

APPENDIX B PARTICIPANT INVOLVEMENT PROGRAM (PIP)

Armitage 949S Substation and Transmission Line Needs Identification Document

1.0 Participant Involvement Program (PIP)

In September to October 2010, the AESO conducted a Participant Involvement Program (PIP) to assist in preparing its *Armitage 949S Substation and Transmission Line Needs Identification Document* (NID). ATCO Electric Ltd. (ATCO), as distribution facility owner (DFO), has requested transmission system access service to supply TransCanada's Oyen South pumping station which will form part of the Keystone XL Pipeline. The AESO's NID addresses the need for transmission development in respect of the DFO's request for service including construction of a new 144kV transmission line and the Armitage 949S Substation to connect the Oyen South pumping station to the existing transmission system.

The AESO directed ATCO, as transmission facility owner (TFO), to assist the AESO in consulting on the need for this transmission development.

The PIP was designed to notify, provide information to, and as necessary, consult residents, occupants and landowners within 800 metres of the proposed development. The following agencies and interested parties were also notified:

- Alberta Environment
- Alberta Culture and Community Spirit
- Alberta Sustainable Resource Development
- Alberta Special Areas Board
- Telus Communications

1.1 Description of Participant Involvement Program

The AESO used a variety of methods to notify and consult stakeholders of the need to connect the Oyen South pumping station in response to the DFO's request for system access service. The AESO developed a one-page need overview document a copy of which was posted to the AESO website at <http://www.aeso.ca/transmission/21796.html> on June 23, 2010. A copy of the need overview is included in Attachment 1.

The need overview was also included in a mail out by the TFO on September 30, 2010 to all occupants, landowners and interested parties within 800 metres of the proposed development as well as the five municipal and provincial representatives listed above. Attachment 2 includes a copy of the TFO mail out.



Most recently, the AESO advertised its intention to file the NID in the Oyen Echo on January 11, 2011. A copy of the final proof has been included in Attachment 3.

As directed by the AESO, the TFO was prepared to direct any inquiries or concerns about the project need to the AESO. The TFO has indicated that no such inquiries or concerns were raised,

To ensure that stakeholders have the opportunity to provide feedback, the AESO also provides stakeholders with a dedicated, toll-free telephone line (1-888-866-2959) and a dedicated email address (stakeholder.relations@aesō.ca). AESO contact information, along with the AESO's mailing address (2500, 330 5th Ave, SW, Calgary) and website address (www.aeso.ca), and a privacy statement that describes how the AESO honours Alberta's Personal Information Protection Act, were included on all AESO communications related to this application.

1.1 Issues and Concerns Raised

The AESO has received no indication of concern from any party about the need for the transmission development proposed in response to the DFO's request for system access service.

1.2 List of Attachments

- Attachment 1 – AESO Need Overview
- Attachment 2 – TFO Mail out - “ATCO Electric – Armitage Transmission Project” (September 30, 2010)
- Attachment 3 – Notification of Filing Advertisement – Final Proof

APPENDIX B AESO PIP



Attachment 1 – AESO Need Overview

**Armitage 949S and Transmission Line
Development - Need for transmission system
development in Hanna Area**

For more information please contact the AESO at 1-888-866-2959,
www.aeso.ca or stakeholder.relations@aeso.ca



Why is transmission system development needed in the Hanna Area

TransCanada Corporation is developing the Keystone XL Pipeline (KXL) that will transport oil to refining markets. The Alberta Electric System Operator (AESO) has confirmed that a new 144/6.9 kilovolt (kV) substation can be connected to the transmission system to serve electricity demand for KXL's Oyen South pump station # 4. The proposed Armitage 949S substation would be connected to the transmission system by a 144 kV single-circuit transmission line (7L150).

The AESO intends to apply to the Alberta Utilities Commission AUC for approval of the need identified for transmission development in the Hanna Area in November 2010.

Who is the AESO?

