



May 2019

# **NEWSLETTER** **TO THE COMMUNITY**

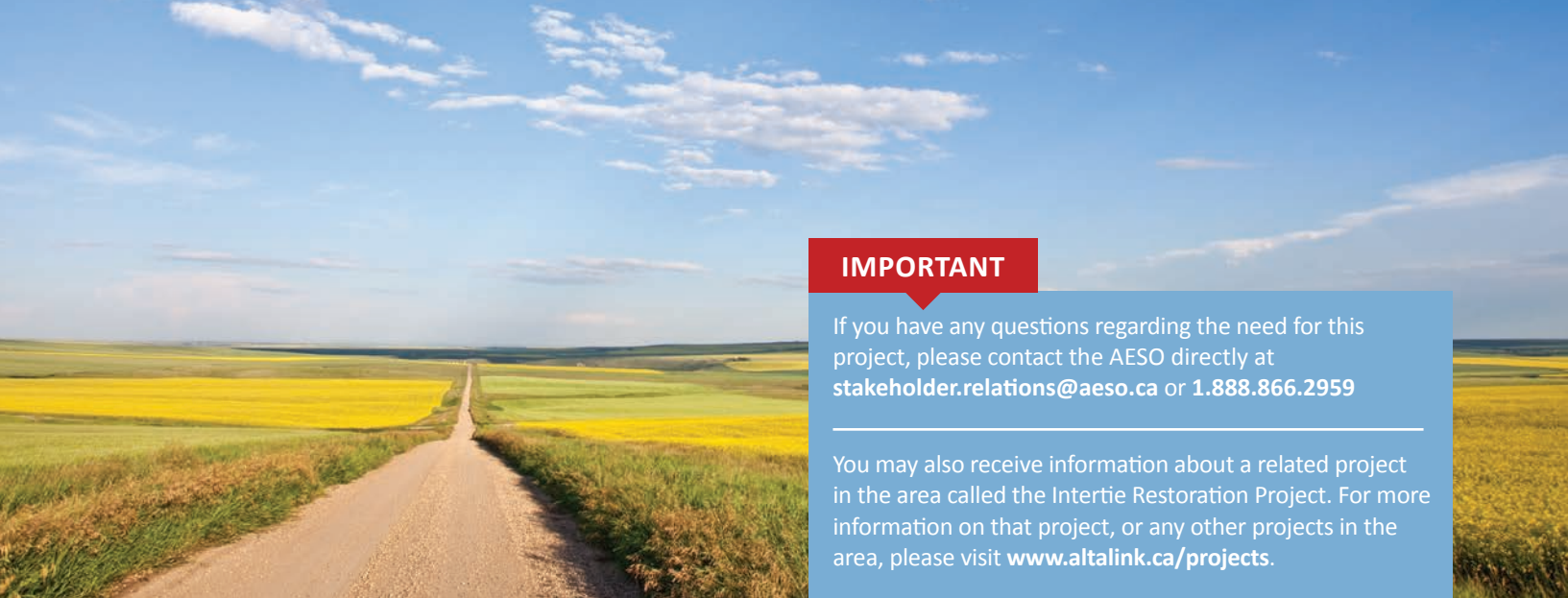
**Chapel Rock to Pincher Creek Area  
Transmission Development**

**UPDATE: Transmission line routes and substation sites**



**PROJECT  
UPDATES**  
IN YOUR AREA

You are receiving this newsletter because you are near the proposed Chapel Rock to Pincher Creek Area Transmission Development, and we want to provide you with a project update.



**IMPORTANT**

If you have any questions regarding the need for this project, please contact the AESO directly at [stakeholder.relations@aeso.ca](mailto:stakeholder.relations@aeso.ca) or **1.888.866.2959**

You may also receive information about a related project in the area called the Intertie Restoration Project. For more information on that project, or any other projects in the area, please visit [www.altalink.ca/projects](http://www.altalink.ca/projects).

# Chapel Rock to Pincher Creek Area Transmission Development

Thank you for your participation in this project, your input is important to us. We began consulting with stakeholders on this proposed project in September 2018. Throughout our consultation process we've received valuable feedback that has helped us in our project planning.

With the input we've received from stakeholders, along with information gathered through ongoing field studies and engineering, we have refined the **transmission** line routes and substation sites proposed for this project, added new potential options and removed others from consideration.

