

DAY MONTH YEAR  
22-Mar-2009

Application #  
1604909

APPLICANT'S FILE NUMBER  
Ribstone-Lakesend (Keystone PS1)

SUBMISSION STATUS Registered SUBMISSION ID 195252 CREATION DATE 22-Mar-2009

### 1. APPLICANT INFORMATION

Primary Applicant

COMPANY NAME ATCO Electric Ltd. BA CODE 0A5Z  
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### 2. PROJECT OVERVIEW

1. Application Description:

Ribstone Creek 892S to Lakesend 508S, 144kV Line 7L696, ATCO Electric portion (Keystone PS1)

2. Are there other AUC applications directly related to this application? Yes  No

Application Category	Application Type	Application Number (If Known)
<u>Electric</u>	<u>Need Assessment</u>	<u>1546106</u>
<u>Electric</u>	<u>Substations</u>	<u>1603771</u>

### 3. APPLICATION TYPES

1. Identify what this application is for:

Electric Transmission Lines  
 Electric Substations  
 Electric Interconnection

If you have any questions or comments, please contact the EAS Administrator.

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**4. TRANSMISSION LINE**

1. Provide the name(s) of all other companies having ownership in the project, details of their incorporation, and the share in the project that each would have.

Company Name: \_\_\_\_\_ Percentage: \_\_\_\_\_

Details:

Total other ownership (%)

2. Have you conducted a participant involvement program?

Yes  No

If No, explain:

3. Are there outstanding public or industry objection and/or concerns? Yes  No

4. Provide Electric Facility ID Number(s):

5. Provide the legal descriptions, including latitudes and longitudes of start and end points of the transmission line.(Provide latitude and longitude coordinate in decimal degrees.)

Start Point of Transmission Line

Lsd	Sec	Twp	Rge	Mer	Lat (NAD 83)	Long (NAD 83)
<u>1</u>	<u>3</u>	<u>37</u>	<u>9</u>	<u>4</u>	<u>52.1443</u>	<u>-111.1982</u>

End Point of Transmission Line

Lsd	Sec	Twp	Rge	Mer	Lat (NAD 83)	Long (NAD 83)
<u>4</u>	<u>22</u>	<u>38</u>	<u>9</u>	<u>4</u>	<u>52.2738</u>	<u>-111.0761</u>

If you have any questions or comments, please contact the EAS Administrator.

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**4. SUBSTATION**

1. Provide the name(s) of all other companies having ownership in the project, details of their incorporation, and the share in the project that each would have.

Company Name: \_\_\_\_\_ Percentage: \_\_\_\_\_

Details:

\_\_\_\_\_

Total other ownership (%)

2. Have you conducted a participant involvement program?

Yes  No

If No, explain:

\_\_\_\_\_

3. Are there outstanding public or industry objection and/or concerns? Yes  No

4. Provide Electric Facility ID Number(s):

5. Provide legal description, latitude and longitude of the substation. (Provide latitude and longitude coordinates in decimal degrees.)

Lsd	Sec	Twp	Rge	Mer	Lat (NAD 83)	Long (NAD 83)
<u>1</u>	<u>3</u>	<u>37</u>	<u>9</u>	<u>4</u>	<u>52.1443</u>	<u>-111.1982</u>

If you have any questions or comments, please contact the EAS Administrator.

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**4. INTERCONNECTION**

1. Provide the name(s) of all other companies having ownership in the project, details of their incorporation, and the share in the project that each would have.

Company Name: \_\_\_\_\_ Percentage: \_\_\_\_\_

Details:

\_\_\_\_\_

Total other ownership (%)

2. Have you conducted a participant involvement program? Yes  No

If No, explain:

\_\_\_\_\_

3. Are there outstanding public or industry objections and/or concerns? Yes  No

4. Is this application to connect a power plant or two transmission elements of different ownership?

Power Plant  Transmission Elements

5. Is this application for connection at the distribution voltage level (generally below 69kV) or transmission voltage level (generally 69kV or greater)? Distribution Level  Transmission Level

6. If this application is for connection of a power plant at the transmission voltage level, what is the capacity of the plant? Less than 70 MW  More than 70 MW

7. Provide the legal description, latitude and longitude of the interconnection point of the power plant with the AIES.

Lsd	Sec	Twp	Rge	Mer	Lat (NAD 83)	Long (NAD 83)
<u>4</u>	<u>22</u>	<u>38</u>	<u>8</u>	<u>4</u>	<u>52.2738</u>	<u>-111.076</u>

If you have any questions or comments, please contact the EAS Administrator.

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**APPLICATION TO THE  
ALBERTA UTILITIES COMMISSION**

**RIBSTONE CREEK 892S TO LAKESEND 508S  
144 kV TRANSMISSION LINE 7L696  
AND RELATED TRANSMISSION FACILITIES**

**March 20, 2009**



10035 - 105 Street  
P.O. Box 2426 Station Main  
Edmonton, Alberta T5J 2V6

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## 1.0 INTRODUCTION

### 1.1 SUMMARY OF PROPOSED FACILITIES

ATCO Electric Ltd. (ATCO) proposes to build new power transmission facilities in the area north of Veteran, Alberta. ATCO's proposed facilities include the alteration of ATCO's existing Ribstone Creek substation, the construction of approximately 24.3 kilometres (km) of new 144 kilovolt (kV) transmission line, and a minor alteration of an existing 144 kV line. ATCO's proposed transmission line will connect with approximately 2.8 km of proposed AltaLink Management Ltd. 144 kV line that will extend to AltaLink's proposed Lakesend substation 508S at TransCanada Keystone's Lakesend pump station site. ATCO's facilities are targeted for completion by December 31, 2009.

### 1.2 PROPOSAL

ATCO hereby applies to the Alberta Utilities Commission pursuant to Sections 14 and 15 of the *Hydro and Electric Energy Act* ("*HEEA*", Chapter H-16, RSA 2000, as amended), for Permits and Licences to:

- (1) Construct and operate a new 144 kV transmission line designated as **7L696** between ATCO's Ribstone Creek substation 892S and a point of connection with AltaLink's proposed 144 kV line 7L696;
- (2) Alter the existing **Ribstone substation 892S** (existing Permit and Licence No. U2005-043); and

ATCO hereby applies to the Commission pursuant to Section 18 of the *HEEA*, for Approval and Order to:

- (3) **Connect** ATCO's proposed 144 kV line **7L696** to AltaLink's proposed 144 kV line 7L696.

AltaLink is submitting a separate facility application for AltaLink's proposed 144 kV transmission line 7L696 which will extend to Lakesend substation, and has filed Application No. 1603771 for the proposed Lakesend substation 508S.

### 1.3 PROJECT NEED AND AESO DIRECTION

These facilities are needed to provide power to a new TransCanada Keystone Pipeline pump station located approximately 36 km north of Veteran, Alberta. The need for the project was addressed by the Alberta Electric System Operator (AESO) as AESO Project No. RP-05-526 and was the subject of a need assessment filing to the Alberta Energy and Utilities Board (Application No. 1546106) pursuant to the applicable processes under *Electric Utilities Act*. The need was approved by the Commission on August 18, 2008 (Approval No. U2008-123).

In accordance with Section 35 of the *Electric Utilities Act*, AESO has directed ATCO to submit this application. A copy of the direction correspondence dated September 18, 2008, is attached (Attachment 9). Further to the aforementioned AESO Direction, ATCO advises it will not execute this project under its Alliance with Balfour Beatty United Group Limited (BBUGL). This project has been removed from the ATCO-BBUGL Alliance scope of work.

Whereas the proposed transmission line 7L696 connecting ATCO's Ribstone Creek substation to AltaLink's proposed Lakesend substation would involve two transmission facility owners, and recognizing that efficiencies may result from one party being responsible for certain project components for the entire line, it was agreed by ATCO and AltaLink that ATCO would be responsible for the routing, initial participant involvement program, engineering, procurement and construction of both ATCO's and AltaLink's portions of the 144 kV line. AltaLink is contracting with ATCO to provide the aforementioned project components for AltaLink's portion of line. These arrangements were reflected in the Proposals to Provide Service (PPS) submitted to AESO by ATCO and AltaLink, whereby the cost estimate for AltaLink's portion of 7L696 was prepared by ATCO as part of ATCO's PPS.

AESO's need assessment Application No. 1546106 also includes approval for the need to install a capacitor bank at ATCO's Monitor substation 774S. ATCO will file a separate facility application to the Commission for that project.

#### 1.4 AGENCY APPROVALS

The status of approvals from other agencies is summarized below. All of these agencies have been provided information as part of the participant involvement process and have indicated no objections to the proposed transmission facilities. Details of consultations with these agencies are provided in Attachment 3, Public and Landholder Consultation.

- The ATCO facilities are within the areas of two municipal authorities. Approximately 16 km of line are located within the Special Areas Board (Special Area No. 4), and Ribstone Creek substation and approximately 8 km of line are located within the County of Paintearth No. 18. Both agencies are municipal and road authorities under the *Municipal Government Act*, (*MGA*), and the Special Areas Board has municipal and Crown land administration authority under the *Special Areas Act*. ATCO will seek the necessary road crossing approvals for construction of facilities across roads (Township and Range Roads) under municipal jurisdiction. The proposed transmission facilities are exempt from the planning and development part of the *MGA* with respect to subdivision and development approvals.
- Alberta Transportation (AT) administers access and proximity to primary highways under the *Public Highways Development Act*. ATCO will apply for a development permit where the transmission line will be located across and along Highway 884 and Highway 599.

- ATCO has requested clearance for the project under the *Historical Resources Act* from Alberta Culture and Community Spirit (ACCS). ACCS is still reviewing the request.
- With respect to agreement by TELUS Communications Inc. pursuant to Section 39 of the *Hydro and Electric Energy Act*, ATCO will provide further information to TELUS following survey, as requested, and provide appropriate mitigation as identified by TELUS.
- The facilities are not an activity requiring a Conservation and Reclamation Approval or an environmental impact assessment report under the *Environmental Protection and Enhancement Act* (EPEA).

## 2.0 PROJECT DESCRIPTION

This section describes the location, project details and engineering specifications of the proposed transmission facilities. The facilities will be designed in accordance with the AESO's direction, and final functional specifications (Attachment 10). The facilities will be built and operated in accordance with the authorizations granted pursuant to this application, and in accordance with the requirements of Section 34 of the *Hydro and Electric Energy Act* (highway authority approvals), Section 39 of the *Electric Utilities Act* (safe and reliable operation), the *Safety Codes Act*, and applicable regulations and industry standards. The proposed facilities will be inspected and declared safe prior to being energized.

The following table is a summary of facility land locations and latitude/longitude coordinates (upon completion).