Alberta's transmission system, sometimes referred to as the Alberta Interconnected Electric System (AIES) or "grid," is planned and operated by the Alberta Electric System Operator (AESO). The transmission system is comprised of the high-voltage lines, towers and equipment that transmit electricity from generators to lower voltage systems that distribute it to cities, towns, rural areas and large industrial customers. Our job is to maintain safe, reliable and economic operation of the provincial transmission grid. Our planning responsibility includes identifying needed transmission reinforcement and recommending preferred options to meet these needs. We are regulated by the Alberta Utilities Commission (AUC) and must apply for approval of the transmission system needs we identify. Further, the AESO is also mandated to facilitate the interconnection of qualified electricity generators and new load customers to the provincial transmission grid.

How is ATCO Electric involved?

ATCO Electric is the transmission facility owner (TFO) in Hanna Area. While the AESO is responsible for determining the need for transmission system reinforcement, ATCO Electric, when directed by the AESO, is responsible for filing an application with the AUC for approval of the transmission facilities that will satisfy the transmission system reinforcement need identified by the AESO.

The AESO appreciates the views of stakeholders. Your comments and suggestions on the plan for transmission system development are encouraged. If you have any questions or suggestions regarding the need for transmission system development in the Hanna Area or the AESO's application regarding this need, please contact:

Matt Gray
AESO Stakeholder Relations
1-888-866-2959
stakeholder.relations@aeso.ca
2500, 330 – 5th Avenue SW
Calgary, Alberta T2P 0L4

The AESO is committed to protecting your personal privacy in accordance with Alberta's Personal Information Protection Act. Any personal information collected by the AESO with regard to this project may be used to provide you with further information about the project, may be disclosed to the Alberta Utilities Commission (and as a result, may become public), and may also be disclosed to the local Transmission Facility Owner. If you have any questions about how the AESO will use and disclose your personal information collected with regard to this project, please contact us at 888-866-2959 or at stakeholder.relations@aeso.ca.

**Attachment 2 – TFO Mailout ‘ATCO Electric – Armitage
Transmission Project’ (September 30, 2010)**

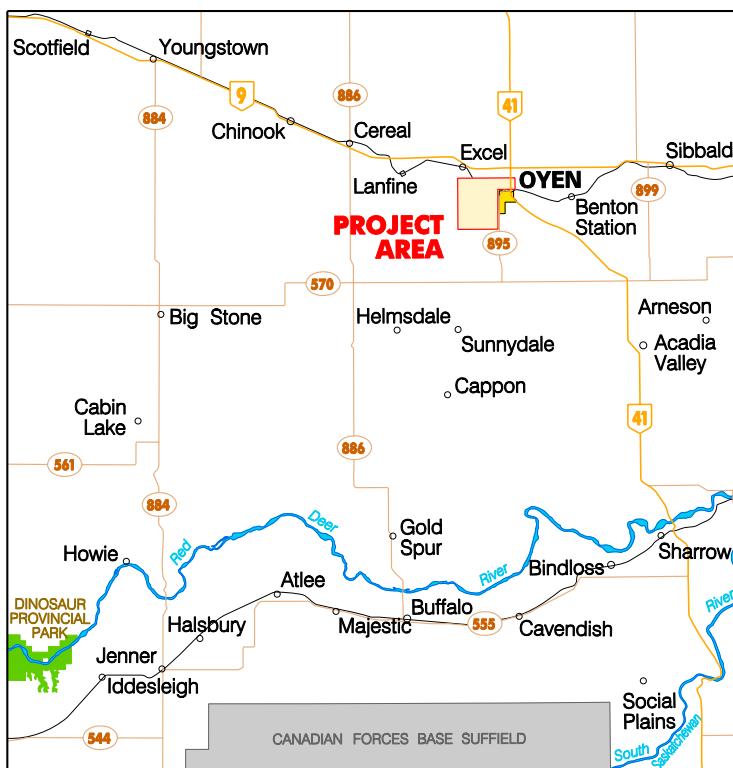


Project Information

ATCO Electric | works for you

September 2010

Armitage Transmission Project



Why are you receiving this project information package?

New transmission facilities are needed in the Oyen area of southeastern Alberta. ATCO Electric has been directed by the Alberta Electric System Operator (AESO) to assess site and route options for these upgrades.