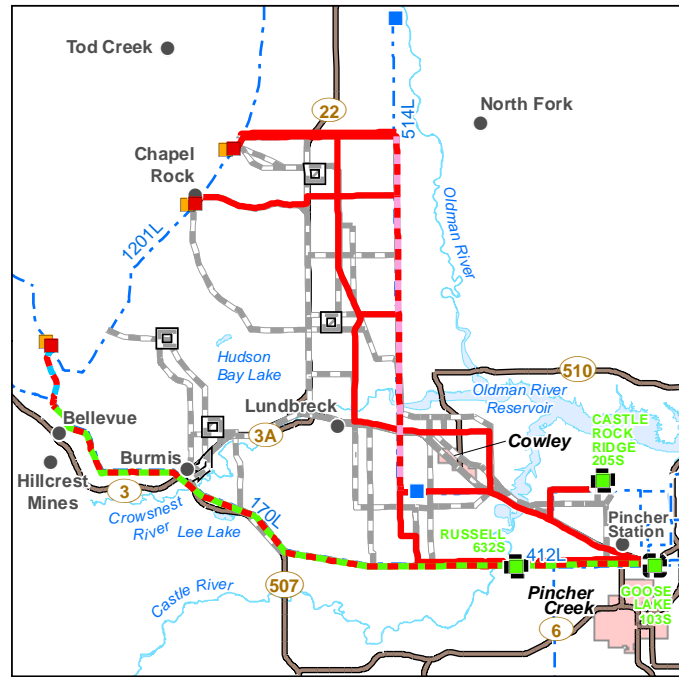
The routes and sites shown in grey on the map have been removed from consideration. If you are near a removed route or substation location, you will no longer receive information from us about this project. Please contact us if you have any questions or wish to stay informed.

Please refer to the *Detailed route and site analysis* document and the maps included in this package to find information about routes and sites near your property.

**DEFINITIONS**

**Transmission**

Transmission lines make up Alberta's electric highway, linking the places where power is generated to where power is used. Transmission lines transport large amounts of power over long distances across the province. The transmission system connects diverse sources of power generation.



**LEGEND**

- Proposed Substation
- Proposed Substation Upgrade
- Existing Substation
- Proposed 240kV Transmission Line Route
- Proposed 138kV/240kV Double Circuit Transmission Line Route
- Proposed 170L and 412L Replacement with 240kV Transmission Line Route
- Proposed Re-use of Existing Transmission Line Route
- Route No Longer Under Consideration
- Existing Transmission Line
- ▨ Substation Target Area No Longer Under Consideration
- Hamlet or Locality
- Highway
- Urban Area
- Water Body

**Other AltaLink Project**

- Proposed Alberta/British Columbia Intertie
- Restoration Project
- Series Capacitor Location

# Updated technical solutions

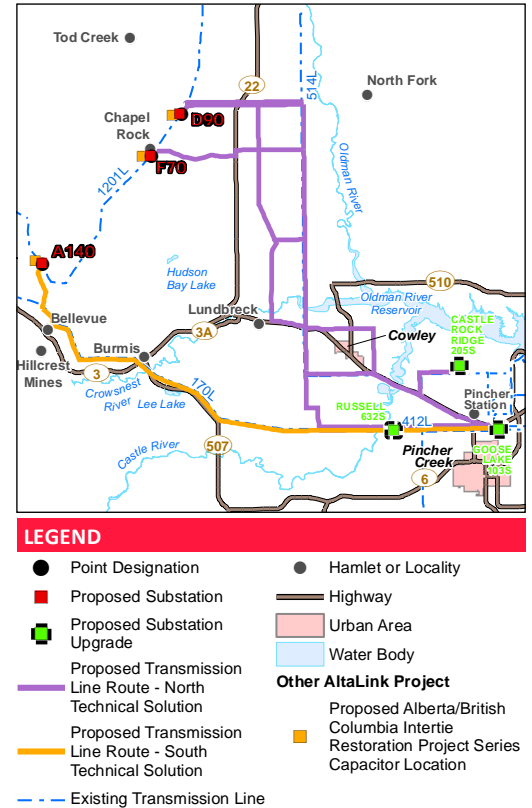
In March we sent a letter to let you know that as a result of stakeholder feedback, the Alberta Electric System Operator (AESO) asked AltaLink to look into the possibility of a new technical solution to meet the identified transmission need in the area. This new technical solution includes using existing transmission line **right-of-way** in the area by replacing the existing 412L line and a section of the 170L line (both 138 kV) with one 240 kV line.

After assessing route options for this technical solution, we have added a new proposed route for consideration. As a result, there are now two different scenarios that we are proposing for this project to meet the two technical solutions proposed by the AESO. We want to get your input on these scenarios, including the proposed substation locations and routing options associated with each.

**Please note:** If the project is approved, only one of these technical solutions will be built. Details about the sites, routes and structures chosen for each technical solution are included in this package.