**TABLE 1 – Location Coordinates**

	<b>Facility</b>	<b>Land (Legal)</b>	<b>Lat. (N)</b>	<b>Long. (E)</b>
(1)	144 kV Line 7L696 - Start (Ribstone Creek Sub) - End (Connection with AltaLink Line 7L696)	LSD 1, SE 3-37-9-W4M LSD 4, SW 22-38-8-W4M	52.1443 52. 2738	-111.1982 -111.0761
(2)	Ribstone Creek Substation 892S	LSD 1, SE 3-37-9-W4M	52.1443	-111.1982
(3)	144 kV Line 7L696 Connection with AltaLink Line 7L696	LSD 4, SW 22-38-8-W4M	52. 2738	-111.0761

### 2.1 RIBSTONE CREEK SUBSTATION 892S

The Ribstone Creek substation will be altered to accommodate the connection of proposed 144 kV transmission line 7L696, the installation of a 144 kV circuit breaker and related support equipment and infrastructure.

#### Location and Land Area

The Ribstone Creek substation is situated in Special Area No. 4, approximately 20 km north of Veteran, Alberta, on Township Road 370 about 4.8 km west of Highway 884. The substation is located in LSD 1 in SE 3-37-9-W4M as shown on proposed site plan and route mosaic (drawings A-04 and A-06a in Attachments 5 and 6 respectively). The existing substation fenced area is approximately 45 by 35 m within an 93 by 74-m substation site that ATCO leases from Express Pipeline Ltd. The fenced area will be expanded approximately 35 m west onto a 40 by 190-m property already owned by ATCO, and will be expanded south by approximately 12 m within the Express pump station property. ATCO will expand the leased area by an additional 47 by 20-m.

### **Proposed Major Equipment Additions**

One – 144 kV circuit breaker

### **Proposed Major Equipment Final Design Specification**

- (a) One – 10/13.3/16.6 MVA, 144-14.16 kV transformer
- (b) Two – 144 kV circuit breakers
- (c) An enclosure surrounded by a chain link fence, and other substation equipment as described in the Application.

### **General Equipment and Engineering Outline**

The general equipment layout is indicated on the site plan, drawing A-04 in Attachment 5. Engineering information, including switching and protection features, is shown on the proposed single line diagram, drawing A-05 in Attachment 5, and in AESO's functional specification document included in Attachment 10.

## **2.2 PROPOSED 144 KV TRANSMISSION LINE 7L696**

ATCO proposes to construct approximately 24.3 km of 144 kV transmission line designated as line 7L696, connecting the existing Ribstone substation 892S to AltaLink's proposed segment of 7L696, which in turn will connect to AltaLink's proposed Lakesend substation 508S. The proposed system single line diagram is included as drawing A-03 in Attachment 5. The location of the line is shown on reference map drawing A-01 in Attachment 4, and on the aerial mosaic drawings A-06a and A-06b in Attachment 6.

### **Design and Operating Details**

The proposed line 7L696 would be a standard three-phase design with a circuit of three 266.8 MCM conductor wires strung on wood or steel pole structures built to ATCO's standards for operation at the nominal voltage of 144 kV. The typical structure for most of the line would be a single-pole "wishbone" design. This design has a typical height of about 18.6 m and a typical span length of about 140 m between poles. The line would have an overhead shield wire for lightning protection. The typical structure is shown on drawing TS-TW301-144SC (Attachment 7).

Non-typical structures with taller or additional poles, and/or anchors and guy wires are required where the line turns or terminates, or requires longer spans, greater clearance or extra stability such as across wet areas or valleys. Final structure specifications to be determined following survey and line design. In all cases, the line would meet or exceed the requirements of applicable safety regulations.

Conductors for the line will be single 266.8 MCM (Partridge) as specified by AESO. Thermal ratings for the line are shown in Table 2.

**TABLE 2 – 144 kV Line Thermal Ratings**

Conductor	Thermal Rating, Normal		Thermal Rating, Emergency	
	Summer	Winter	Summer	Winter
266.8 MCM (Partridge)	114 MVA	146 MVA	130 MVA	157 MVA

**Transmission Line Alignment and Right-of-Way**

The transmission line alignment was based on stakeholder input, and on the location of physical, environmental and cultural constraints between the end points, generally following existing linear disturbances and property boundaries to minimize impacts on adjacent land uses.

A minimum right-of-way width is required for construction and maintenance access. The width and structure placements vary with route location. Typical minimum right-of-way widths for a 144 kV line are as indicated in Table 3.

**TABLE 3 – Typical Alignment and Right-of-Way**

Transmission Line (T/L) Route Location	Typical Structure Location	Minimum Right-of-Way Width (R/W)
Road Allowance (or road plan)	0.6 m onto road allowance	9 m adjacent to road allowance
Quarter Line	0.6 to 1.0 m offset from quarter-line	9 m on each side of quarter-line (18 m total)
Cross Country	Centre of new R/W	7.5 m on each side of T/L (15 m total)

Right-of-way requirements for specific route segments are shown on the cross-section diagrams, drawings A-07a to A-07d, Attachment 7. Besides the minimum widths indicated, additional area can be required as follows:

- At non-typical structures such as at corners, watercourse or coulee crossings, for anchors, guy wires, additional poles and wider spacing.
- In treed areas, to keep the power line "tree-free" by removing adjacent trees that could fall onto the line now or in the future.

Subject to final survey, no additional right-of-way for tree clearing is expected to be required along the proposed route.

## 2.3 CONNECTION OF 144 KV TRANSMISSION LINE 7L79 (ATCO-ALTALINK)

The facilities in this application will connect with those described in an application being filed by AltaLink. ATCO's facilities will be connected in accordance with the interconnection requirements of the AESO and ATCO's respective Commission-approved terms and conditions of service, and with the AESO's final functional specification (Attachment 10 of this application). ATCO will establish joint operating procedures with AltaLink for the interconnection of facilities prior to energization.

The designated point of connection of ATCO's 144 kV line 7L696 to AltaLink's proposed line 7L696 is at the boundary of the operating areas of the two transmission facility owners, in LSD 4, SW 22-38-8-W4M. The location is shown as node D22 on the reference map (drawing A-01, Attachment 4), and the connection is shown on single line drawing 526-SLD-03 on page 24 of AESO's final functional specification (Attachment 10).

## 2.4 SCHEDULE

Key project activities and dates are as follows:

**TABLE 4 – Proposed Schedule**

<b>Activity or Milestone</b>	<b>Start</b>	<b>Completed</b>
AUC approvals	March 2009 (application filed)	July 3, 2009 (approvals issued)
Easements and related approvals	July 2009	September 2009
Transmission line right-of-way preparation and line construction	September 1, 2009	December 2009
Substation alterations/construction	July 6, 2009	December 2009
In-service date		December 31, 2009

If approvals are not obtained by July, then the December in-service date may not be achieved, which would have significant impacts on TransCanada Keystone's pipeline operations.

## 2.5 PROJECT COST ESTIMATE

The cost estimate for ATCO's portion of the project is provided in Table 5. In accordance with the arrangements described in section 1.3 of this application, ATCO has also provided the estimate for the AltaLink portion of line 7L696 estimated on a pro rata basis of line length and overall project costs.

The estimate for ATCO's portion of the project costs is \$8,688,000, as provided in Table 5. AESO's direction letter (September 18, 2008) specified a project cost of \$10,297,000, based on the estimate in ATCO's Proposal to Provide Service (PPS) dated September 9, 2008. The estimate in the PPS had assumed a preliminary line route that

would require approximately 1.6 km of under-stringing of existing 25 kV lines. As a result, amounts of approximately \$332,000 of direct and \$78,000 of distributed and indirect costs had been included in the PPS estimate for temporary line construction, under-stringing and temporary line removal. When route planning and stakeholder consultations had concluded, the final proposed route successfully avoided those constraints. In addition, the lower estimate also reflects greater efficiencies in project management and construction management.

**TABLE 5 – Project Cost Estimate (+20 / -10%, 2009\$)**

	System Portion	Customer Portion		TOTAL	Capital Maintenance
		AE Allocation	AML Allocation		
<b>Transmission Line Costs</b>					
Material	\$ -	\$ 1,347,000	\$ 154,000	\$ 1,501,000	\$ -
Labour	\$ -	\$ 3,046,000	\$ 348,000	\$ 3,394,000	\$ -
<b>Total-Transmission line</b>	<b>\$ -</b>	<b>\$ 4,393,000</b>	<b>\$ 502,000</b>	<b>\$ 4,895,000</b>	<b>\$ -</b>
<b>Substation Facilities Cost</b>					
Material	\$ -	\$ 858,000	\$ -	\$ 858,000	\$ -
Labour	\$ -	\$ 1,114,000	\$ -	\$ 1,114,000	\$ -
<b>Total-Substations</b>	<b>\$ -</b>	<b>\$ 1,972,000</b>	<b>\$ -</b>	<b>\$ 1,972,000</b>	<b>\$ -</b>
<b>Telecommunication Cost</b>					
Material	\$ -	\$ 223,000	\$ -	\$ 223,000	\$ -
Labour	\$ -	\$ 28,000	\$ -	\$ 28,000	\$ -
<b>Total-Telecommunication</b>	<b>\$ -</b>	<b>\$ 251,000</b>	<b>\$ -</b>	<b>\$ 251,000</b>	<b>\$ -</b>
<b>Owner Costs</b>					
Proposal to Provide Service	\$ -	\$ 70,000	\$ 5,000	\$ 75,000	\$ -
Facility Applications	\$ -	\$ 209,000	\$ 16,000	\$ 225,000	\$ -
Land Rights - Easements	\$ -	\$ 218,000	\$ 17,000	\$ 235,000	\$ -
Land - Damage Claims	\$ -	\$ -	\$ -	\$ -	\$ -
Land - Acquisitions	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total - Owner's Cost</b>	<b>\$ -</b>	<b>\$ 497,000</b>	<b>\$ 38,000</b>	<b>\$ 535,000</b>	<b>\$ -</b>
<b>Distributed Costs</b>					
Procurement	\$ -	\$ 21,000	\$ 2,000	\$ 23,000	\$ -
Project Management	\$ -	\$ 46,000	\$ 4,000	\$ 50,000	\$ -
Construction Management	\$ -	\$ -	\$ -	\$ -	\$ -
Contingency	\$ -	\$ 718,000	\$ 55,000	\$ 773,000	\$ -
<b>Total - Distributed Costs</b>	<b>\$ -</b>	<b>\$ 785,000</b>	<b>\$ 61,000</b>	<b>\$ 846,000</b>	<b>\$ -</b>
<b>Total Direct Costs</b>	<b>\$ -</b>	<b>\$ 7,898,000</b>	<b>\$ 601,000</b>	<b>\$ 8,499,000</b>	<b>\$ -</b>
<b>Salvage</b>					
Transmission Line Labour	\$ -	\$ -	\$ -	\$ -	\$ -
Substation Labour	\$ -	\$ -	\$ -	\$ -	\$ -
Land Remediation and Reclamation	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total-Salvage</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Other Costs</b>					
AFUDC	\$ -	\$ 158,000	\$ 12,000	\$ 170,000	\$ -
E&S	\$ -	\$ 632,000	\$ 48,000	\$ 680,000	\$ -
<b>Total - Other Costs</b>	<b>\$ -</b>	<b>\$ 790,000</b>	<b>\$ 60,000</b>	<b>\$ 850,000</b>	<b>\$ -</b>
<b>Total In-Direct Costs</b>	<b>\$ -</b>	<b>\$ 790,000</b>	<b>\$ 60,000</b>	<b>\$ 850,000</b>	<b>\$ -</b>
<b>TOTAL PROJECT COSTS</b>	<b>\$ -</b>	<b>\$ 8,688,000</b>	<b>\$ 661,000</b>	<b>\$ 9,349,000</b>	<b>\$ -</b>

## 3.0 ROUTE SELECTION

### 3.1 STUDY AREA

The study area was selected to provide a sufficiently broad area for routing assessment. The area is generally bounded by the area shown on the constraint maps in Attachment 8. The study area was tied to the location of the substation terminations as specified by AESO. Routing opportunities were investigated generally up to 1.6 km west and south of Ribstone Creek substation, and up to 1.6 km east and north of the proposed Lakesend substation site.

