATCO Transmission and AltaLink facility applications are in the public interest having regard to the social, economic and environmental effects of the project. This requires the Commission to balance the benefits and impacts of the project, while having regard to the legislative framework for transmission development in the province.

379. As laid out in Section 5.3, in this case the Commission has followed a holistic approach to assessing the combined NID and facility applications, and in the preceding sections has made various findings that are inextricably linked to its public interest determination on the facility applications.

380. The Commission has considered the relative environmental effects of the proposed transmission option in comparison to the generation alternatives in Section 8.5.3 above, and found that from a NID perspective, the proposed alternative is in the public interest having regard to its high level land use and environmental effects. From a detailed routing and site selection perspective, the Commission has reviewed the methodologies used, the environmental effects of the proposed facilities, and the mitigation measures proposed. Having regard to the site-specific impacts as well as the relative environmental effects of the proposed generation options, the Commission finds that approval of the project is in the public interest having regard to its environmental effects.

381. The Commission has also considered the economics of the project at length in this decision, and has made its determination on the facility applications in light of the legislative framework required in the particular context of isolated generation. The Commission has considered the social impacts of the project and had regard for the technical viability of the alternatives proposed, and the relative reliability of the available supply options. As noted above, the Commission finds that the proposed transmission alternative is the least cost alternative that is viable to meet the needs of Jasper.

382. The Commission finds that the alterations to transmission lines 847L and 615L are minor in nature and agrees with AltaLink that it does not need to request new permits and licences.

383. For all of its reasons above and in the preceding sections, the Commission finds that approval of the ATCO Transmission and AltaLink facility applications is in the public interest, having regard for the social, economic and environmental effects of the project.

11.5 Construction completion date

384. The AESO anticipated a scheduled in-service date for the project of May 1, 2018. The AESO stated that in the event the proposed facilities were not in service by November 1, 2018, it would inform the Commission in writing whether the need to expand or enhance the transmission system as proposed continued, and whether the technical solution continued to be the AESO's preferred technical solution.²⁰⁷

385. AltaLink and ATCO Transmission anticipated an in-service date of May 2018, subject to receiving Commission approval by June 2017. They stated that a delay in obtaining the permits might require construction in frozen ground conditions which would affect the project schedule and cost.²⁰⁸ ATCO Transmission confirmed its revised in-service date of December 30, 2019 at the hearing.²⁰⁹

11.5.1 Commission findings

386. The Commission received a revised in-service date from ATCO Transmission, but not from the AESO or AltaLink. The Commission finds the extension of the in-service date to be warranted and extends the in-service date to the AltaLink facilities.

12 Decision

387. The overarching question considered by the Commission in this proceeding was whether it is in the public interest to continue supplying the Jasper area via an isolated generation supply option or to connect the area to the AIES. The Commission's assessment of the public interest was contextual and guided by the applicable statutory scheme, which required it to consider whether interconnection to the AIES is "economic", taking into account the relative costs of mitigating the social, economic and environmental impacts of the various supply options that have been proposed.

388. The Commission is satisfied that the ATCO transmission option will meet the relevant reliability standards, criteria and guidelines and will provide an acceptable level of reliability to the Jasper area. With respect to environmental and land use impacts, the Commission weighed the different types of impacts presented by a transmission connection or an isolated generation option. The Commission finds that the impacts caused by construction of the ATCO transmission option through Jasper National Park can be effectively and acceptably mitigated. It also finds that the overall environmental impacts of a transmission option are lower than the impacts of a generation option, taking into account that an isolated generation option would prolong the Jasper area's dependence on fossil fuels for the next 40 years. The Commission is satisfied that

²⁰⁷ Exhibit 22125-X0001, Sheridan 2085S Substation Needs Identification Document, PDF page 11.

²⁰⁸ Exhibit 22125-X0031, AML ATCO Jasper Interconnection – Application, PDF page 78 and Exhibit 22125-X0042, Attachment1_ApplicationText, PDF pages 18-19.

²⁰⁹ Transcript, Volume 3, page 533.

from a cost perspective, the ATCO transmission option is the lowest cost option, after taking into account its social, economic and environment effects.

389. Having regard to the foregoing, the Commission concludes that it is economic to connect Jasper to the AIES and that approval of the Jasper project is in the public interest, having regard to its social, economic and environmental effects. In making this decision, the Commission confirms that no person demonstrated that the AESO's assessment of the need was either technically deficient or that approval of the NID was not in the public interest.

390. In approving the applications the Commission makes no determination regarding the regulatory treatment of the costs of the assets to be removed, retired or abandoned pursuant to the application, the costs incurred in carrying out these activities, or the associated rate implications.

391. Pursuant to Section 34 of the *Electric Utilities Act*, the Commission approves the need outlined in Needs Identification Document Application 22125-A001 and grants the AESO the approval set out in Appendix 1 – Needs Identification Document Approval 22125-D02-2018 – May 4, 2018.

392. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 22125-A002 and grants AltaLink Management Ltd. the approval set out in Appendix 2 – Substation Permit and Licence 22125-D03-2018 – May 4, 2018, to alter and operate the Watson Creek 104S Substation.

393. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 22125-A003 and grants AltaLink Management Ltd. the approval set out in Appendix 3 – Transmission Line Permit and Licence 22125-D04-2018 – May 4, 2018, to construct and operate the transmission line 530L.

394. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 22125-A004 and grants ATCO Electric Ltd. the approval set out in Appendix 4 – Substation Permit and Licence 22125-D05-2018 – May 4, 2018, to construct and operate the Sheridan 2085S Substation.

395. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 22125-A005 and grants ATCO Electric Ltd. the approval set out in Appendix 5 – Transmission Line Permit and Licence 22125-D06-2018 – May 4, 2018, to construct and operate the transmission line 6L530.

396. Pursuant to Section 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 22125-A006 and grants ATCO Electric Ltd. the approval set out in Appendix 6 – Connection Order 22125-D07-2018 – May 4, 2018, to connect transmission line 6L530 to transmission line 530L.

397. The appendices will be distributed separately.

Dated on May 4, 2018.