	<b>NORTH TECHNICAL SOLUTION</b> <i>Shown in purple on the map to the right</i>	<b>SOUTH TECHNICAL SOLUTION (NEW)</b> <i>Shown in orange on the map to the right</i>
	<i>Refined routes and sites based on what was proposed in the first round of consultation</i>	<i>The 170L/412L replacement route</i>
<b>Substation work</b>	<p>A new Chapel Rock Substation to be built at one of two proposed sites:</p> <ul style="list-style-type: none"> <li>NW-31-8-2-W5M (designation point F70 on the maps included in this package)</li> <li>NE-8-9-2-W5M (designation point D90 on the maps included in this package)</li> </ul> <p>This technical solution can connect at either the Goose Lake or Castle Rock Ridge substation</p> <p>In any case, modifications are required at the Goose Lake Substation</p> <p>If the line connects to Castle Rock Ridge modifications will also be required at this substation</p>	<p>A new Chapel Rock Substation to be built at one proposed substation site:</p> <ul style="list-style-type: none"> <li>SW-8-8-3-W5M (designation point A140 on the maps included in this package)</li> </ul> <p>This technical solution only connects at the Goose Lake Substation</p> <p>Modifications will be required at the Russell, Goose Lake and Pincher Creek substations</p>
<b>New transmission line</b>	<p>Route will generally travel west and north from either the Goose Lake or Castle Rock Ridge substation to the new Chapel Rock Substation</p> <p>Several route options are proposed for this technical solution, only one of which will be built</p>	<p>Route will travel west from the Goose Lake Substation to the new Chapel Rock Substation</p> <p>One proposed route option primarily using a portion of the existing 170L and 412L right-of-way</p>
<b>Structure types</b>	<p>Primarily monopole</p> <p>H-frame structures may be used in some select areas</p>	<p>A mix of H-frame and monopole structures to address different features and terrain along the route</p>

There are several possible routes and substation sites proposed for this project, depending on which technical solution is selected. The different options for each technical solution are outlined in the **Detailed route and site analysis** document included in this package.



## DEFINITIONS

**Right-of-way**  
The right-of-way is a strip of land required for the construction and safe operation of a transmission line. A right-of-way refers to the physical space a transmission line encompasses including areas on either side of the line. The majority of the right-of-way can still be used by the landowner. Buildings cannot be placed on the right-of-way, but can be built up to the edge of the right-of-way.

**Kilovolt (kV)**  
A kilovolt is equal to one thousand volts and is commonly used when describing transmission and distribution lines. AltaLink's transmission lines range from 69 kV (69,000 volts) to 500 kV (500,000 volts). Light bulbs typically range from 120 to 300 volts.

**Substation**  
Substations are the connection points between power lines of varying voltages and contain equipment that controls and protects the flow of power. Substations include transformers that step down and step up the voltage so power can be transmitted through transmission lines or distributed to your community through distribution lines.



# Structure types

## NORTH TECHNICAL SOLUTION

As a result of stakeholder feedback, engineering and cost analysis between the monopole and H-frame structures, we have decided to primarily use monopole structures for the following reasons:

- Generally preferred by stakeholders
- Require the least amount of new right-of-way
- Can be located within road allowance boundaries, reducing impacts to adjacent lands
- Comparable in cost to the H-frame

H-frame structures are still proposed in some locations, typically in hilly areas or when crossing rivers/reservoirs.

Where the proposed route parallels the existing 170L and 412L (between A0-A60 on the maps included in this package), we will use H-frame structures so that we can match the spans of the existing structures in order to reduce agricultural and visual impacts.

## SOUTH TECHNICAL SOLUTION

Because of the different features and terrain located along this route, multiple structure types will be used as outlined below:

- From A0 – A35 (the Russell Substation), we are proposing to primarily use H-frame structures for the majority of the segment so that we can match the spans of the existing 185L structures that will be parallel to this route. This will minimize visual and agricultural impact in the area. From the location at which the 185L turns south, monopoles are proposed.
- From A35 – A85, we are proposing to primarily use monopole structures because they will require less new right-of-way than H-frames, minimizing impacts to landowners and the conservation easements crossed along this segment of the route. H-frames will be used in areas where longer span lengths are required, like hilly terrain or stream crossings.
- From A85 – A130, we are proposing to use H-frames because of the terrain in the area. H-frames allow for longer span lengths, reducing the number of structures required.
- From A130 – A140, a double **circuit** H-frame structure is proposed. Both the new 240 kV line and the existing 170L need to connect to the Chapel Rock Substation for this technical solution. Instead of using two single circuit structures, the double circuit H-frame will reduce the amount of new right-of-way required.