The project study area includes mainly privately-held agricultural land within the Special Areas Board (SAB), the County of Provost No. 18, and the Municipal District of Provost No. 52, and also includes some areas of Crown land, including lands administered by the SAB. Ribstone Creek substation is located within the County of Paintearth, and the AltaLink proposed Lakesend substation is located within the M.D. of Provost. Most of the study area for line routing lies within the SAB.

The local terrain ranges from level, to gently rolling, to very hilly, notably the Nose Hill area in the southwest part of the study area (see route mosaic drawing A-06a in Attachment 6).

The study area lies southwest of the Silver Heights Environmentally Significant Area (ESA), which is classified as national significance (see drawing A-08a, Attachment 8); route options avoid that area. There is a provincially significant ESA called Ribstone Creek-Nose Hill within the project area. This ESA is mapped as a band of about 1 km in width bounding the Ribstone Creek which flows southwest to northeast across the study area. These stream systems have discontinuous clusters of willows (*Salix* spp.) and riparian vegetation along their banks, and traverse the bottoms of deeply incised coulees, particularly in the southwestern portion of the study area. In the eastern region of the study area, there are several occurrences of ephemeral ponds and wetlands, but no named lakes.

The vegetation complexes of the area are typical of the Grassland Natural Region and Northern Fescue Subregion (Alberta Environmental Protection, 1997). The predominant native shrub vegetation includes willows (*Salix* spp.), wild rose (*Rosa* spp.), and saskatoon berry (*Amelanchier alnifolia*). Tree species include black poplar and trembling aspen (*Populus balsamifera* and *P. tremuloides*).

Grassland areas are primarily a dry mixed prairie grassland complex (*Festuca* spp., *Agropyron* spp., *Bouteloua* spp., *Stipa* spp.), with some prairie wildflowers and various introduced weeds. Field work conducted during the summer and autumn of 2008 confirmed vegetation complex compositions, and other landscape characteristics of this area. During the consultation process, the SAB had expressed concerns with preservation of undisturbed grasslands in view of the challenges posed by cumulative disturbances, but they did not object to the proposed route.

Additional details on environment and landscape features are provided in Attachment 3 (Conservation and Reclamation). Environmental factors for the study area are indicated on the maps in Attachment 8.

Agricultural activities occur throughout most of the project area. Productivity of the soils varies, as indicated on the CLI soils map A-09b in Attachment 8. The majority of the soils in the study area have been classified by the CLI for agricultural suitability as classes 3 through 6. Primary farming activities include ranching, pasture, hay lands and cereal crops.

Rural residences are located throughout the study, along most of the developed roads and road allowances. Some small parcel land ownership includes a local community hall (Nose Hill Community Hall), a church cemetery (St. Olaf's Norwegian Lutheran Church) and historical school site (Lakesend School District 1618).

The oil and gas industry is active in the area and a major pipeline (TransCanada Keystone) is under development. There are no other major industrial facilities, factories, or feedlots in the study area.

A number of telecommunication towers are concentrated on the southeast end of Nose Hill, about 4 km east of Ribstone Creek substation.

The project falls within the traditional lands of interest to four First Nations, as described in Attachment 3.

### **3.2 GENERAL TRANSMISSION LINE ROUTING CRITERIA**

In selecting a route or route options, objectives are to:

- Minimize impacts with other land uses such as residences, built-up areas and oil and gas facilities.
- Utilize existing linear disturbances such as roads and property boundaries, to minimize new disturbance, following existing power lines where possible.
- Follow road allowances where possible, for access, to reduce new clearing and to avoid impacts to agriculture and other land use.
- Keep routes as straight as possible, to reduce line length.
- Avoid environmentally sensitive areas such as wet areas, recreation areas, parks, campgrounds and designated wildlife habitat.

Routes along existing roads and highways were sought, to provide better maintenance access, straighter alignments and for potential overlap of rights-of-way to reduce project footprint.

### 3.3 ROUTE OPTIONS

Preliminary route options were chosen based on the technical, economic, environmental and land-use criteria and features described in Sections 3.1 and 3.2. Several routing options. These preliminary route options are shown on the preliminary route mosaic drawing P-05, included in the public information package, Attachment 11. Preliminary route option details are provided on Page 3 (Route Option Details) of the November 2008 Project Information document in Attachment 11. The descriptions and maps include "node" identifiers (e.g., "B7") as reference points to clarify the descriptions. Further details are provided as follows.

#### **Western Routing Options (Far-West Route and West Route) (28.6 and 25.5 km)**

A "Far West" route (A1-F2-F6-B12) and a "West" route (A1-A7-B12) were proposed as preliminary routes as a route from Ribstone Creek substation to join the Central West Option (B12) at Highway 884. These western options potentially avoided constraints and costs associated with paralleling the existing 144 kV line 7L79 along Tp.Rd. 370 east of Ribstone Creek substation. They also avoid the residences located along Highway 884 south of B12. Both of these western options would then continue from B12 to B21 to D23 and terminate at D24 (Lakesend substation).

Both of the western options would be located along undeveloped or partially developed road allowances through native grass pasture and rangelands in the Nose Hills area. Although there would be no impact to residences from nodes A1 to B12, both options would require significant coulee crossings, traversing of very hilly terrain, potential encroachment on areas designated as having Historical Resource Value (HRV) (see map drawing A-09c in Attachment 8), and associated construction impacts to undisturbed native pasture and rangelands. There are 5 residences within 800 m of the Far West route and 4 within 800 m of the west route.

#### **Central West Routing Option (25.7 km)**

The Central West route (A1-B7-B21-D23-D24/Lakesend substation) would go east from Ribstone Creek substation along Tp. Rd. 370 to Highway 884, then north along Highway 599 and Rge. Rd. 85 (to B21), then east on Twp Rd 384. This route could be the most direct, but potentially the most costly due if double-circuiting with existing 144 kV lines (7L79) and existing distribution lines, or if mitigation were required for parallel TELUS infrastructure and adjacent communications towers (Section 6 -37 -9-W4M), under-stinging of existing distribution lines. This option would require three crossings of Ribstone Creek. There are 7 residences within 800 of this route.

#### **Central East Routing Option (25.7 km)**

This route (A1-C8-B13-D14-D24/Lakesend substation) would follow the Central West to B7, but continue another mile east along Tp. Rd. 370 to C8, then turn north along Rge. Rd. 84. The route would turn east at B13, follow Twp Rd 374 for a mile (to D14),

then join the East option going north along Rge. Rd. 83 to Lakesend substation. There would be 9 residences within 800 m along this route.

#### **East Routing Option (25.6 km)**

The East route (A1–D9–D17–D24/Lakesend substation) would follow the Central East route to C8, but continue another mile east along Tp. Rd. 370 to D9, then turn north along Rge. Rd. 83 and follow it directly to the Lakesend substation. There are 12 residences within 800 m of this route.

#### **Far- East Routing Option (28.9 km)**

The Far East route (A1–E10–E23–D24/Lakesend substation) would follow the East route to D9, but continue another mile east along Tp. Rd. 370 to E10, then turn north along Rge. Rd. 82 (developed and undeveloped) and follow Rge. Rd. 82 and Highway 884 north to area east of Lakesend substation (E23), then route west along a quarter line to the proposed substation. This portion of the route would traverse through native rangelands. The Far East routing option would require multiple crossings of ephemeral ponds (E15-E18) and would traverse some very hilly topography, particularly from E21 to E23. There are 3 residences within 800 m of this route.

#### **Connecting Route Options**

Several routes along east-west roads as described in Attachment 11 were considered, to connect the main routes.

### **3.4 COMPARISON OF ROUTE OPTIONS**

In evaluating the route options and selecting the proposed route, ATCO considered the factors and information as summarized in Table 6; the information as shown on the route constraint maps (drawings A-08a to A-08c in Attachment 8); and feedback obtained through consultation. Preliminary route options were presented for review by the landowners and occupants, interested agencies and the general public. Through consultation with affected landowners/occupants ("landholders") and agencies, the Applicant identified concerns and potential objections along each of the routes (refer to Attachment 3, Tables C and D).

Adjustments to route options were made to arrive at a proposed route alignment to reflect feedback from landholder and agency consultation. ATCO selected the proposed route that best meets the selection criteria and minimizes landholder and stakeholder concerns. The proposed route is shown on the route maps/mosaics in Attachments 4, 6 and 8. Table 6 summarizes key route factors including environmental considerations and resource/land use factors, for each route option for comparative purposes.