Alberta Utilities Commission

(original signed by)

Anne Michaud
Panel Chair

(original signed by)

Neil Jamieson
Commission Member

(original signed by)

Carolyn Hutniak
Commission Member

Appendix A – Proceeding participants

Name of party or organization (abbreviation) Name of counsel or representative
Consumers' Coalition of Alberta (CCA) J. Wachowich
Jill Seaton David Hatto N. Ramessar
Energy Storage Canada J. Van Egteren
Greg Slatter
Jasper Environmental Association N. Ramessar
Kinder Morgan Canada Inc. K. Slipp
Municipality of Jasper J. Cusano
Peter Bubik
Samson Cree Nation K. Buffalo
Wachi Nehiyawak (Mountain Cree) / Bobtail Descendants Traditional Band J. Cooper

Alberta Utilities Commission
Commission panel
A. Michaud, Panel Chair
N. Jamieson, Commission Member
C. Hutniak, Commission Member
Commission staff
K. Macnab (Commission counsel)
J.P. Mousseau (Commission counsel)
A. Chen
V. Choy
W. MacKenzie
H. Ritchie

Appendix B – Oral hearing – registered appearances

Name of party, group or organization (abbreviation) Name of counsel or representative	Witnesses
Alberta Electric System Operator (AESO) D. Langen L. Lees V. Light	M. Mazadi J. Martin J. Kruger
ATCO Electric Transmission, a division of ATCO Electric Ltd. B. Williams T. Wyers	G. Vachon D. Baptist S. Martin T. McDonnell
AltaLink Management Ltd. (AltaLink) B. Hunter L. Coward	K. Deane
Jasper Environmental Association N. Ramessar R. Barata	J. Seaton D. Hatto D. Madsen D. Levson T. Cline D. Sullivan
Consumers' Coalition of Alberta (CCA) J. Wachowich	
Kinder Morgan Canada Inc. K. Slipp	
Municipality of Jasper J. Cusano R. Johnston	
Peter Bubik	

Appendix C – Summary of Commission directions with required deliverables

This section is provided for the convenience of readers. In the event of any difference between the directions in this section and those in the main body of the decision, the wording in the main body of the decision shall prevail.

1. ATCO Transmission is directed to file with the Commission its finalized Environmental Protection Plan when available and prior to commencing construction. This direction will be a condition of Substation Permit and Licence 22125-D05-2018 and Transmission line Permit and Licence 22125-D06-2018.
2. ATCO Transmission is directed to file with the Commission, within three months of the completion of construction, a report confirming compliance with the Environmental Protection Plan. In the event that ATCO Transmission has deviated from that plan, it shall provide an explanation of each deviation and the reasons for them in its report. This direction will be a condition of Substation Permit and Licence 22125-D05-2018 and Transmission line Permit and Licence 22125-D06-2018.
3. AltaLink is directed to file its finalized Environmental Specifications and Requirements document with the Commission prior to commencing construction. This direction will be a condition of Substation Permit and Licence 22125-D03-2018 and Transmission line Permit and Licence 22125-D04-2018.
4. AltaLink is directed to file, with the Commission, a report confirming compliance with the Environmental Specifications and Requirements document. Such report shall be filed within three months of the completion of construction and, in the event that AltaLink has deviated from the specifications and requirements, shall include an explanation of each deviation and the reasons for them. This direction will be a condition of Substation Permit and Licence 22125-D03-2018 and Transmission line Permit and Licence 22125-D04-2018.

Appendix D – Abbreviations

Abbreviation	Name in full
AESO	Alberta Electric System Operator
ATCO Distribution	ATCO Electric Distribution, a division of ATCO Electric Ltd.
ATCO Transmission	ATCO Electric Transmission, a division of ATCO Electric Ltd.
AFUDC	allowance for funds used during construction
AIES	Alberta Interconnected Electric System
ANID	abbreviated needs identification document
AltaLink	AltaLink Management Ltd.
Astoria	Astoria Hydroelectric Generating Station
BEMA	Bema Enterprises Ltd.
CCA	Consumers' Coalition of Alberta
CEAA 2012	<i>Canadian Environmental Assessment Act, 2012</i>
CO ₂	carbon dioxide
CH2M	CH2M Hill Canada Limited
dBA	A-weighted decibel, Energy equivalent sound level
DIA	detailed impact assessment
DFO	distribution facility owner
EPP	environmental protection plan
GWh	gigawatt hours
IGUCC Regulation	<i>Isolated Generating Units and Customer Choice Regulation</i>
Insitu	Insitu Power Corporation
ISO	independent system operator
JEA	Jasper Environmental Association
Kinder Morgan	Kinder Morgan Canada Inc.
km	kilometres
kV	kilovolt
MVA	megavolt ampere
MW	megawatt
NIA	noise impact assessment
NID	needs identification document
NO _x	Nitrogen oxide
NPV	net present value
O&M	operating and maintenance costs

Palisades	Palisades Power Plant
PPS	proposal to provide service
PP&E	Property, Plant and Equipment
Rule 007	Rule 007: <i>Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments</i>
UNESCO	United Nations Educational, Scientific and Cultural Organization

Appendix E – Standing rulings

AUC Ruling on standing – August 3, 2017



22125 Standing
Ruling - August 3, 201
(consists of 8 pages)

August 3, 2017

To: Parties currently registered on Proceeding 22125

**Alberta Electric System Operator, AltaLink Management Ltd. and ATCO Electric Ltd.
Jasper Interconnection Project
Proceeding 22125
Applications 22125-A001 to 22125-A006**

Ruling on standing

Introduction

1. In this ruling, the Alberta Utilities Commission decides whether to hold a public hearing to consider applications by the Alberta Electric System Operator (AESO), ATCO Electric Ltd. (ATCO Electric) and AltaLink Management Ltd. (AltaLink). The Commission must hold a hearing if persons who have filed a statement of intent to participate (SIP) in Proceeding 22125 have demonstrated that they have rights that may be “directly and adversely affected” by the Commission’s decision on the applications. Such a person may participate fully in the hearing, including giving evidence, questioning of witnesses, and providing argument. This right to participate is referred to as standing.