We have prepared this information package for landowners, occupants, agencies and interested parties located near the proposed power transmission facilities. It includes important project information and outlines our public consultation process.

We invite any comments, questions or concerns you may have. Please refer to page six for our contact information and details.

Project Overview

The **Armitage Transmission Project** is required to connect the TransCanada KXL Oyen South Pump Station to the provincial electric system.

If approved, the project will include construction of about 10 kilometres of new transmission line from the proposed Lanfine substation to the proposed Armitage Substation.

Included in this package:

- Project Information brochure
- Reply Form
- ATCO Electric Information Sheets
- Statement of Project Need from the AESO
- Alberta Utilities Commission brochure *Public Involvement in Needs or Facilities Applications*
- Maps and drawings



Project Need and Details

When upgrades to Alberta's electrical system are needed, they are identified by a not-for-profit organization with a public interest mandate called the Alberta Electric System Operator (AESO).

The AESO has identified the need for new transmission facilities in the Oyen area to connect TransCanada Corporation's Oyen South Pump Station to the provincial electric system.

The need for these facilities is described in the enclosed AESO document *Armitage 949S and Transmission Line Development – Need for transmission system development in Hanna Area*. If you have any questions or concerns about the need for this project you may contact the AESO directly or you can make them known to an ATCO Electric representative who will communicate them to the AESO on your behalf.

Proposed Armitage Substation

If approved, the proposed Armitage substation (to be called 949S) will be located at the site of the KXL Oyen South Pump Station (in LSD 16, 20-27-4 W4M), about 2.4 kilometres southwest of the town of Oyen.

The proposed Armitage substation will be surrounded by a fence with approximate dimensions of 50 by 30 metres (m). The substation will include one transformer, one 144 kV circuit breaker and related electrical and control equipment. Substation communications equipment will include a telecommunications tower about 21 m tall.



Typical 144-kV substation in southern Alberta



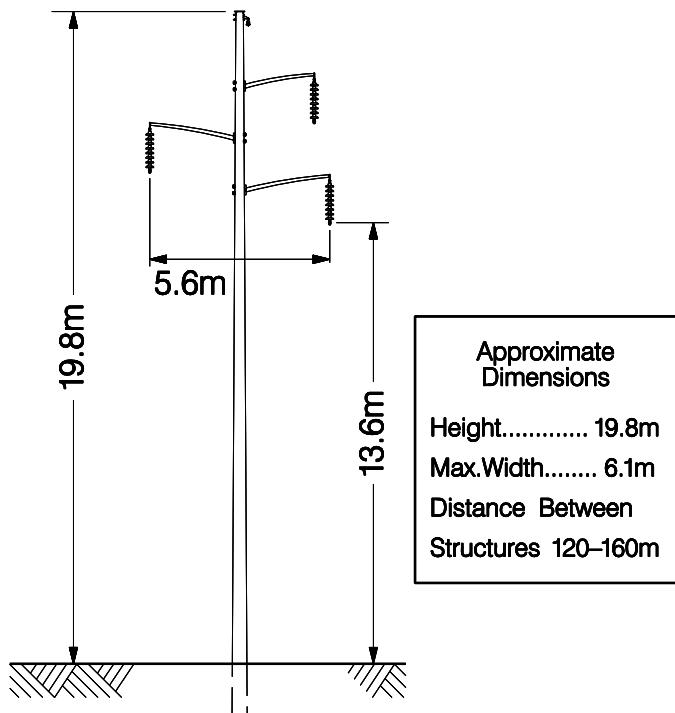
Proposed 144 kV Transmission Line

If approved, the proposed transmission line will be 144 kV and will be about 10 kilometres in length. The new transmission line (to be called 7L150) will connect the proposed Armitage substation to the proposed Lanfine substation (to be called 959S). This Lanfine substation will be built as part of the Hanna Region Transmission Development and will require two circuit breakers to accommodate the connection of the 144 kV line.

The new line will consist of three conductor wires and one overhead shield wire strung on a steel pole. The typical structure will suspend each conductor wire from a 'Davit Arm' and be approximately 20 metres (m) tall. The typical distance between structures will range from 120 m to 160 m.