**TABLE 6 - Summary of 7L696 Route Options**

Route Factor	Proposed Route	Rejected Far-West & West Options	Rejected Central-West Option	Rejected Central-East Option	Rejected East Option	Rejected Far-East Option
Key Segments (Includes both ATCO and AltaLink portions of 7L696)	A1-B7-B9-B9A-B12A-B12-B17-B19-D20-D24	A1-F2-F6-B12-B21-D23-D24, and A1-A7-B12-B21-D23-D24	A1-B7-B21-D23-D24	A1-C8-B13-D14-D24	A1-D9-D24	A1-E10-E23-D24
Line length	27.1 km	28.6 & 25.5 km	25.7 km	25.7 km	25.6 km	28.9 km
<b>LAND USE &amp; LANDOWNER CONSIDERATIONS</b>						
Adjacent Linear Facility						
• Existing Power Line	5.1 km	0	5.1 km	5.1 km	5.1 km	5.1 km
• Road or Road Allowance	23.6 km	28.6 & 25.5 km	25.7 km	25.7 km	25.6 km	27.3 km
• Quarter or Section Line	3.2 km	0	0 km	0	0	1.6 km
• Cross country	0.4 km	0	0	0	0	0
Pipeline Crossings	5	4	5	4	4	7
Occupied Residences:						
• 0 to 50 m	0	0	1	1	2	0
• 0 to 100 m	0	0	4	6	9	0
• 0 to 200 m	0	0	4	7	9	0
• 0 to 400 m	0	0	4	7	9	0
• 0 to 800 m	4	5 & 4	7	9	12	3
Number of Land Parcels	75	74 & 66	68	68	68	75
Potential Objections – No. of Landholders/ Agencies	1	7 & 3	2	4	7	1
Potential Objections or Outstanding Concerns – No. of Land Parcels	17	20 & 14	8	12	14	11
<b>ENVIRONMENTAL AND RESOURCE CONSIDERATIONS:</b>						
Environmentally Significant Areas (Nose Hill-Ribstone Creek)	3.0 km	4.1 & 1.6 km	1.6 km	1.6 km	1.6 km	1.0 km
Native grasslands disturbance potential	Slight. Approx. 400 m cross-country segment (B18A-B19)	High. Extensive undisturbed areas (F2-F6, & A1-A7)	Slight. Undisturbed area (B17-B18)	Slight, if any present on road allowances	Slight, if any present on road allowances	Moderate. Some undisturbed areas on forced road (E15-E18)
Topography and terrain	Gently undulating to gently rolling.	Very hilly/ rolling terrain with deep coulees in Nose Hill area	Gently undulating to gently rolling	Gently undulating to gently rolling	Gently undulating to gently rolling	Gently undulating to gently rolling
Water bodies, riparian areas and wetlands	1 crossing of Ribstone Creek. 1 water body to be spanned (near D20).	Multiple crossings of Cooper Creek tributaries & Ribstone Creek.	Multiple crossings of Ribstone Creek.	1 crossing of Ribstone Creek. 1 water body to be spanned (near D20).	1 crossing of Ribstone Creek. 1 water body to be spanned (near D20).	Multiple water bodies & ephemeral wetlands (E12-E21). 1 crossing of Ribstone Creek.
Historical Resource Value Areas, HRV 4 or 5.	1.0 km	1.9 & 3.5 km	1.2 km	2.2 km	1.0 km	1.0 km
Agricultural Soil Capability:						
• CLI Class 3	12 km	17 & 13 km	15 km	12 km	13 km	12 km
• CLI Class 4	8 km	3 km	6 km	10 km	9 km	14 km
• CLI Class 5	3 km	5 & 8 km	3 km	1 km	1 km	1 km
• CLI Class 6	4 km	4 & 1 km	2 km	2 km	2 km	2 km
Agricultural use (current)	Cropland, hayland and pasture.	Native grassland & pasture in Nose Hill area. Cropland, hayland and pasture elsewhere.	Cropland, hayland and pasture.	Cropland, hayland and pasture.	Cropland, hayland and pasture.	Cropland, hayland and pasture.

### 3.5 SELECTION OF PROPOSED ROUTE

The Proposed Route was selected based on consideration of the land-use and environmental/resource factors, and the feedback from agencies and affected landholders. Of the various factors and information described in Table 6 and in Attachment 3 of the application, those that most distinguished one option from another included:

- Concerns or potential objections as identified by agencies and landholders.
- Proximity to residences.
- Location along existing linear disturbances, particularly developed roads, property boundaries and power lines.
- Avoidance of sensitive terrain, particularly in undisturbed areas in the Nose Hill area, and in the vicinity of Ribstone Creek.
- Avoidance of native grassland.
- Avoidance of areas and sites of cultural significance as identified by historical resource value (HRV) information and in consultations with First Nations.
- Line length and cost.

The **Proposed Route** is a combination of the **Central West and East** routing options with adjustments at B9-B9A-B12A-B12 and at B17-B18A-B19 to mitigate specific concerns. This route was selected as the route that best meets the key criteria. In comparing the routing factors in Table 6, the proposed route is most favourable for the key land-use and landowner considerations. The route is generally equal to other options in following existing roads, road allowances and property boundaries to minimize impacts to agriculture; it is the most favourable for avoiding residences, with no dwellings within 400 m of the route (the nearest is about 724 m away); and it has the least number of potential landowner objections and outstanding concerns. The route diverts to a quarter line 0.8 km east of Highway 884 to avoid four residences. The proposed route has no significant environmental impacts that would trigger a review under the *Environmental Protection and Enhancement Act*. For environmental and resource considerations, it is better than some other routes and generally equal to others, with gently undulating to gently rolling terrain, minimal impact on native grasslands, and a single crossing of the Ribstone Creek along a developed road allowance. The route follows a road diversion and short (400 m) cross-country alignment at B17-B18A-B19 in order to avoid additional impact on the Ribstone Creek and the Nose Hill-Ribstone Creek ESA.

The western routing options (**Far-West Route and West Route**) were comparable to the Proposed Route in avoiding proximity to residences, but were much less favourable in that there were more objections and concerns from affected landholders, agencies and interested parties, including the First Nations. The western options would have the most environmental and landscape impacts compared to other route options: the routing would traverse the steeper terrain in the Nose Hill area; would cross several kilometres of undisturbed areas (undeveloped road allowances) with native grassland; would require multiple water course crossings; and would have the greatest potential to impact

cultural and historical features. These routes were deemed the least favourable overall, and were rejected.

The **Central West Option** was generally similar to the Proposed Route for most land-use, landowner and environmental impacts. It was slightly more favourable for access by following developed road allowances in its entirety, but was less favourable due to the closer proximity to residences (4 within 100 m of the route), the greater number and nature of landholder objections, and the greater potential environmental impacts due to the multiple creek crossings within the Nose Hill-Ribstone Creek ESA. The route was rejected due to the impacts noted and the objections raised.

The **Central East Option** was similar to the Proposed Route for most land-use and environmental factors. However, it was rejected because of proximity to residences (6 within 100 m of the route), and the greater number and severity of potential objections by landholders.

The **East Option** was similar to the Proposed Route for most land-use and environmental factors, but was rejected because of proximity to residences (6 within 100 m of the route), and the much greater number and severity of potential objections by landholders.

The **Far East Option** was comparable to the Proposed Route for most land-use and landowner considerations, including very few residences (3 within 800 m). However, there was a firm objection to this route. Regarding environmental considerations, this route would have the most potential impact on water bodies and ephemeral wetlands, and would be less favourable than other routes (except the west routes) due to the rolling and hilly terrain, and the potential for disturbance of previously undisturbed rangelands along an undeveloped road allowance. This route was also longer than most other routes. As such, this route was rejected in favour of the Proposed Route.

## 4.0 PROPOSED ROUTE DESCRIPTION

The proposed line route for 7L696 is described in detail in the segment-by-segment description that follows. Detailed route information is shown on the proposed route mosaics, drawings A-06a and A-06b (Attachment 6), and on cross-sections "A" through "L" on drawings A-07a to A-07d (Attachment 7). Details may vary slightly following survey and final design.

### **Ribstone Creek Substation/A1 to B4 to B5 to B7 (5.3 km)**

Centre line location:	0.6 m within widened road allowance north boundary (Tp. Rd. 370) (entry to substation via pump station site).
R/W width:	9 m adjacent to road plan right-of-way (R/W).
Predominant vegetation:	Adjacent land cleared and cultivated.
Adjacent features:	Developed road (Tp. Rd. 370). 144 kV transmission line 7L79 on opposite side of road. Cemetery (B4 to B5).
Crossings:	Highway 884, 3 undeveloped road allowances, 1 pipeline.
Access:	Via existing road.
Land ownership/jurisdiction:	Private.
Residences within 800 m:	None.
Cross-section drawing:	"A" and "B" (drawing A-07a).

### **B7 to B8 to B9 (3.2 km)**

Centre line location:	0.6 m within widened road allowance (Highway 884) east boundary.
R/W width:	9 m adjacent to road plan R/W.
Predominant vegetation:	Adjacent land cleared: cultivated or pasture.
Adjacent features:	Developed road (Highway 884). Power distribution line on opposite side of road (B7 to B8).
Crossings:	2 pipelines, 1 power distribution line.
Access:	Via existing roads.
Land ownership/jurisdiction:	Private.
Residences within 800 m:	None.
Cross-section drawing:	"C" (drawing A-07a) and "D" (drawing A-07b).

### **B9 to B9A TO B12A to B12 (4.9 km)**

Centre line location:	0.6 m within road allowance north boundary (Tp. Rd. 372) (B9 to B9A), 1.0 m west of quarter line (B9A to B12A), 0.6 m within road allowance north boundary (Tp. Rd. 374) (B12A to B12).
R/W width:	9 m adjacent to road allowances, or 9 m on each side of quarter line.
Predominant vegetation:	Cultivated or pasture.
Adjacent features:	Developed road allowances, or quarter line boundary.
Crossings:	Highway 884, 1 pipeline.
Access:	Via existing roads and proposed right-of-way.
Land ownership/jurisdiction:	Private.
Residences within 800 m:	Three (724 to 754 m west).
Cross-section drawing:	"E" and "F" (drawing A-07b), and "G" (drawing A-07c).

### **B12 to B17 (5.8 km)**

Centre line location:	0.6 m within road right-of-way west boundaries: Highway 884 road plan (B12 to B15), and Rge.Rd. 85 road allowance (B15 to B17).
R/W width:	9 m adjacent to road allowance.
Predominant vegetation:	Adjacent land cleared: cultivated or pasture. Gas industry development on Rge.Rd. 85.
Adjacent features:	Developed roads (Highway 884 and Rge.Rd. 85). Power distribution line on opposite side of road (B12 to B15).
Crossings:	Highway 599, 1 undeveloped road allowance, 1 pipeline.
Access:	Via existing roads.
Land ownership/jurisdiction:	Private
Residences within 800 m:	One (756 m west).
Cross-section drawing:	"H" and "I" (drawing A-07c).

### **B17 to B18A to B19 (0.9 km)**

Centre line location:	0.6 m within east boundary of road plan (Rge.Rd. 85) (B17 to B18A); Cross-country alignment (B18A to B19).
R/W width:	9 m adjacent to road allowance (B17- B18A); 15 m (7.5 m each side of centre line) (B18A to B19).
Predominant vegetation:	Pasture.
Adjacent features:	Developed road (B17- B18A), Ribstone Creek/valley.
Crossings:	1 Developed road allowance, Ribstone Creek-Nosehill ESA.
Access:	Via existing roads and proposed right-of-way.
Land ownership/jurisdiction:	Private.
Residences within 800 m:	None.
Cross-section drawing:	"J" and "K" (drawing A-07d).