2. The Commission issued notices of application for Proceeding 22125 in January and March 2017. The Commission received SIPs from David Hatto and Jill Seaton on behalf of the Jasper Environmental Association (JEA), Kinder Morgan Canada (Kinder Morgan), Greg and Elaine Slatter (the Slatters), Energy Storage Canada (ESC) and Peter Bubik. ATCO Electric filed response submissions on August 2, 2017.

3. This proceeding is unique, given the location of certain of the proposed facilities in Jasper National Park and that there are three different applicants for two different types of applications before the Commission. In this proceeding, the Commission is considering standing in relation to two different types of applications: (i) a need application, filed by the AESO requesting approval of the need identified and the preferred option to meet that need; and (ii) facility applications, filed by each of ATCO Electric and AltaLink requesting approval of the specific routing and siting of the facilities required to meet the need identified.

4. The Commission has authorized me to communicate its decision on standing. For the reasons that follow, the Commission finds that the JEA, the Slatters and Mr. Bubik have standing in relation to the AESO’s need application. The Commission finds that Kinder Morgan and the Slatters have standing in relation to ATCO Electric’s facilities applications. None of the SIPs filed to date have addressed the facilities applications filed by AltaLink, and accordingly no persons have been granted standing in relation to those applications. However, the Commission recognizes that the facilities applications filed by ATCO Electric and AltaLink are inextricably linked.

Standing and participation in AUC proceedings

5. There are two ways that a person can take part in a Commission proceeding. First, if a person meets the Commission's test for standing, that person has a right to participate in the proceeding. Second, if a person does not meet the test for standing, the Commission can nonetheless decide to allow that person to participate in the proceeding, either fully or in a limited manner. However, whether a person is granted or denied standing has important implications for whether that person is eligible to claim the costs of their participation at the end of the proceeding. These implications are explained in detail in the last section of this ruling: *Commission comments on cost eligibility*.

Participation with standing

6. Section 9(2) of the *Alberta Utilities Commission Act* sets out how the Commission must determine standing:

(2) If it appears to the Commission that its decision or order on an application **may directly and adversely affect the rights of a person**, the Commission shall

- (a) give notice of the application in accordance with the Commission rules,
- (b) give the person a reasonable opportunity of learning the facts bearing on the application as presented to the Commission by the applicant and other parties to the application, and
- (c) hold a hearing. [emphasis added]

7. The meaning of the key phrase, “directly and adversely affect,” has been considered by the Alberta Court of Appeal on multiple occasions, and the legal principles set out by the court guide the Commission when it determines standing. Standing is determined by application of a two-part test. The first test is legal: a person must demonstrate that the right being asserted is recognized by law. This could include property rights, constitutional rights or other legally recognized rights, claims or interests. The second test is factual: a person must provide enough information to show that the Commission's decision on the application may “directly and adversely affect” the person's right, claim or interest.¹

8. To determine if a right is “directly” affected, the court has said that “[s]ome degree of location or connection between the work proposed and the right asserted is reasonable.”² When considering the location or connection, the Commission looks at factors such as residence and the frequency and duration of the applicant's use of the area near the proposed site.³

9. The Commission summarized court decisions relating to the meaning of the phrase “directly and adversely affected” in a decision issued in 2015 and concluded that to pass the test for standing, “the potential effects associated with a decision of the Commission must be personal rather than general and must have harmful or unfavourable consequences.” The

¹ *Cheyne v Alberta (Utilities Commission)*, [2009 ABCA 94](#); *Dene Tha' First Nation v Alberta (Energy and Utilities Board)*, [2005 ABCA 68](#) [*Dene Tha'*].

² *Dene Tha'*.

³ *Sawyer v Alberta (Energy and Utilities Board)*, [2007 ABCA 297](#).

Commission further commented that the court decisions “highlight the need for persons seeking standing to demonstrate the degree of connection between the rights asserted and potential effects identified.”⁴

10. The Commission assesses the potential for a “direct and adverse effect” on a case-by-case basis. It considers the specific circumstances of each proposed project application and each SIP that it receives. In the past, the Commission has decided that general or broad concerns about a proposed project will generally be insufficient to establish standing, unless a more specific link or connection to the demonstrated or anticipated characteristics of a proposed project is established.

Participation without standing

11. The Commission has the authority to control its own process and has discretion to allow parties without standing to participate in its proceedings and to determine the level of that participation.⁵ That is, it may permit a person without standing to participate by filing a brief written submission explaining his or her position, or it may allow the person to fully participate in the hearing by filing evidence, cross-examining witnesses and submitting argument. When deciding to grant participation rights, the Commission takes into account whether the person or group requesting participation has relevant information that may assist the Commission in carrying out its duties or functions.

Standing and participation in need and facilities applications

12. Two approvals from the Commission are generally required to build new transmission capacity in Alberta. The first is an approval of the need to expand or enhance the transmission system pursuant to Section 34 of the *Electric Utilities Act*. The second is a permit to construct and a licence to operate a transmission line pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*. In this proceeding, the Commission is considering both types of applications: (i) the AESO’s need application; and (ii) the ATCO Electric and AltaLink facilities applications.

13. The AESO’s need application describes the need for new transmission and proposes a transmission solution to meet that need. Pursuant to Section 38(e) of the *Transmission Regulation*, the Commission must consider the AESO’s assessment of the need to be correct unless an interested person satisfies the Commission that the AESO’s assessment is either: (i) technically deficient; or (ii) not in the public interest. The Commission may approve the AESO’s need application, refer it back to the AESO with directions or suggestions for changes or additions, or refuse to approve the need application. It is the Commission’s view that approval of a need application has the potential to affect Alberta electricity ratepayers as they bear the costs of any new transmission facilities approved.

⁴ [Decision 3110-D02-2015](#), Market Surveillance Administrator Allegations against TransAlta Corporation et al., Phase 2 Preliminary matters; Standing and Restitution, Proceeding 3110, September 18, 2015.