Non-typical structures with wider bases and/or guy wires and anchors are required where the line ends or bends, at corners and to go over and around obstacles. In all cases minimum clearance will meet or exceed the requirements of provincial safety regulations.

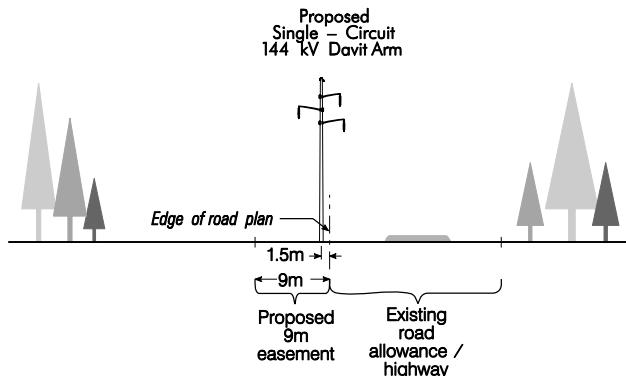
Typical Single-Circuit 144 kV
“Davit Arm” Structure



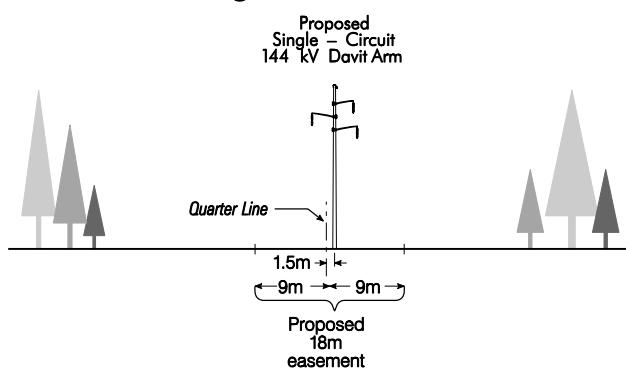
Typical Right-of-Way

Transmission lines are located in corridors that have been cleared of brush and other obstacles. These are called a 'right-of-way.' Right-of-ways must have a minimum width to ensure safety and to allow for construction and ongoing access for maintenance purposes. The width of the right-of-way, and the position of transmission structures within it, will depend on the type of structure that is used. Typical right-of-ways associated with this project are shown below. Details may change as the project develops and designs are finalized.

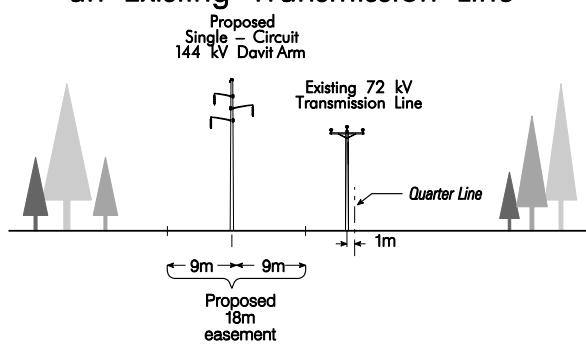
Typical Right-of-Way Along Road Allowances



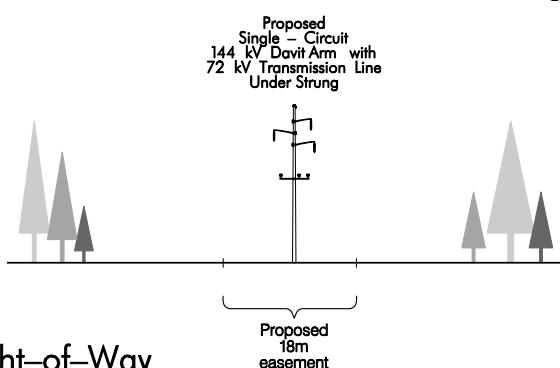
Typical Right-of-Way Along a Quarter Line