**B19 to D20 to D22 (Connection with AltaLink Line 7L696) (4.3 km)**

Centre line location:	0.6 m within road allowance south boundary (Tp. Rd.382) (B19 to B20); 0.6 m within road allowance east boundary (Rge. Rd. 83) (B19 to B20).
R/W width:	9 m adjacent to road allowance.
Predominant vegetation:	Pasture.
Adjacent features:	Developed road allowances.
Crossings:	3 developed roads/road allowances.
Access:	Via existing roads.
Land ownership/jurisdiction:	Private.
Residences (within 800 m):	None.
Cross-section drawing:	"J" and "L" (drawing A-07d).

**AltaLink's Line 7L696, D22 to D23 to D24 (2.8 km)**

As AltaLink is contracting with ATCO to construct this portion of line, ATCO is providing the following description.

Centre line location:	0.6 m within road allowance east boundary (Rge. Rd. 83) (B19 to B20).
R/W width:	9 m adjacent to road allowance.
Predominant vegetation:	Pasture.
Adjacent features:	Developed road allowances, historic Ribstone School site.
Crossings:	1 developed road allowance, 1 power distribution line (FortisAlberta), 1 pipeline corridor, Ribstone Creek, Ribstone Creek-Nosehill ESA.
Access:	Via existing roads.
Land ownership/jurisdiction:	Private.
Residences (within 800 m):	None.
Cross-section drawing:	"J" (drawing A-07d).

## **5.0 ENVIRONMENTAL AND ELECTRICAL EFFECTS**

### **5.1 ENVIRONMENTAL EFFECTS**

ATCO will construct and maintain the proposed transmission facilities adhering to Alberta Environment's C&R/IL/95-2, *Environmental Protection Guidelines for Electric Transmission Lines*, and in accordance with the terms and conditions of the right-of-way agreements and easements.

Measures to reduce the environmental and landscape impacts of this project are described in the conservation and reclamation document (Attachment 2).

### **5.2 ELECTRICAL EFFECTS**

High voltage electrical transmission facilities may induce a voltage in metal objects that are located nearby. The most common objects are metal fences and buildings, telephone lines, and pipelines. Appropriate mitigation measures are outlined as follows.

#### **Radio and Television Interference**

The transmission facilities will be constructed and maintained in such a manner as to keep radio and television interference levels within limits acceptable to Industry Canada, the federal government department that regulates communications.

#### **Telephone Facilities**

Under certain conditions, power transmission facilities can induce both electrical noise and hazardous voltages on telephone lines. ATCO will work with TELUS before and after construction to identify and mitigate adverse impacts.

#### **Metal Fences, Buildings and Structures**

Where necessary, metal fences, buildings, and structures will be grounded by ATCO to minimize induced voltages. Minimum clearance required between all transmission facilities and buildings will be in accordance with the *Safety Codes Act* and regulations.

#### **Oil and Natural Gas Well Heads**

Regulations under the *Safety Codes Act* require that transmission facilities must not be located any closer than 40 m from any natural gas or oil well head unless the operator grants permission. This requirement will be adhered to with the use of the most up-to-date information available. Well sites established subsequent to the date of our information and prior to the Commission's approval will be appropriately accommodated in the design of the project.

## **Pipelines**

The *Safety Codes Act* and the *Pipeline Act* both have regulations to which ATCO and the pipeline operators must adhere. ATCO, in conjunction with pipeline operators, will continue to meet the regulated standards so that both facilities can be operated safely.

## **Electric and Magnetic Fields (EMF)**

While landowners and occupants occasionally raise questions regarding the potential for health effects from EMF, ATCO's review of available information on biomedical research and epidemiological studies indicates that EMF associated with high-voltage transmission facilities are not demonstrated to cause harmful biological effects.

## **6.0 PARTICIPANT INVOLVEMENT PROGRAM**

ATCO undertook a comprehensive consultation program with landholders, agencies and other interested parties, as described in Attachment 3, Public and Landholder Consultation. ATCO notified 136 landholders, agencies and other potential interested parties within at least 800 m from the preliminary route options and substation location. This included stakeholders in AltaLink territory for the initial project consultation on route options. For the proposed route, ATCO and AltaLink then conducted further consultations within their respective operating areas.

ATCO has conducted personal consultation with all but two of the 67 landowners, occupants, agencies and interested parties for ATCO's proposed route. Feedback is still pending from two companies that are occupants within 800 m. ATCO has communicated with the landowners and addressed most of their concerns, as described in the consultation summary (Attachment 3).

Since the project is located in an area of traditional interests identified for four First Nations, ATCO implemented a communication plan to ensure thorough and meaningful consultation with the affected First Nations. The consultation with the First Nations is described in Attachment 3.

## 7.0 CONCLUSION

Consultation with affected parties played an important role in the planning of these facilities. The proposed route was selected based on input from the agencies, landholders and other parties potentially affected by the project. ATCO believes that the proposed transmission facilities are the most acceptable and respectfully requests the Commission's timely and favourable approval.

If there are any questions concerning this submission please contact Claudia Palylyk at 780-420-7218, or the project manager, Yu-Min Chin, at 780-420-7194.

Sincerely,  
ATCO Electric Ltd.

*< Original signed by >*

**Paul Goguen, P. Eng., MBA**  
Vice President, Transmission

## ATTACHMENT 2

### CONSERVATION AND RECLAMATION

ATCO Electric Ltd. proposes to construct approximately 27.1 kilometres (km) of new 144 kilovolt (kV) transmission line from the existing Ribstone Substation 892S to the proposed Lakesend Substation 508S, to provide power to TransCanada Keystone's Pipeline Pump Station 1 (PS1), approximately 36 km north of Veteran, Alberta. These facilities are shown on the proposed route mosaic (drawing A-06a and A-06b, Attachment 6), and are described in the application text (Attachment 1 of this application to the Alberta Utilities Commission).

ATCO will own 24.3 km of the line and AltaLink Management Ltd. will own the 2.8 km portion near the Lakesend substation, as shown on drawing A-06b, Attachment 6.

Project study area setting and details are provided in Section 3 of Attachment 1. This document describes conservation and reclamation measures for the project.

#### **1 Project Setting and Study Area**

The project area is located within Special Areas Board (SAB) Special Area No. 4. For clarification, "Special Area No. 4" refers to one of the three administrative districts that comprise the Special Areas Board (a unique rural municipal area administered by a board appointed by the provincial government).

The southern portion of the project study area begins approximately 20 km north of Veteran, Alberta. The new transmission line will extend from the existing substation Ribstone Creek 508S substation, in LSD 1, SW 3-37-9-W4M (N 52.1443, E -111.1982), to the proposed Lakesend substation 508S at LSD 9, NE 28-38-8-W4M (N 52.2964, E -111.0769), for a distance of approximately 27.1 km. Refer to Attachment 6, drawings A-06a and A-06b.

The project area is located in the "Northern Fescue" subregion of south eastern Alberta, within the "Grassland Natural Region" (Alberta Environmental Protection, 1997). The land is mostly privately owned agricultural land, with some Crown land (SAB jurisdiction). There is industrial (oil and gas) development in the area. The proposed route for 7L696 requires one creek crossing (Ribstone Creek at SW 22-38-8-W4M) and parallels Ribstone Creek (NE 7- and NW 8-38-8-W4M) for approximately 900 m. The Ribstone Creek is contained within the Nose Hill-Ribstone Creek provincially listed Environmentally Significant Area (ESA) (see environmental constraints map A-08a, Attachment 8). The Nose Hill-Ribstone Creek ESA traverses through the project study area in a southwest to northeast direction, encompassing the Cooper Creek and Ribstone Creek tributary and stream networks. The nationally recognized ESA areas of Silver Heights and Middle Lakes are proximal to the study area (northwest and southeast, respectively); however, they will not be impacted by this project.

This proposed route is supported by the Special Areas Board (SAB), and the County of Paintearth No. 18, which are the municipal jurisdictional authorities for the area. Consultation with SAB representatives led to the identification of general concerns with preservation and conservation of native grassland and/or pasture areas. The SAB recommended that developments be limited to existing corridors as much as possible to avoid disturbance of native rangelands. The rejection of preliminary route options to the west significantly reduced potential for activity on undisturbed grasslands in the project study area.

Major surface industrial facilities in the area include an existing Express Pipelines Ltd. pump station and pipeline (SE 3-37-9-W4M), as well as the TransCanada Keystone Pipeline and associated pump station PS1 (NE 28-38-8-W4M), for which this transmission project is being constructed. The nearest occupied residences to the substation include those of an Hutterian Brethren settlement (NE 25-36-9-W4M) located approximately 3.2 km south of the proposed line, and a private residence (NW 33-37-9-W4M) approximately 3.2 km west of the Ribstone Creek substation site.

The proposed new 144 kV transmission line requires a minimum right-of-way of 9 metres in width (see right-of-way cross-sections, drawings A-07a to A-07d, Attachment 7), plus some additional area at corners and termination points for special structures and anchoring. The proposed route is detailed in Section 4.0 of Attachment 1. The scope of this activity is relatively minor with respect to surface disturbance, and the proposed facilities will be constructed in existing corridors (highway corridors and road allowances), except for two portions of the route detailed below.

- (a) 3.2 km of route (node B9A to B12A) along the quarter-lines that separate the west and east halves of Sec 17 and Sec 20 in 37-8-W4M; which enables the avoidance of multiple residences on the landholders property; and
- (b) Approximately 400 m of cross-country route (NW 8-38-8-W4M) from node B18A to B19, that enables avoidance of multiple crossings of Ribstone Creek and the associated ESA, and then continues eastward in a road allowance from B19 to D20.

Approval of the respective landholders was received for both of these deviations from existing road allowances along the proposed route. Overall, there would be no significant impacts on the local landscape or environment, or to the adjacent landholders.

## **2 Road Allowances and Cross-Country Routing Considerations**

The construction of the major portion of the proposed transmission line will occur on existing road allowances encompassing local Township roads and Range roads. An overview of the routing is provided in Attachment 1.

The proposed routing will require only one crossing of Ribstone Creek, and the cross-country segment (B19A to D20) in NE-29-38-8-W4M will minimize impacts to the associated riparian area.

This proposed route is easily accessible for future maintenance as may be required.

### **3 Substation Considerations**

The expansion of ATCO's Ribstone Creek substation 892S will be onto property already owned or leased by ATCO Electric, or set aside for such use. This substation expansion will be minor and will not affect the surrounding land use or wildlife. For substation considerations associated with the proposed AML Lakesend substation 508S, refer to AltaLink's application to the AUC (No. 1603771).