⁵ *Alberta Utilities Commission Act*, [SA 2007, c A-37.2](#); *Canada (Combines Investigation Act Director of Investigation & Research) v Newfoundland Public Telephone Co.*, [\[1987\] 2 SCR 466](#); *Society of Composers, Authors and Music Publishers of Canada v Canada (Copyright Board)*, [1993] FCJ 137; Decision 2011-436: AltaLink Management Ltd. and EPCOR Distribution & Transmission Inc. – Heartland Transmission Project, Proceeding 457, Application 1606609, November 1, 2011.

14. The facilities applications filed by AltaLink and ATCO Electric describe the facilities they propose to construct in order to meet the need identified by the AESO. ATCO Electric's proposed facilities include the construction of a 45-kilometre single-circuit 69-kV transmission line in Jasper National Park. AltaLink's proposed facilities connect directly to the proposed ATCO Electric facilities but are located outside of Jasper National Park. For facility applications, the Commission must consider whether their approval is in the public interest having regard to the social, economic and environmental effects associated with the project. Standing in facility applications is therefore generally granted to those who demonstrate legal rights, usually property rights, that may be directly and adversely affected by the Commission's decisions on the applications.

Commission ruling on standing

Jasper Environmental Association

15. The JEA raised concerns relating to whether alternative, less environmentally-impactful options had been considered in order to supply electricity to the Jasper area, as well as the general impacts of the transmission line option proposed to meet the needs of the Jasper area. Put another way, the JEA is questioning whether approval of the AESO's preferred option is in the public interest given the unique setting of the project. As noted above, need applications have the potential to impact all electricity ratepayers. The JEA's concerns with respect to the potential environmental impacts of the transmission line and its submissions that the Commission should consider alternative options to address the need in the area are sufficient to demonstrate that the JEA should be granted standing in this proceeding in relation to the need application filed by the AESO.

16. While the JEA expressed some general concerns about the route for the transmission line proposed by ATCO Electric, the Commission understands that the JEA's primary concern with the project relates to the AESO's choice of a transmission option to serve Jasper's electricity needs. The JEA explained in its SIP that it has acted as an advocacy group in Jasper National Park for 27 years, but it did not describe the rights it was asserting or how those rights may be directly and adversely affected by the Commission's decision on the facilities applications. For that reason, the JEA is not granted standing in ATCO Electric's facilities applications.

17. However, as noted the Commission may allow persons without standing to participate in its proceedings. The JEA has raised concerns which may be relevant to the Commission's consideration of ATCO Electric's facilities applications, particularly with respect to the potential environmental impacts of the proposed transmission line located in Jasper National Park. The Commission will therefore grant the JEA full participation rights in this proceeding in relation to ATCO Electric's facilities applications, including the ability to file evidence, cross-examine witnesses and make argument.

The Slatters

18. The Slatters submitted general environmental concerns with the AESO's preferred alternative, and proposed alternative solutions, including potentially updating the Astoria hydroelectric power plant. Considering the Commission's view that all electricity ratepayers may be affected by its decision on a need application, the Commission finds that the Slatters have met the test for standing on the AESO's need application.

19. The Slatters also identified a number of site-specific concerns in relation to ATCO Electric's facilities applications, based on the proposed transmission line route's proximity to their residence, the Pocahontas Warden Station. Accordingly, the Commission is satisfied that the Slatters also meet the test for standing with respect to ATCO Electric's facilities applications.

Kinder Morgan Canada

20. Kinder Morgan expressed support for the project in general and raised no concerns about the AESO's assessment of the need for the project nor its preferred alternative. Based on the information filed, Kinder Morgan's interests in the proceeding relate specifically to ATCO Electric's facilities application. Kinder Morgan therefore does not have standing with respect to the AESO's need application.

21. Kinder Morgan owns or occupies land in close proximity to the transmission line route proposed by ATCO Electric in its facilities applications and has demonstrated that the Commission's decision on the application has the potential to result in a direct and adverse effect on its property, including potential electromagnetic interference with its Trans Mountain pipelines. As such, Kinder Morgan has met the test for standing with respect to ATCO Electric's facilities applications.

Energy Storage Canada

22. ESC provided insufficient information to satisfy the Commission's standing test. While ESC expressed general environmental and reliability concerns as well as concerns about the potential alternatives to serve the Jasper area, it is not clear what rights ESC is asserting in this proceeding, or how those rights may be directly and adversely affected by the Commission's decision on the AESO's need application or the facilities applications. If ESC wishes to pursue formal participation in the proceeding as a party with standing, it may file further information with the Commission explaining the rights it is asserting and how those rights may be directly and adversely affected by the Commission's decision on the applications filed in this proceeding.

23. In the alternative, the Commission is prepared to grant ESC limited participation rights with respect to the AESO's need application. Specifically, the Commission will allow ESC to make a written or oral submissions on the issues set out in its SIP. ESC will not be allowed to cross-examine other parties or make argument.

Peter Bubik

24. Mr. Bubik proposed alternative solutions to the transmission-only option identified by the AESO in its need application, including competitively sourced generation and/or energy storage, and expressed concerns with the need assessment process. The Commission acknowledges ATCO Electric's submissions that Mr. Bubik is a director and shareholder of Turning Point Generation, which was denied standing in relation to need and facilities applications for the Thornton 2091S Substation (Proceeding 20925). In that proceeding, Turning Point Generation submitted that energy storage solutions were not considered, and as such the AESO's need application was technically deficient. The Commission denied standing as the information provided related to an alternative to the transmission line and did not specifically address the adequacy of the AESO's proposed solution to meet the need identified. Notwithstanding that

there are some similarities between Mr. Bubik's SIP in this case and those submissions filed by Turning Point Generation in Proceeding 20925, the Commission considers the present proceeding to be unique. Among others, the proposed solution to meet the need identified by the AESO is located in Jasper National Park, and the need to be addressed is currently being met with an isolated generation solution. Mr. Bubik is an electricity ratepayer in Alberta and has raised concerns relevant to the AESO's need application. As such, the Commission finds that Mr. Bubik has met the test for standing on the AESO's need application.