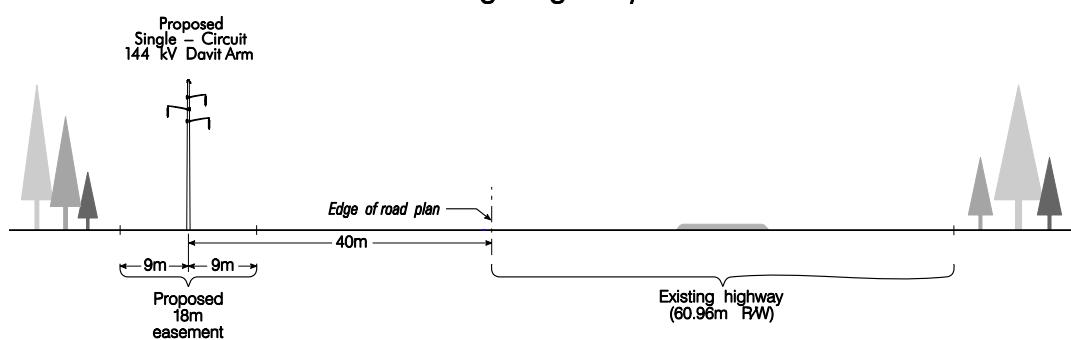
Typical Right-of-Way Along a Section Line Following an Existing Transmission Line



Typical Right-of-Way Cross – Country Alignment with 72 kV Transmission Line Under Strung



Typical Right-of-Way Along Highway 9



* Additional vegetation clearing may be required outside the proposed easement.



Route and Site Selection

The proposed Armitage substation site is at the location of the KXL Oyen South Pump Station. The location was chosen to ensure: suitable site conditions (level, well-drained); good access; sufficient space for initial development and incoming lines; and adequate setback from adjacent development and environmentally sensitive areas.

We have identified several preliminary routes for the transmission line (see map). Site and route options were selected to:

- Avoid homes and minimize impacts on residences
- Follow property boundaries wherever possible to provide convenient access and to avoid impacts to agriculture
- Minimize impacts on built-up areas, highways, oil and gas operations, and communication facilities
- Minimize length of disturbance and impacts to environmentally sensitive areas such as watercourses, wet or steep areas, wildlife habitat and other sensitive areas such as designated historical sites

Other options for a transmission line route may be considered if identified through our consultation process.

Facilities Application Process

Once the transmission line route has been studied to ensure that it is suitable, ATCO Electric will submit a facilities application to the Alberta Utilities Commission (AUC) to obtain approval for the construction and operation of the proposed transmission facilities.

For more information about how you can participate in the process, please refer to the enclosed AUC brochure entitled *Public Involvement in Needs or Facilities Applications*.





Proposed Timeline*

September - October 2010

Consultation with landowners and agencies

November 2010

Selection of preferred site and route options and submission of the facilities application to the Alberta Utilities Commission (AUC)

September 2011

If approval is granted by the AUC, construction will commence

March 2012

Facilities completed and operating

*Timing may be adjusted to reflect final plans.



ATCO Electric

Albertans count on us for the safe, reliable and cost-effective delivery of electricity to their homes, farms and businesses. We have delivered electricity to Albertans for more than 80 years.

Headquartered in Edmonton, ATCO Electric has 38 service offices serving two-thirds of the province in northern and east-central Alberta.

We help keep the lights on across the province by building, operating and maintaining more than 69,000 kilometres of transmission and distribution power lines. We also operate an additional 12,000 kilometres of distribution power lines on behalf of Rural Electrification Associations.

We are committed to responsible development and environmental practices. We conduct an open and transparent consultation process, carefully considering the impacts to landowners, communities and the environment.

Contact Us

Your comments and concerns are important to us. Please contact us – toll free **1-866-600-0022** or direct:

Wes Caldwell, Project Planner
Armitage Transmission Project
Phone: 780-733-2700
Email: wes.caldwell@atcoelectric.com

Right-of-Way Planning
ATCO Electric
10035-105 Street
Edmonton, AB T5J 2V6
Website: www.atcoelectric.com
Fax: 780-420-5030



REPLY FORM

10035 - 105 Street, Edmonton, Alberta, T5J 2V6

DATE: _____

FAX OR MAIL TO: **Wes Caldwell, ATCO Electric, Fax No. 780-420-5030**

PROJECT: **Armitage Transmission Project**

Do you have any facilities or developments in the area that may be affected by this project?