### **4 Requirements of Alberta Environment**

The facilities proposed are not of a type requiring a Conservation and Reclamation Approval or an environmental impact assessment report under the *Environmental Protection and Enhancement Act* (EPEA).

### **5 General Conservation and Reclamation Measures**

ATCO will undertake the alterations adhering to:

- Alberta Environment's *C&R/IL/95-2, Environmental Protection Guidelines for Electric Transmission Lines*;
- ATCO's general construction and maintenance environmental protection standards; and
- Terms and conditions of the applicable right-of-way agreements and easements.

All activity will be confined to the existing or acquired rights-of-way and to road allowances.

ATCO will follow standard good practices to minimize potential soil erosion and compaction, spills and prairie fires, and to implement post-construction clean-up and reclamation. The area is accessible year round, and soil and ground conditions for the proposed construction activities do not require seasonal timing considerations. Construction activities will be delayed if required by weather and soil conditions.

### **6 Equipment**

All construction equipment will be sent to the right-of-way in a clean condition to minimize the risk of weed or disease introduction. Logging equipment and crawler tractors will be used for clearing the right-of-way if required. The following types of equipment may be used to construct the transmission line:

- pick up trucks for hauling crews;
- 1 ton trucks with generators;
- 3 and 4 ton drill trucks for digging holes;
- pole trucks with crane (similar to logging trucks);
- skidder or D6 Crawlers for pulling wire;
- 3 ton picker trucks for framing;
- Nodwells or LGP crawlers may be used to pull wire or drag poles depending on ground conditions; and
- all terrain vehicles (ATVs) or Nodwells may be used to transport crews to work sites.

## **7 Waste Disposal**

The Applicant will ensure that during the course of the project no fuel, lubricating fluids, hydraulic fluids, antifreeze, herbicides, biocides, or other chemicals are released on the ground or into any watercourse. In the event of a spill, the spilled contents will be cleaned up to the satisfaction of the landowner, Crown (SAB) or County.

Construction waste will be continuously collected and disposed of at an approved facility to avoid the attraction of wildlife. Waste containers will accompany each working unit. All garbage will be stored in wildlife-proof containers. Personnel will be made aware of proper disposal methods for cigarette butts and other hot or burning materials. Each working unit will have fire fighting equipment on hand as regulated by the *Forest and Prairie Protection Regulations*.

## **8 Operation and Maintenance**

Continued operation and maintenance of the line will require access to the structures and conductors. Access for work on the line will be from the acquired right-of-way, using existing access where available.

Minimal tree clearing may be required, based on the present land use and land cover. Vegetation management and removal, where required to control the growth of vegetation along the line will be done in accordance with the standards of practice for the Industrial Vegetation Management Association of Alberta.

## **9 Wildlife and Species-at-Risk**

Upon review of Species-at-Risk data, it was determined that this project does not overlap any designated areas of concern for wildlife, although several Species-at-Risk have been identified within the overall geographic region. These species fall into three levels of threat, from "endangered" to "concerned" according to the condition of the population. For this region, Environment Canada lists the only endangered species as the "Piping Plover" (*Circumcinctus spp*). Since the proposed route will be built primarily in road allowances or on agricultural lands, it is unlikely that there will be encounters with this particular species.

The Alberta Natural History Information Centre (ANHIC) advised that only one Element of Occurrence (EOID #6186) was located within the project study area. The referenced EOID documented was a bird colony (Great Blue Heron – *Ardea herodias*) nesting site last observed in 1998, in the vicinity of a wetland area located in SW 16-37-9-W4M. This location is approximately 8 km away from the proposed route.

Any wildlife that is encountered will not be harassed or fed. Construction personnel will not be permitted to have dogs or firearms on the right-of-way, and the recreational use of ATVs and/or snowmobiles by construction personnel on the right-of-way will be prohibited.

## **10 Environmentally Sensitive Areas**

The local project area has some significant topographical features (Nose Hill area) but the majority of the proposed route is located in level to undulating to gently rolling landscape. A portion of the proposed route (about 1 km) is located near the Ribstone Creek, which is within an ESA as described earlier. The proposed route crosses the Ribstone Creek once in Sec 22-38-8-W4M. Alberta Environment's Code of Practice indicates that there are no timing restrictions for Ribstone Creek. The Applicant will seek the advice of an ASRD biologist or a Fish and Wildlife representative to help identify measures to ensure minimal impact while constructing the transmission line.

## **11 Local Landscape and Environmental Considerations in Conservation and Reclamation**

For conservation and reclamation purposes, general procedures and environmental considerations are provided under several headings in this document. Given that there will be some deviations from paralleling existing road allowances, some additional considerations for conservation and reclamation are warranted for this study area where the proposed route encroaches on agricultural lands, pasture lands, native grasslands (B9A to B12A), ephemeral wetland and riparian areas (B17 to B19), and a small lake near D20. Additional measures to be followed for these areas will include:

- Monitoring of construction activities (pre-disturbance assessment and on-going assessment) to ensure that any impacts to the landscape will be noted and appropriate mitigation plans developed for remedy.
- Halting of construction activities in wet or inclement weather to avoid soil compaction, rutting and soil erosion.
- Replacement of topsoil that may have been bladed or removed during construction activities (i.e., single lift and subsequent replacement to avoid permanent exposure of sub-horizons).
- Use of low ground pressure (LGP) equipment to minimize soil disturbance and compaction.
- Use of appropriate re-vegetation seed mixtures for native grasslands, to be approved through consultation with the environmental representative of the SAB and the County of Paintearth No.18 and Alberta Sustainable Resource Development (ASRD), as may be required.
- Use of weed control methods, to be approved through consultation with the environmental representative of the SAB and the County of Paintearth No.18 and ASRD, as may be required.
- Post-disturbance (grass species establishment) monitoring, in consultation with the environmental representative of the SAB and the County of Paintearth No.18 and ASRD, as may be required.
- Riparian areas associated with the Ribstone Creek crossing in SW-22-38-8-W4M and the small lake in SW 16-38-8-W4M (near D20) should not be affected, as these features can be spanned through placement of poles. In the event of any impact to these areas, mitigation plans will be developed in consultation with the appropriate authorities (SAB, County of Paintearth No.18, and/or ASRD).

## **12 Historical Resources and Sensitive Areas**

ATCO has applied to Alberta Culture and Community Spirits (ACCS) for Historic Resource Act clearance for this project, and is currently awaiting response. In the interim, ATCO has conducted a review of publicly available historical resource information (see drawing A-08c, Attachment 8), and has determined that rejected route options to the west would have impacted several listed Historical Resource Value (HRV) sites. The existing Ribstone Creek substation is located within an area designated with HRV potential. One other currently listed HRV site was identified in LSD-16, Sec 6-37-9-W4M, and this site is by-passed as the proposed route is aligned on the east side of Highway 884, across from this site.

The proposed transmission line alignment is located mainly on existing road allowances, with the exception of the portion of the proposed route that traverses from node B9A to B12A, on agricultural lands, where the route follows the west side of the quarter lines separating the west and east halves of Sec 17 and Sec 20-37-8-W4M. Poles and corner structures along this section are to be located on cleared farmland and pasture. ATCO considers the potential of encountering any sites with historical resource value very low. Work in proximity to any such sites that may be discovered during construction will be suspended until permission to continue is granted by ACCS.

## **13 Agricultural Impacts**

Canada Land Inventory (CLI) Agricultural Soil Capability classification for the project area indicates that soils are of CLI classes 3, 4, 5 and 6 (drawing A-08b, Attachment 8), with a moderately to severely restricted range of crops, and special conservation practices required for agricultural activity. The current land use is primarily pasture, hayland and some cereal cropping. There are several buried pipelines located throughout the study area. Construction activities will be limited to within the acquired easement right-of-ways and the existing road allowances.

Construction may occur during the crop growing or haying season. Efforts will be made to avoid damages to crops, haylands and pasture where possible. ATCO will provide compensation for crop and fence damages associated with the construction activities where applicable. All construction equipment will be sent to the right-of-way in a clean condition to minimize the potential for introduction of weeds or disease.

If necessary ATCO will properly brace fences prior to cutting, and fences will be returned to pre-construction condition or as agreed upon with the landowners. Gates will be closed after use.

## **14 Landscape, Aesthetics and Residential Considerations**

The proposed facilities will be constructed primarily along existing developed road allowances, and Highway 884. Mitigation of stakeholder concern requires that 3.2 km of route be located along quarter lines separating the west and east halves of Sections 17

and 20-37-8-W4M. Additionally, to minimize the need for multiple creek crossings, there will be approximately 400 m of route segment constructed in a cross country alignment (NW-8-37-8-W4M), nodes B18A to B19.

There were no areas identified on the route that would require tree planting or landscaping. There are four residences located between 700 and 800 m from the proposed transmission line. No residents have identified visual concerns, but ATCO is committed, if requested, to work with affected landowners and residents during the line design and construction stages, including consulting on structure placement to minimize impacts to agricultural operations and to reduce the visibility of specific structures from residential viewpoints where practical. If concerns with the specific location of structures were identified, that information would be taken into account with reasonable flexibility to locate the poles to reduce impacts.

## **15 Noise and Traffic**

Any significant noise or traffic is generally limited to the initial construction period, when larger trucks and equipment are required for clearing, hauling and construction. Longer-term traffic is generally limited to less frequent traffic and lighter equipment, mainly along the existing highways and developed Township and Range roads. There would be no appreciable noise increase from the proposed 144 kV facilities relative to the local agricultural and oil-field activities and associated traffic, and the existing pump station at Ribstone Creek. The transformer at Ribstone Creek substation would be the only significant continuous noise source. There are no dwellings within 2.5 km of the Ribstone Creek substation. ATCO's experience with similar equipment indicates that permissible sound levels as specified in AUC Rule 012 (ERCB Directive 038) would be met.

## **16 Electrical Effects**

Where necessary, metal fences, buildings, and structures will be grounded by ATCO to minimize induced voltages. Minimum clearance required between all transmission facilities and buildings will be in accordance with the *Safety Codes Act* and regulations.

ATCO will work with the pipeline operators to ensure compliance with the *Safety Codes Act*, *Pipeline Act* and applicable regulations for all pipeline crossings. ATCO will ensure that applicable regulations for setbacks are followed.

The transmission facilities will be constructed and maintained in such a manner as to keep radio and television interference levels within limits acceptable to Industry Canada, the federal government department that regulates communications.

## **17 Socio-economic Considerations**

The proposed alterations will not have a significant socio-economic impact relative to the various industrial facilities in the area. Nearby established centres such as Veteran, Coronation and Stettler, have services and amenities equipped to deal with construction activities of this magnitude.