25. Mr. Bubik did not express any concerns specifically related to ATCO Electric's or AltaLink's facilities applications in his SIP, nor did he assert a right or interest that may be directly and adversely impacted by the Commission's decision on those applications. Accordingly, Mr. Bubik has not met the test for standing in relation to the facilities applications filed in this proceeding.

Commission comments on cost eligibility

26. As discussed above, whether a person meets the test for standing or is granted participatory rights without standing has significant implications for that person's ability to recover their costs of intervening in Commission proceedings. Cost eligibility in the context of this proceeding is unique, because the Commission is required to consider two different types of applications, which are each governed by different cost rules. As such, the Commission has decided in these particular circumstances to clarify eligibility for cost claims at this early stage of the process.

The need application and Rule 022: Rules on Costs in Utility Rate Proceedings

27. The Commission's Rule 022: *Rules on Costs in Utility Rate Proceedings* will apply to the need application filed by the AESO to govern the recovery of costs for the portion of this proceeding related to the need for the project. Rule 022 generally applies to proceedings on rate-related applications before the Commission. Although need applications do not fall squarely within the application of Rule 022, the Commission has broad statutory authority under Section 21(1) of the *Alberta Utilities Commission Act* to grant cost recovery for any hearing or proceeding before it.

28. Under Rule 022, costs may be awarded to utility customers that have a substantial interest in a proceeding and do not have the means to raise sufficient financial resources to enable them to adequately present those interests. Rule 022 also contains a list of interveners that are ineligible to claim costs that includes business, commercial, institutional or industrial entities, and associations of those entities.

The facilities applications and Rule 009: Rules on Local Intervener Costs

29. The Commission's Rule 009: *Rules on Local Intervener Costs* will apply to the facilities applications filed by ATCO Electric and AltaLink. Under Rule 009, only "local interveners" are eligible to potentially recover the costs of their participation in facility related applications, which is defined in the *Alberta Utilities Commission Act*:

22(1) For purposes of this section, "local intervener" means a person or group or association of persons who, in the opinion of the Commission,

(a) has an interest in, and

(b) is in actual occupation of or is entitled to occupy

land that is or may be directly and adversely affected by a decision or order of the Commission in or as a result of a hearing or other proceeding of the Commission on an application to construct or operate a hydro development, power plant or transmission line under the Hydro and Electric Energy Act or a gas utility pipeline under the Gas Utilities Act, but unless otherwise authorized by the Commission does not include a person or group or association of persons whose business interest may include a hydro development, power plant or transmission line or a gas utility pipeline.

Jasper Environmental Association

30. The JEA has been granted standing in relation to the AESO's need application. As a local group representing a number of interests, including customer interests that may be affected by the Commission's decision on the AESO's need application, the Commission considers that the JEA is eligible to claim the costs of its participation in relation to the AESO's need application under Rule 022.

31. The Commission has exercised its discretion to allow the JEA to participate in ATCO Electric's facilities applications, even though the JEA has not met the test for standing. However, the JEA does not fall within the definition of "local intervener" under Section 22 of the *Alberta Utilities Commission Act* and Rule 009 as it has not demonstrated it holds an interest in land that may be affected by the Commission's decision on the facilities applications. Therefore, any costs incurred by the JEA related to ATCO Electric's facilities applications will not be eligible for cost recovery.

The Slatters

32. The Slatters fall within the ambit of both Rule 022 and Rule 009. They are utility customers with an interest in the subject matter of the AESO's need application, as they have expressed their concerns with potential alternative solutions to the need proposed by the AESO. The Slatters also have an interest in, and currently occupy, land that may be directly and adversely affected by the Commission's decision on ATCO Electric's facilities applications. As such, the Slatters are eligible to claim their costs incurred for their participation in the AESO's need application under Rule 022, and their participation in ATCO Electric's facilities applications under Rule 009.

Kinder Morgan Canada

33. Kinder Morgan has not been granted standing or participatory rights in relation to the AESO's need application. In any event, Rule 022 specifically exempts business entities from eligibility to claim costs for rate-related proceedings. Kinder Morgan has an interest in, and is entitled to occupy, land that may be affected by the Commission's decision on ATCO Electric's facilities application. Accordingly, Kinder Morgan falls within the definition of "local intervener" and will be eligible to claim costs incurred in relation to ATCO Electric's facilities application.

Energy Storage Canada

34. As discussed above, ESC may choose to provide additional information to the Commission if it wishes to pursue standing in this proceeding. Alternatively, ESC may participate without standing by providing submissions on the issues set out in its SIP.

35. However, ESC is specifically exempted from eligibility to claim costs under Rule 022 by virtue of its status as an industry organization. As such, if ESC chooses to participate in the proceeding with respect to the AESO's need application, it will not be eligible to claim its costs.

Peter Bubik

36. As a utility customer with an interest in the subject-matter of the AESO's need application, Mr. Bubik is eligible to claim costs under Rule 022. The Commission finds that Mr. Bubik is eligible to claim costs incurred due to his participation relating to the AESO's need application.

37. However, Mr. Bubik has not asserted an interest in land that may be affected by the Commission's decision on the facilities applications filed in this proceeding. Accordingly, Mr. Bubik does not fall within the definition of "local intervener" and is not eligible to claim any costs incurred in relation to the facilities applications filed by either ATCO Electric or AltaLink.

38. Finally, the Commission emphasizes that eligibility to claim costs as discussed above does not guarantee full recovery of those costs. Any claims for costs must be filed after this proceeding is concluded, in accordance with Rule 022 and/or Rule 009, as applicable. Although parties may potentially be reimbursed for their costs of participation, which could include legal and consultant fees, recovery of costs is subject to the Commission assessing the value of the contribution provided by counsel and technical experts. The Commission encourages parties with similar interests and positions to work together to ensure that any expenditures are minimized and costs are not duplicated.

39. If you have any questions, please contact the undersigned by phone at 403-592-4385 or by email at Kim.Macnab@auc.ab.ca.