No. Yes, and they are as follows:

Do you have any concerns about the project?

No. Yes, and they are as follows:

Is there anyone else we should be contacting about this project?

No. Yes, and they are as follows:

Do you have any other comments or questions?

No. Yes, and they are as follows:

If we have any errors in your name and address, please provide corrections.

Sent By: Name_____

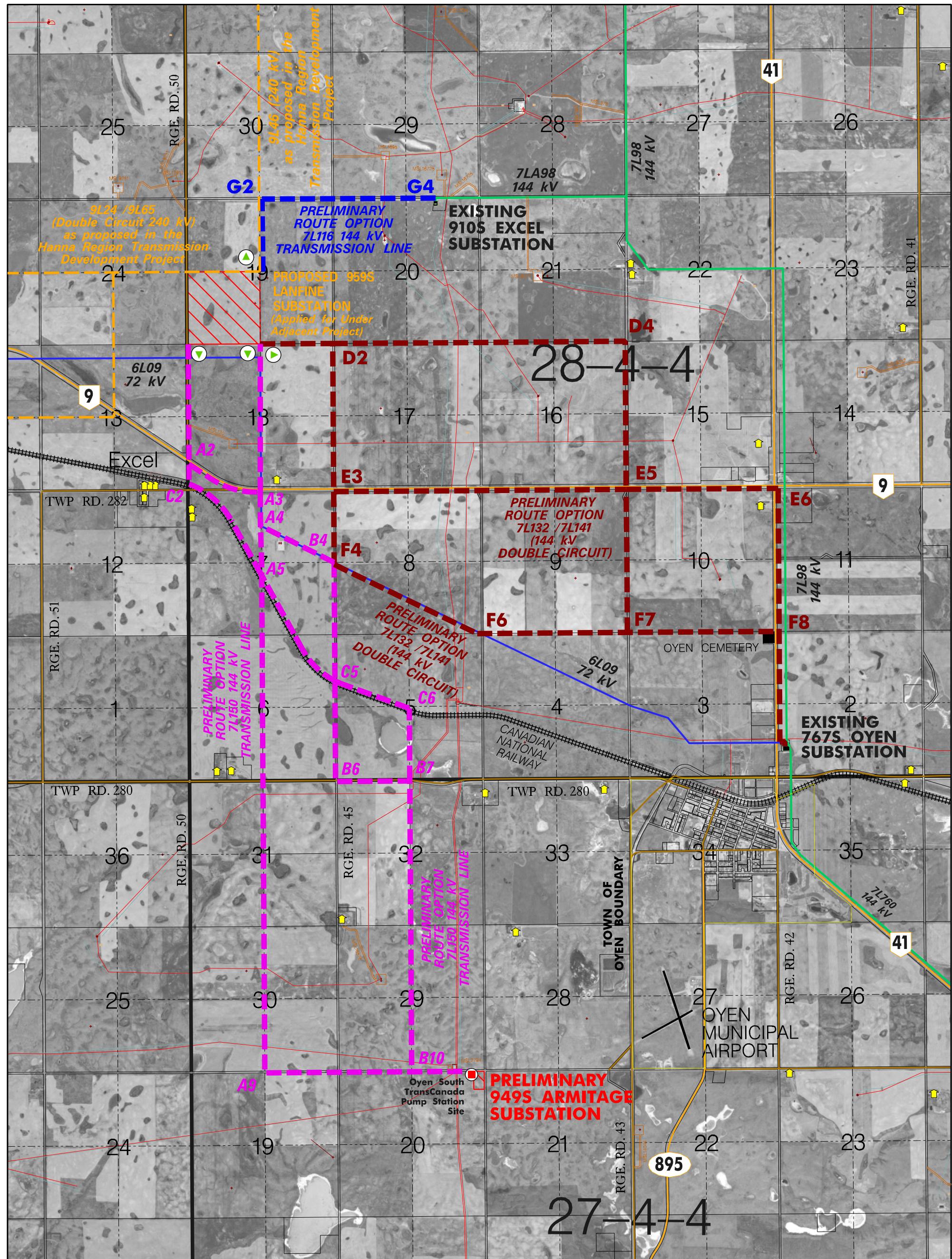
Agency/Company Name_____

Address_____

Phone No.: _____ **Fax No.:** _____

E-mail/Other: _____

NOTE ABOUT PRIVACY: The information on this form is being collected to help identify potential concerns with the location of proposed power transmission facilities, to facilitate communications about the project, and to comply with our obligations to the Alberta Utilities Commission. This information may be provided to the Alberta Utilities Commission. Enquiries or concerns about ATCO Electric's privacy policies can be directed to Greg McNeill, privacy officer (address above), phone 780-420-4468.



LEGEND

LEGEND

Preliminary Route Start Point(s)
Preliminary Route End Point(s)

Preliminary Route Option(s) – Lanfine to Excel

Preliminary 144 KV Route Option(s) – Lanfine to Oy

Preliminary 144 kV Route Option(s) – Lanfine

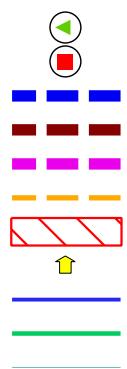
Proposed 240 kV Line for an Ad

Prepared by:

Residencies

Existing 72 kV Transmission Line

Existing 144 kV Transm



NOTES:

- Only facilities in the vicinity of the Route Options are shown.
 - Several Route Options are shown, but only one alignment per project will be built.

ATCO Electric

Oyen Area Facilities Interconnections

Preliminary Route Mosaic MAP 1

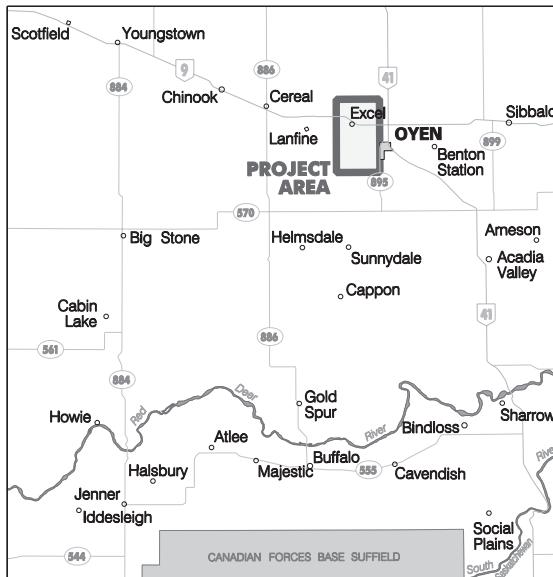


Attachment 3 – Notification of Filing Advertisement – Final Proof

Alberta Electric System Operator