## **ATTACHMENT 3**

### **PUBLIC AND LANDHOLDER CONSULTATION**

#### **1. SUMMARY OF PUBLIC AND LANDHOLDER CONSULTATION**

Consultation with affected parties played an important role in the planning of the proposed route. ATCO Electric Ltd. (ATCO) undertook a comprehensive consultation program with landowners and occupants ("landholders"), agencies, First Nations, and other interested parties. ATCO notified 136 parties, including all landholders within at least 800 metres (m) and up to several kilometres away from the preliminary route options. An open house was held in Coronation on December 2, 2008, and was attended by 30 stakeholders and interested parties. Following consultation with almost all parties along all route options, and following further consultation with those on a preferred route, the proposed route was selected based largely on input from the agencies, landholders and other potentially affected parties. Consultation activities are summarized in Table A.

ATCO has conducted personal consultation with the 67 stakeholders for ATCO's proposed route, including landholders within 800 m of the proposed right-of-way and existing substation site, and relevant agencies and interested parties. The 51 landholders include:

- 24 private landowners or occupants
- 5 agency or miscellaneous landowners or occupants
- 22 industry/business landholders

The 12 additional agencies and 4 First Nations make up the remainder of the list of 67 stakeholders. ATCO has confirmed no objections to the proposed route for all but three of the affected parties. The exceptions include two companies for which responses are outstanding (no concerns expected), and one landowner with outstanding concerns.

Since the project area is located in traditional lands identified by several First Nations, ATCO implemented a plan to ensure thorough and meaningful consultation. Consultation with First Nations is described in Section 4 of this attachment. None of the First Nations have indicated objections to the proposed route. Consultation will continue with the First Nations regarding ongoing aspects of this project.

Tables B and C in Section 3 summarize comments and concerns identified through the consultation process, and ATCO's responses to these. Comments received from relevant agencies are summarized in Table B. Comments from landholders along the proposed route are summarized in Table C.

Consultation feedback information for the proposed and rejected route options is summarized in Table D. All parties will be provided a project update, and those on the proposed route will be advised of the construction schedule and details prior to construction.

## **2. LANDHOLDER AND PUBLIC CONSULTATION**

Based on standard routing criteria and consideration of the feedback received, preliminary route options were developed and presented in a project referral package (Attachment 11) which was mailed out November 18, 2008, to 136 potentially impacted landholders, occupants, agencies, industry stakeholders, and First Nations (hand-delivered). The project referral package described various aspects of the project including the consultation process, a description of the proposed facilities and route options, and an invitation to an open house. The package also provided maps of the study area and the route options being considered.

Personal consultation commenced during the open house that was conducted in Coronation on December 2, 2008 (see Table A). Following the open house, ATCO followed up with personal consultation, either in person or by telephone (at the stakeholder's preference), with the landholders on all route options. The first round of consultation efforts concentrated on contacting all private landholders (freehold title-holders and occupants) on all preliminary route options, and feedback was also sought from industry landholders, during December 2008 and January 2009. The personal consultation included approximately 108 landholders, including the private (freehold) and individual landowners and occupants within 800 m of all the route options presented in the referral package. Records of personal consultation were collected, reviewed and considered in selection of the proposed route.

Using the feedback obtained during the initial consultations, ATCO identified a proposed route and undertook a second, more intensive consultation from January to March 2009, to ensure that all concerns of all 51 landholders along the proposed route were documented and mitigated wherever possible. All landholders for the proposed transmission line route have been personally consulted (Table C), with the exception of two non-respondent companies. The key consultation activities are summarized in Table A.

**TABLE A – KEY CONSULTATION ACTIVITIES**

<b>Timing</b>	<b>Activity or Milestone</b>
June and July 2008	Preliminary meetings with First Nations, and with Special Areas Board.
July to November 2008	Continued consultation (including field work) with First Nations on route options.
November 18, 2008	Project Information packages sent to 136 landholders, agencies and interested parties, and project details published on ATCO Electric's world-wide web site. Package included invitation to Public Open House.
December 2, 2008	Open house held at Coronation (30 stakeholders attended).
December 2008 to January 2009	Initial personal consultation with 108 landholders and agencies along all route options.
January to March 2009	Personal consultation/follow-up with agencies and all landholders within 800 m of proposed routes and substation, to discuss routes, document concerns and confirm no objections.

### 3. CONSULTATION COMMENTS SUMMARY

Table B summarizes the comments received from relevant agencies. Table C summarizes comments of landholders and occupants along the proposed route. Table D compares the consultations for the proposed and rejected route options.

**TABLE B – SUMMARY OF AGENCY COMMENTS (ATCO AREA)**

Organization	Comments/Concerns	Applicant's Response
<b>MUNICIPAL</b>		
Special Areas Board (SAB) Special Area No. 4	Landowner (Crown) / Administers lands and grazing leases. Requested that new developments take place along existing corridors (e.g., Highway 884 and road allowances as much as possible. Requested information on associated telecommunications towers placement relative to existing towers in the Nose Hill area. No other concerns.	Proposed Route follows roads/boundaries where possible.  Interference not expected, but would be mitigated if required.
County of Paintearth No. 18	No concerns or objections.	
MD of Provost No. 52	No concerns or objections.	(AltaLink area only)
<b>PROVINCIAL</b>		
Alberta Culture & Community Spirit (ACCS)	Historical Resources Act (HRA) clearance under review.	(In process.)
Alberta Sustainable Resource Development (ASRD) - Fish & Wildlife	Objection to West and Far West route options, request an alternative route.	Complied – western routes rejected.
Alberta Tourism, Parks and Recreation (ANHIC)	Identified no points of interest along the proposed route.	
Alberta Tourism, Parks and Recreation (Alberta Parks Service)	No concerns or objections	
Alberta Transportation	Highway crossing and development permits required.	Will comply.
Service Alberta – Director of Cemeteries	Concerns with any direct impacts on the cemetery. Do not disturb marked/unmarked graves. Spanning the property is acceptable.	Will comply. Line will span the property along the road boundary.
AESO	Notified.	(Courtesy notification)
AUC	Notified.	(Courtesy notification)
Alberta Agriculture, Food & Rural Development – Rural Electrification Pgm.	Notified. No concerns.	(Courtesy notification)
MLA – Drumheller-Stettler	Notified. No concerns.	(Courtesy notification)
MLA – Battle River-Wainwright	Notified. No concerns.	(Courtesy notification)
<b>FEDERAL</b>		
Transport Canada - Civil Aviation	Submit Aeronautical Obstruction Clearance form upon project completion.	Will comply.
- NAV CANADA	Submit line design information for review.	Will Comply.
<b>UTILITIES / OTHER</b>		
TELUS Communications Inc.	Concern with HV parallel lines, B7 to B18. New equipment required to mitigate potential fault conditions.	ATCO will pay for equipment and installation (Estim. approx \$100,000).
PaintEarth Gas Co-op	No concerns or Objections	

**TABLE C – SUMMARY OF LANDHOLDER COMMENTS, PROPOSED ROUTE (Part 1 of 2)**

Landholder (Private)	Land Interest	Comments/Concerns	Applicant's Response
Beebe, D.L.	Freehold	Keep poles within road allowance. No other outstanding concerns or objections.	Will comply.
Beebe, D.R. & E. B.	Freehold	Keep poles within road allowance. No other outstanding concerns or objections.	Will comply.
Beebe, D.R.	Occupant	Keep poles within road allowance. o other outstanding concerns or objections.	Will comply.
Beeching-Smith, C. & Beeching, C.	Freehold, Occupant	No concerns or objections.	
Chan, M.	Freehold	No concerns or objections if occupant is okay with route.	Consulted with occupant: no concerns and no objections to proposed route.
Cross Bar Ranches Ltd. (Gatty, J.)	Freehold (17 parcels)	Does not want route in front of the residences on his property. Agreed to proposed route ROW on the quarter lines of his property. Initially no other concerns or objections. <b>Subsequently identified concerns and possible objection re: visual impacts, EMF, compensation for R/W.</b>	Will comply. Route alignment moved to quarter lines to avoid residences.  <b>Line is more than 700 m from residences.</b>
Crookes, K. G.	Freehold	No concerns or objections.	
Davis, P.	Freehold	Objects to Central route option. Will grant easement to enable R/W along west side of quarter-lines on his property for proposed route. Does not object to proposed route, but does not want any structures on his property.	That route is rejected. Will comply. Proposed Route is aligned on west side of quarter lines. Corner structures will be designed to avoid encroachment.
Forrest, F. & J.	Freehold	Objects to route option portion B15-D17. No other outstanding concerns or objections with Proposed Route.	Route B15-D17 rejected. No other mitigation required.
Forrest, J. M.	Freehold, Occupant (GRL)	Objects to route portion B15-D17. No other concerns or objections.	Route B15-D17 rejected. No other mitigation required.
Fuglem, R. & B.	Freehold	No concerns or objections.	
Gerber, J.	Freehold.	No concerns or objections	
Hutterian Brethren Church of Veteran	Freehold, & Occupant (GRL)	No concerns or objections.	
Johnstone, H. & S.	Freehold	Objects to route portion B15-D17. Does not want any poles in front of residence. No other concerns or objections.	Route B15-D17 rejected.  No other mitigation required.
Johnstone, R. & D.	Occupant	Objects to route portion B15-D17. Does not want any poles in front of residence. No other concerns or objections.	Route B15-D17 rejected.  No other mitigation required.
Kostavich, P.	Freehold	No concerns or objections.	
Lindsay, L.	Occupant	No concerns or objections.	
Lindsay, L.	Occupant	No concerns or objections..	
Smith, J.E.	Freehold	No concerns or objections..	
Smith, S.R.	Freehold	No concerns or objections.	
Smith, S.A., & T. & K.J.	Freehold	No concerns or objections.	
Smith, K.H.	Freehold	No concerns or objections.	
Smith, R.	Occupant	No concerns or objections.	
Twa, B.	Occupant	No concerns or objections.	
Twa, R. M.	Freehold	No concerns or objections.	