Yours truly,

Kim Macnab
Commission Counsel

AUC Ruling on CCA Standing - September 19, 2017



22125 AUC Ruling on
CCA Standing.pdf

(consists of 3 pages)

September 19, 2017

To: Persons currently registered on Proceeding 22125

**Alberta Electric System Operator, AltaLink Management Ltd. & ATCO Electric Ltd.
Jasper Interconnection Project
Proceeding 22125
Applications 22125-A001 to 22125-A006**

Ruling on CCA standing

1. On September 15, 2017, the Consumers' Coalition of Alberta (CCA) submitted a late-filed statement of intent to participate in Proceeding 22125. In its letter, the CCA requested that the Alberta Utilities Commission grant it standing in relation to matters in the Alberta Electric System Operator's (AESO) need application. The CCA also requested that the Commission confirm in advance whether the CCA is eligible for recovery of its costs of participation.

2. The Commission issued notices of application for Proceeding 22125 in January and March 2017, and received statements of intent to participate from a number of parties whose standing was addressed in a previous ruling dated August 3, 2017.

3. The Commission has authorized me to communicate its decision on standing.

How the Commission determines standing

4. Section 9(2) of the *Alberta Utilities Commission Act* sets out how the Commission must determine standing:

(2) If it appears to the Commission that its decision or order on an application *may directly and adversely affect the rights of a person*, the Commission shall

- (a) give notice of the application in accordance with the Commission rules,
- (b) give the person a reasonable opportunity of learning the facts bearing on the application as presented to the Commission by the applicant and other parties to the application, and
- (c) hold a hearing. [emphasis added]

5. The Commission's process for determining standing is set out in further detail in its August 3, 2017 ruling, filed in this proceeding as Exhibit 22125-X0136.

6. In this proceeding, the Commission is considering two different types of applications: (i) a need application, filed by the Alberta Electric System Operator requesting approval of the need identified and the preferred option to meet that need; and (ii) facility applications, filed by

each of ATCO Electric Ltd. (ATCO) and AltaLink Management Ltd. (AltaLink) requesting approval of the specific routing and siting of the facilities required to meet the need identified.

7. For the purposes of the need application stage of the approval process, the matters the Commission considers when deciding on the need identified by the AESO are set out in Section 38 of the *Transmission Regulation*. It is the Commission's view that the approval of a need application has the potential to affect all Alberta electricity ratepayers as they bear the costs of new transmission facilities approved in conjunction with a needs identification document approval.

Ruling

8. The CCA requested leave to participate in this proceeding in a limited capacity, focusing specifically on matters in the AESO's need application. The CCA requested the opportunity to cross-examine the AESO, ATCO and AltaLink panels on need-related matters only, and to file argument and reply argument if necessary. The CCA requested that the Commission exercise its discretion to permit the CCA's involvement, notwithstanding that its request to participate in this proceeding was filed late.

9. With respect to the CCA's participation, as noted above it is the Commission's view that the approval of a need application has the potential to affect all Alberta electricity ratepayers. As such, the Commission finds that the CCA has standing to participate in this proceeding as it relates to the AESO's need application. Given the late stage of the process, the Commission considers that the limited scope of the CCA's requested participation is reasonable. The Commission finds that the CCA may participate in Proceeding 22125, limited to the opportunity to cross-examine the AESO, ATCO and AltaLink panels in the oral hearing, and to file argument and reply argument.

10. The CCA has not requested standing in relation to the facility applications and has not shown that its rights may be directly and adversely affected by the Commission's decision on the facility applications. The Commission emphasizes the limited nature of the CCA's request for standing to intervene in the AESO's need application only and expects that the CCA will so limit its participation in the proceeding.

11. With respect to the CCA's request for eligibility for cost recovery, the Commission previously considered eligibility for cost recovery under Rule 022: *Rules on Costs in Utility Rate Proceedings* in its August 3, 2017 ruling on standing. In that ruling, the Commission stated:

27. The Commission's Rule 022: *Rules on Costs in Utility Rate Proceedings* will apply to the need application filed by the AESO to govern the recovery of costs for the portion of this proceeding related to the need for the project. Rule 022 generally applies to proceedings on rate-related applications before the Commission. Although need applications do not fall squarely within the application of Rule 022, the Commission has broad statutory authority under Section 21(1) of the *Alberta Utilities Commission Act* to grant cost recovery for any hearing or proceeding before it.

12. Given the uniqueness of this proceeding and that the CCA's participation is limited to matters in the AESO's need application, the Commission finds that the CCA is eligible to claim

for recovery of its costs under Rule 022. The Commission notes that eligibility to claim costs as discussed above does not guarantee full recovery of those costs.

13. Please contact me at 403-592-4385 or at kim.macnab@auc.ab.ca if you have any questions about the matters addressed in this letter.

Regards,

Kim Macnab
Commission Counsel

Standing Ruling – AWNTB



22125 Standing
Ruling-AWNTB.pdf
(consists of 4 pages)

October 12, 2017

To: Persons currently registered on Proceeding 22125

**Alberta Electric System Operator, AltaLink Management Ltd. & ATCO Electric Ltd.
Jasper Interconnection Project
Proceeding 22125
Applications 22125-A001 to 22125-A006**

Ruling on standing of the Asini Wachi Nehiyawak (Mountain Cree) / Bobtail Descendants Traditional Band

1. On September 25, 2017, Mr. J. Fromhold on behalf of the Asini Wachi Nehiyawak (Mountain Cree) / Bobtail Descendants Traditional Band (AWNTB) submitted a late-filed statement of intent to participate (SIP) in Proceeding 22125. In this ruling, the Commission considers whether the AWNTB has demonstrated that it has rights that may be directly and adversely affected by the Commission's decision.
2. The Commission issued notices of application for Proceeding 22125 in January and March 2017, and received statements of intent to participate from a number of parties whose standing was addressed in a previous ruling dated August 3, 2017. The Commission also issued a ruling on the standing of the Consumers' Coalition of Alberta on September 19, 2017.
3. For the reasons set out below, the Commission has concluded that neither the AWNTB nor Mr. Fromhold in his capacity as an individual ratepayer have satisfied the test for standing set out in Section 9 of the *Alberta Utilities Commission Act*. The Commission has authorized me to communicate this ruling on its behalf.