Notification of Regulatory Filing Addressing the Need for a New Transmission Substation in the Oyen area

TransCanada Corporation has requested access to the Alberta Interconnected Electric System (the grid) to supply its KXL Oyen South Pump Station. The Alberta Electric System Operator (AESO) has determined that the increased demand in the area can be reliably met with the development of a new substation southwest of Oyen and approximately 12km of single circuit 144 kv transmission line to connect it to the grid. The AESO will file a needs identification document (NID), describing the need for this transmission system development, with the Alberta Utilities Commission (the Commission) for approval.



The NID Project Area shown on the map above indicates the approximate area in which the AESO has identified that transmission development is needed. Proposed line routes and substation locations are provided by ATCO Electric in its facility application to be filed with the Alberta Utilities Commission for approval.

The AESO and ATCO Electric presented this need to residents, occupants and landowners near the proposed site and other stakeholders in September 2010. The AESO has considered feedback gathered from stakeholders, and technical and cost considerations, and will apply to the Commission for approval of the need for this project. The AESO intends to file its application with the Commission, and post it on the AESO website at <http://www.aeso.ca/transmission/21796.html> on or after January 25, 2011.

Please visit our website, www.aeso.ca for more information, or contact the AESO at 1-888-866-2959 or stakeholder.relations@aeso.ca. In a separate application, ATCO Electric will apply to the Commission for approval to construct and operate the specific facilities to meet the identified need.



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