**TABLE C – SUMMARY OF LANDHOLDER COMMENTS. PROPOSED ROUTE (Part 2 of 2)**

Landholder (Agency, Other)	Land Interest	Comments/Concerns	Applicant's Response
Special Areas Board (SAB No. 4)	Freehold	See Table B.	See Table B.
Lakesend School District No. 1618, c/o County of Paintearth	Freehold	No objections or concerns.	
Nose Hill Community Hall, c/o Board of Trustees	Freehold	Avoid placement of poles inside the parking area. No objections to proposed route.	Will comply. Line located on opposite side of road.
Prairie Farm Rehabilitation Admin.	Caveats	No objections or concerns as long as poles are placed in road allowance of affected lands.	Will comply.
St. Olaf's Norwegian Lutheran Church	Freehold	Avoid disturbance to metal fence and avoid placement of poles in cemetery property.	Will comply.
<b>Industry – Oil/Gas</b>			
The Alberta Gas Trunk Line Co. Ltd		c/o TransCanada Pipelines Ltd.	Project contribution customer. Provided a letter of no concerns for all 4 Keystone projects including this one.
TransCanada Pipelines Ltd.			
TransCanada Keystone Pipeline GP Ltd.			
TransCanada Energy Ltd.			
Nova Gas Transmission Ltd.			
Apache Canada Ltd.		No concerns or objections	ATCO will notify Alberta First Call before construction begins to have pipelines and other infrastructure located and will arrange appropriate crossing agreements as required.
Avenir Operating Corp			
Canadian Forest Oil Ltd.			
Canadian Natural Resources Limited			
Delphi Energy Corp.			
Enermark Inc.			
Express Pipeline Ltd.			
Fairwest Energy Corporation			
Gascombe Oils Ltd (c/o VTS Energy)			
Husky Oil Operations Limited			
Inter Pipeline Fund			
Keles Production Company Ltd.			
Pengrowth Corporation			
Real Resources Inc. (Tristar Oil & Gas)			
<b>Industry – Telecommunications</b>			
Allarcom Limited		<b>Response pending.</b>	Note: Towers are >800m away, but ATCO is undertaking consultation.
Canadian Broadcasting Corporation		<b>Response pending.</b>	
Glentel Inc.		No concerns or objections	

**Miscellaneous Concerns**

Several parties have confirmed no objections with the proposed route or project, but would like specific items to be addressed:

**Farmers/Ranchers:** Several farmers, including land occupants/renters, have expressed concerns regarding the compensation amounts payable for facilities (structures) placed on private property, and for impacts to farming operations during the construction period. ATCO is currently reviewing compensation payments for facilities placed on private property, and will compensate for loss of income associated with construction activities.

**Rural Residences:** Several land owners and occupants have requested that transmission lines not be routed in front of their residences due to line-of-sight concerns, and have agreed to undertake easement on other portions of their land to enable avoidance of routing in front of their residences.

**Miscellaneous Consents:** The need for ATCO to obtain the necessary approvals or crossing agreements has been identified. This is considered a routine matter rather than an outstanding concern, and they will be handled as standard industry practice. ATCO will be contacting all of those parties from whom crossing consents or agreements are required when applying for the right-of-way agreements, following survey when the line and right-of-way details are known.

**TABLE D – SUMMARY OF LANDHOLDERS/AGENCY COMMENTS FOR ROUTE OPTIONS**

<b>Route Options</b>	<b>Outstanding Concerns / Potential Objections</b>	<b>General Comments</b>	<b>Applicant's Response</b>
<b>Proposed Route</b>	Number of landowners = 1. Number of land parcels = 17.	<ul style="list-style-type: none"> <li>• Avoid residences located along Highway 884.</li> <li>• Avoid placing structures on east side of quarter line for nodes B9A to B12A.</li> <li>• Avoid multiple crossings of Ribstone Creek.</li> <li>• Mitigate TELUS communications lines along Highway 884.</li> <li>• Avoid structures in Cemetery.</li> <li>• Maintain routes in easily accessible areas and developed corridors.</li> </ul>	See Tables B and C.
<b>Far West Option</b>	Number of landowners = 7. Number of land parcels = 20.	<ul style="list-style-type: none"> <li>• Avoid disturbance to native grasslands in Nose Hill area.</li> <li>• Avoid disturbance to significant Aboriginal Traditional Land Use areas in Nose Hill area.</li> </ul>	Rejected routes.
<b>West Route Options</b>	Number of landowners = 3. Number of land parcels = 14.	<ul style="list-style-type: none"> <li>• Avoid transmission lines that would obscure viewpoints from residences and residences to be constructed.</li> <li>• Maintain routes in easy to access areas and developed corridors.</li> </ul>	
<b>Central-West Option</b>	Number of landowners = 2. Number of land parcels = 8.	<ul style="list-style-type: none"> <li>• Avoid residences located along Highway 884 (segment B9 to B12).</li> <li>• Avoid multiple crossings of Ribstone Creek.</li> <li>• Avoid structures in Community Hall property.</li> </ul>	Rejected route.
<b>Central-East Option</b>	Number of landowners = 4. Number of land parcels = 12.	<ul style="list-style-type: none"> <li>• Avoid residences (segment B9 to B12).</li> <li>• Avoid obscuring viewpoints from residences.</li> </ul>	Rejected route.
<b>East Option</b>	Number of landowners = 7. Number of land parcels = 14.	<ul style="list-style-type: none"> <li>• Avoid residences located along Rge.Rd. 83 (segment D11 to D20)</li> <li>• Avoid obscuring viewpoints from residences</li> </ul>	Rejected route.
<b>Far East Option</b>	Number of landowners = 1. Number of land parcels = 11.	<ul style="list-style-type: none"> <li>• Avoid residences located on Rge.Rd. 82 (Segment E18-E21).</li> <li>• Avoid disturbance to pasturelands (segment E21 to E23, E23 to D24).</li> <li>• Avoid ¼ line routing (segment E23-D24).</li> </ul>	Rejected route.

#### **4. First Nations Consultation**

ATCO Electric's relationship with Aboriginal communities has evolved over many years, and ATCO continues to further enhance relationships with Aboriginal communities in Alberta. ATCO believes responsible development must take into account the issues and concerns of all stakeholders, including First Nations. ATCO contacted four First Nations that have identified traditional land interests in south-eastern Alberta which included: Siksika First Nation, Tsuu T'ina First Nation, Piikani Nation, and Blood Tribe (Kainai). Project information was hand-delivered to these First Nations in early summer of 2008, and all responded with a request to be formally consulted.

ATCO's consultation activities with First Nations included face-to-face meetings with communities (consultation representatives, field technicians, and community Elders) to discuss project plans, identify any issues and seek resolution to any concerns. Participatory field work involving Elders and community members was undertaken during the summer and autumn of 2008 to identify any potential impacts to traditional rights and uses that the proposed project may have, and to address any concerns raised in the project review process.

Each of the four First Nations consulted had expressed concerns with potential disturbances to cultural features and sensitive resources such as ceremonial sites, camping areas, hunting areas, medicinal plants, and other features on the Far West, West and East route options. The proposed route avoids all of the areas that have been identified through First Nations consultation.

The Piikani Nation provided their approval of the project through correspondence and a traditional ceremony. ATCO has received correspondence confirming non-objection from the other three First Nations, and anticipates no outstanding or immitigable concerns with the proposed route. To date, none of the First Nations have identified any further objections or concerns with the proposed route for the Ribstone Creek-Lakesend transmission project.

Each of the First Nations consulted is aware of, and has verbally indicated support of ATCO's application submission to the AUC. ATCO is committed to providing a copy of our submission and ongoing project updates to all four First Nations. Additionally, all four First Nations have expressed their appreciation with ATCO's positive working relationship and continued consultation efforts.

## ATTACHMENT R

### Reference Note – Required Attachments for IAR/DDS Registration

This attachment provides information requirements in accordance with the Alberta Utilities Commission's Integrated Application Registry/Digital Data Submission (IAR/DDS) system. To avoid duplicate submission in the IAR/DDS system of an attachment that is otherwise deemed by the IAR/DDS system as a required attachment, this reference note is provided to indicate where the required attachment or information may be found and to substitute for the required or duplicate attachment. Attachments cited are considered to be submitted for the applicable facilities as referenced below.

### Cross-Reference of Common Attachments

<b>Attachment Description:</b>	<b>Applicable Facilities:</b>	<b>Submission:</b>
AESO Direct Assignment Letter	(1) Transmission Line 7L696 (2) Ribstone Creek Substation 892S.	<b>Attachment 9</b> , submitted under <b>Transmission Line 7L696</b> .
Air Photo Mosaics	(1) Transmission Line 7L696	<b>Attachment 6, Dwg.A-06a</b> and <b>Dwg.A06b</b> (route mosaics), submitted under <b>Transmission Line 7L696</b> .
Application (text)	(1) Transmission Line 7L696 (2) Ribstone Creek Substation 892S, (3) Interconnection ATCO-AltaLink 7L696.	<b>Attachment 1</b> , submitted under <b>Transmission Line 7L696</b> .
Conservation & Reclamation Plan	(1) Transmission Line 7L696.	<b>Attachment 2</b> , submitted under <b>Transmission Line 7L696</b> .
Project Area Map	(1) Transmission Line 7L696 (2) Ribstone Creek Substation 892S.	<b>Attachment 4, Dwg.A-01</b> and <b>Dwg.A-02</b> (reference and regional maps), submitted under <b>Transmission Line 7L696</b> .
Route Maps	(1) Transmission Line 7L696.	<b>Attachment 8, Dwg.A-08a, Dwg.A-08b</b> and <b>Dwg.A-08c</b> (constraint maps), submitted under <b>Transmission Line 7L696</b> .
Transmission Line Maps	(1) Transmission Line 7L696.	<b>Attachment 5, Dwg.A-03</b> (system SLD), <b>Attachment 7, Dwg.A-01</b> (ROW cross-sections A to L), and <b>Attachment 7, Dwg.RS-TW301-144SC</b> (structure drawing), submitted under <b>Transmission Line 7L696</b> .
Substation Single-line Diagram (electrical)	(2) Ribstone Creek Substation 892S.	<b>Attachment 5, Dwg.A-05</b> (SLD drawing), submitted under <b>Ribstone Creek Substation 892S</b> .
Substation Single-line Diagram (site plans)	(2) Ribstone Creek Substation 892S.	<b>Attachment 5, Dwg.A-04</b> (site/layout map), submitted under <b>Ribstone Creek Substation 892S</b> .
Interconnection Point Diagram	(3) Interconnection ATCO-AltaLink 7L696.	Included in <b>Attachment 10</b> AESO functional specification (drawing 526-SLD-03) submitted under <b>Interconnection ATCO-AltaLink 7L696</b> , and in <b>Attachment 4, Dwg.A-01</b> (reference map), submitted under <b>Transmission Line 7L696</b> .
Functional Specifications	(3) Interconnection ATCO-AltaLink 7L696.	<b>Attachment 10</b> . AESO functional specification, submitted under <b>Interconnection ATCO-AltaLink 7L696</b> .
Load Flow Studies	(3) Interconnection ATCO-AltaLink 7L696.	Included in AESO's need assessment document, <b>Application No. 1546106</b> .
Short Circuit Calculations	(3) Interconnection ATCO-AltaLink 7L696.	Included in <b>Attachment 10</b> (section 6.1 of AESO's functional specification).
Participant Involvement Program (Per AUC Rule 007)	(1) Transmission Line 7L696 (2) Ribstone Creek Substation 892S.	<b>Attachment 3</b> , public & landholder consultation, and <b>Attachment 11</b> , public notification package, submitted under <b>Transmission Line 7L696</b> .