How the Commission determines standing

4. Section 9(2) of the *Alberta Utilities Commission Act* sets out how the Commission must determine standing:

(2) If it appears to the Commission that its decision or order on an application may directly and adversely affect the rights of a person, the Commission shall

- (a) give notice of the application in accordance with the Commission rules,
 - (b) give the person a reasonable opportunity of learning the facts bearing on the application as presented to the Commission by the applicant and other parties to the application, and
 - (c) hold a hearing. [emphasis added]
5. The standing test applies to all persons, companies, organizations and First Nations who want to participate in Commission hearings. The test has two parts. First, you must demonstrate that your right or interest is recognized by law. Second, you must provide some concrete

information that shows that if the Commission approves the applications, your rights may be directly and adversely affected. The first part of the test is legal; the second part of the test is factual.

6. It is not enough to merely assert a possible aboriginal or treaty right, you must show some degree of location or connection between the work proposed and the right asserted.¹ This means, for example, that sufficient information about the traditional activity should be provided. This information should include a description of the traditional activity; e.g., hunting, trapping, or gathering berries or plants; the proximity of the activity to the proposed project; and, the effect of the proposed project or work on the activity described.

7. The Commission's process for determining standing is set out in further detail in its August 3, 2017 ruling, filed in this proceeding as Exhibit 22125-X0136.²

8. In this proceeding, the Commission is considering two different types of applications: (i) a need application, filed by the Alberta Electric System Operator (AESO) requesting approval of the need identified and the preferred option to meet that need; and (ii) facility applications, filed by each of ATCO Electric Ltd. (ATCO) and AltaLink Management Ltd. (AltaLink) requesting approval of the specific routing and siting of the facilities required to meet the need identified.

Ruling

9. In its SIP, the AWNTB stated that it is recognized by the Government of Canada as falling within the court-mandated duty to consult obligations, and that it had been "consulted in this matter by Jasper National Park and ATCO Electric but not by AltaLink."³ The AWNTB stated that it has no indication that AltaLink conducted the necessary Historic Resource Assessment or has consulted or engaged with the AWNTB to determine the impact on significant AWNTB sites in the area.

10. In addition to its SIP, the AWNTB filed a letter stating that it "intends to submit evidence at the scheduled hearing into the Jasper Interconnect Pipeline" and attached a submission of written evidence.⁴ The AWNTB stated that its position towards the project is "mixed", as in general it supports the ATCO portions of the project with certain conditions, but finds that AltaLink has not met its duty to consult obligations. The AWNTB listed a number of conditions applicable to the ATCO portions of the project (applications 22125-A004, 22125-A005, and 22125-A006) that it would consider acceptable.⁵ The AWNTB also stated that it had not been notified of the project by the AESO or the Commission, and as such it was not engaged or consulted with respect to applications 22125-A001, 22125-A002, and 22125-A003.⁶

¹ *Dene Tha' First Nation v Alberta (Energy and Utilities Board)*, 2005 ABCA 68, paragraph 14.

² Exhibit 22125-X0136, AUC Ruling on standing, August 3, 2017.

³ Exhibit 22125-X0174, Statement of intent to participate, September 26, 2017.

⁴ Exhibit 22125-X0175, Mountain Cree letter to AUC, September 27, 2017 [AWNTB Submissions].

⁵ AWNTB Submissions, PDF pages 14, 16-19.

⁶ AWNTB Submissions, PDF pages 15-19.

11. The AWNTB submitted, with respect to the facilities applications filed by ATCO and AltaLink, that its traditional lands include Jasper National Park and that those lands and contents were never surrendered by treaty. It also stated that the Supreme Court of Canada has recognized a number of obligations in relation to consultation with affected First Nations.⁷ However, the AWNTB's submissions do not contain any specific information relating to any traditional activities or asserted rights that may be affected by the Commission's decisions on the AESO, AltaLink, or ATCO applications filed in this proceeding.

12. The legal part of the standing test requires more than the assertion of a legal right. The applicant must provide information that establishes a right or interest recognized by law. After a review of the AWNTB's submissions, it is not clear to the Commission that the AWNTB has satisfied the first part of the standing test in this proceeding. It is also not clear that the AWNTB, as an organization, is made up of any individuals other than Mr. Fromhold; and the Commission does not have any information or evidence before it indicating otherwise.

13. Regardless of the Commission's decision on the legal part of the standing test, the factual part of the test must also be met. The factual part of the standing test requires a person or group to show some degree of location or connection between the proposed project and the asserted right. The AWNTB's submissions in relation to each of the applications do not discuss how its asserted interests may be affected by the proposed project. Absent specific information demonstrating a causal connection between the project and its effects on the AWNTB's interests, the Commission finds that the AWNTB has not met the factual part of the standing test in respect of the applications filed by ATCO and AltaLink.

14. Further, as noted above, it is not clear to the Commission that the AWNTB has satisfied the legal part of the standing test as it relates to the need application filed by the AESO. That said, it is the Commission's view that the approval of a need application has the potential to affect all Alberta electricity ratepayers. The Commission considers that Mr. Fromhold, as a ratepayer in Alberta, has a right that may be directly and adversely affected by the Commission's decision in this proceeding and as such has met the legal part of the standing test as an individual.

15. With respect to the factual portion of the standing test in relation to the AESO's need application, Mr. Fromhold has raised a number of general concerns related to a lack of engagement and consultation with the AWNTB with respect to the proposed projects. However, the submissions did not include any concerns with the need for the proposed projects or related issues such as reliability or cost. There are no references to any of the options proposed to meet the need identified by the AESO in its application. None of the concerns raised provide the Commission with information on how Mr. Fromhold's rights or interests may be directly and adversely affected by the Commission's decision on the AESO's need application. Accordingly, the Commission finds that neither the AWNTB, nor Mr. Fromhold as an individual ratepayer, has met the test for standing in relation to the AESO's need application.

⁷ AWNTB Submissions, PDF page 12.

16. Notwithstanding its conclusion that the AWNTB has not met the test for standing set out in Section 9 of the *Alberta Utilities Commission Act*, the Commission recognizes that this proceeding is unique because the proposed project is to be located in a national park and, as such, its general significance to Canadian citizens. The Commission is therefore prepared to exercise its discretion to allow Mr. Fromhold, as a member of the public with an interest in Jasper National Park, to make submissions in relation to the need application filed by the AESO at the public hearing scheduled for **December 12, 2017**.

17. If Mr. Fromhold decides to participate in this manner, he must file a submission summarizing the issues he intends to address in the proceeding by no later than **November 24, 2017**. This submission must include any documents Mr. Fromhold intends to refer to at the hearing, and he may speak for up to 60 minutes at the proceeding, following the evidence of the AESO and the interveners. The Commission will not hear from Mr. Fromhold during cross-examination or argument. Further, the Commission advises that if all parties with standing withdraw their objections to the project, the Commission may cancel the hearing and issue a decision without further submissions from Mr. Fromhold.

18. Please contact me at 403-592-4385 or at Kim.Macnab@auc.ab.ca if you have any questions about the matters addressed in this letter.

Regards,

Kim Macnab
Commission Counsel

Standing Ruling - Municipality of Jasper



22125 Standing
Ruling-Municipality of
(consists of 3 pages)

October 12, 2017

To: Persons currently registered on Proceeding 22125

**Alberta Electric System Operator, AltaLink Management Ltd. & ATCO Electric Ltd.
Jasper Interconnection Project
Proceeding 22125
Applications 22125-A001 to 22125-A006**

Ruling on Municipality of Jasper's standing

1. On September 29, 2017, the Municipality of Jasper (the municipality) submitted a late-filed statement of intent to participate (SIP) in Proceeding 22125.
2. In its SIP, the municipality requested the opportunity to participate in the proceeding because changes to the delivery of power to Jasper will affect residents and businesses. Among other things, the municipality noted that its concerns with the reliability of the proposed option, the environment, and with the visual impact of above-ground power lines to Jasper National Park. The municipality stated that more information would be provided from the Municipality of Jasper Council.
3. The Commission finds, for the reasons set out below, that the municipality has standing to participate in Proceeding 22125 in relation to the applications filed by the Alberta Electric System Operator (AESO), and ATCO Electric Ltd. (ATCO Electric). The Commission has authorized me to communicate its standing ruling for the municipality.

How the Commission determines standing

4. Section 9(2) of the *Alberta Utilities Commission Act* sets out how the Commission must determine standing:

(2) If it appears to the Commission that its decision or order on an application *may directly and adversely affect the rights of a person*, the Commission shall

- (a) give notice of the application in accordance with the Commission rules,
 - (b) give the person a reasonable opportunity of learning the facts bearing on the application as presented to the Commission by the applicant and other parties to the application, and
 - (c) hold a hearing. [emphasis added]
5. The Commission's process for determining standing is set out in further detail in its August 3, 2017 ruling and its second ruling on standing dated September 19, 2017, filed in this proceeding as exhibits 22125-X0136 and 22125-X0167, respectively.

Ruling

6. The municipality raised concerns relating to the reliability of the proposed transmission line, including the frequency and duration of outages, and the effect of changes to the delivery of power on Jasper residents. The Commission considers that the municipality's concerns with respect to the proposed transmission option's reliability and impact on Jasper are sufficient to demonstrate that it should be granted standing in this proceeding in relation to the need application filed by the AESO.

7. With respect to the facilities applications filed by ATCO Electric, the municipality raised concerns with the impact of above-ground power lines on Jasper National Park, including visual and environmental effects. As the municipality in which portions of the proposed project will be located, and considering its concerns raised with respect to the potential effects of the proposed project on Jasper National Park, the Commission considers that the municipality has demonstrated that it has rights that may be directly and adversely affected by its decision on ATCO Electric's facilities application. The municipality has not raised any concerns specifically related to the AltaLink facilities applications.

8. As previously determined by the Commission in this proceeding, cost recovery for the AESO need application is governed by Rule 022: *Rules on Costs in Utility Rate Proceedings* whereas cost recovery for the ATCO and AltaLink facilities applications is governed by Rule 009: *Rules on Local Intervener Costs*.

9. The Commission finds that the municipality is ineligible to claim costs in relation to the AESO need application pursuant to Section 4(e) of Rule 022. Moreover, only local interveners, as that phrase is defined in Section 22 of the *Alberta Utilities Commission Act*, are eligible to recover their costs of participation in ATCO's facility applications. To meet that definition, the claimant must demonstrate that it: (a) has an interest in land that it occupies or is entitled to occupy, and (b) that the interest in land is or may be directly and adversely affected by the Commission's decision on the application(s) before it.

10. The Commission currently has insufficient information before it to make a determination regarding the municipality's eligibility to claim local intervener costs under Rule 009. However, it is important to note that the Commission's authority to award costs to interveners in its proceedings is discretionary and that, in previous decisions, the Commission and its predecessors have declined to exercise their discretion to allow municipalities to recover local intervener costs for their participation in proceedings.¹

11. The municipality stated in its statement of intent to participate that it did not intend to participate in the public hearing for this proceeding. However, the Commission understands that the municipality may wish to file written submissions setting out its position for the

¹ Decision 2011-489, Heartland Transmission Project Local Intervener Costs Claim, December 14, 2011, paragraphs 14-26, citing *Wood Buffalo (Regional Municipality) v Alberta (Energy and Utilities Board)*, 2007 ABCA 192 at paragraph 8 and *Lavesta Area Group v Alberta (Energy and Utilities Board)*, 2009 ABCA 155 at paragraph 22, See also, Decision 21717-D01-2016, South and West of Edmonton Area Transmission Development Cooking Lake, Saunders Lake, Wabamun and Leduc Developments, Costs Award, paragraphs 80-86.

Commission's consideration. Should the municipality decide to provide such written submissions, the Commission requests that they be filed through the Commission's eFiling system by no later than **October 27, 2017**, which is the deadline for written evidence from interveners.

12. Please contact me at 403-592-4385 or at Kim.Macnab@auc.ab.ca if you have any questions about the matters addressed in this letter.

Regards,

Kim Macnab
Commission Counsel