## NEW: 500 KV STRUCTURE REQUIREMENTS

After further engineering we have determined that to accommodate the connection of the new substation to the existing 1201L, one new 500 kV structure is required at two of the proposed substation sites:

- D90 (North Technical Solution)
- A140 (South Technical Option)

### DEFINITIONS

#### Circuit

A circuit is three wires. Transmission line structures can be single or double circuit, and this affects how much electricity the structure carries. Single circuit transmission lines have three wires strung along the structures. A double circuit transmission line has six wires and carries double the amount of electricity. Photos of single and double circuit structures can be found on the following page.

### ATTENTION

#### PRELIMINARY STRUCTURE LOCATIONS, RIGHT-OF-WAY, ACCESS TRAILS AND CONSTRUCTION WORKSPACE

On the enclosed maps we have included preliminary structure locations, right-of-way, access trails and construction workspace along the proposed routes. Where possible we've tried to use existing trails, avoid residences, wetland areas and reduce agricultural and other potential impacts. If you are aware of features that we haven't identified please let us know. Where guy boxes are required for guyed structures, an area of approximately 15x45 metres will be needed.


Access trails are required in areas where access may be limited for a number of reasons, including steep terrain, wetlands or lack of access directly to the right-of-way. Typically, an access trail is approximately eight metres wide, but this width may vary depending on the terrain.


Workspace area in addition to the transmission line right-of-way is required for the safe construction of the transmission line.


Discussions regarding acquiring right-of-way access and construction workspace will be negotiated on an individual basis with landowners.


## PROPOSED STRUCTURE TYPES

All dimensions are approximate and subject to change with further engineering. We are proposing to use either self-supporting or guyed structures at angle locations along the transmission line route. These locations are identified on the maps included in this package.

SINGLE CIRCUIT MONOPOLE									
	<table border="1"> <tr> <td>Structure height</td> <td>18-40 m</td> </tr> <tr> <td>Structure width</td> <td>1-1.5 m at the base</td> </tr> <tr> <td>Right-of-way width</td> <td> <b>When on private property:</b> 22 m  <b>When in road allowance:</b> 10 m from the edge of the road allowance                 </td> </tr> <tr> <td>Technical solution</td> <td> <b>North</b> - primarily used  <b>South</b> - in select areas                 </td> </tr> </table>	Structure height	18-40 m	Structure width	1-1.5 m at the base	Right-of-way width	<b>When on private property:</b> 22 m <b>When in road allowance:</b> 10 m from the edge of the road allowance	Technical solution	<b>North</b> - primarily used <b>South</b> - in select areas
Structure height	18-40 m								
Structure width	1-1.5 m at the base								
Right-of-way width	<b>When on private property:</b> 22 m <b>When in road allowance:</b> 10 m from the edge of the road allowance								
Technical solution	<b>North</b> - primarily used <b>South</b> - in select areas								

SINGLE CIRCUIT H-FRAME									
	<table border="1"> <tr> <td>Structure height</td> <td>16-36 m</td> </tr> <tr> <td>Structure width</td> <td>6 m at the base</td> </tr> <tr> <td>Right-of-way width</td> <td> <b>When on private property:</b> 35-85 m (typically 40 m unless otherwise noted)  <b>When in road allowance:</b> 20 m                 </td> </tr> <tr> <td>Technical solution</td> <td> <b>North</b> - in select areas  <b>South</b> - in select areas                 </td> </tr> </table>	Structure height	16-36 m	Structure width	6 m at the base	Right-of-way width	<b>When on private property:</b> 35-85 m (typically 40 m unless otherwise noted) <b>When in road allowance:</b> 20 m	Technical solution	<b>North</b> - in select areas <b>South</b> - in select areas
Structure height	16-36 m								
Structure width	6 m at the base								
Right-of-way width	<b>When on private property:</b> 35-85 m (typically 40 m unless otherwise noted) <b>When in road allowance:</b> 20 m								
Technical solution	<b>North</b> - in select areas <b>South</b> - in select areas								

DOUBLE CIRCUIT H-FRAME									
	<table border="1"> <tr> <td>Structure height</td> <td>25-38 m</td> </tr> <tr> <td>Structure width</td> <td>6 m at the base</td> </tr> <tr> <td>Right-of-way width</td> <td> <b>When on private property:</b> 30 m  <b>When in road allowance:</b> 14 m                 </td> </tr> <tr> <td>Technical solution</td> <td><b>South</b> - in select areas</td> </tr> </table>	Structure height	25-38 m	Structure width	6 m at the base	Right-of-way width	<b>When on private property:</b> 30 m <b>When in road allowance:</b> 14 m	Technical solution	<b>South</b> - in select areas
Structure height	25-38 m								
Structure width	6 m at the base								
Right-of-way width	<b>When on private property:</b> 30 m <b>When in road allowance:</b> 14 m								
Technical solution	<b>South</b> - in select areas								

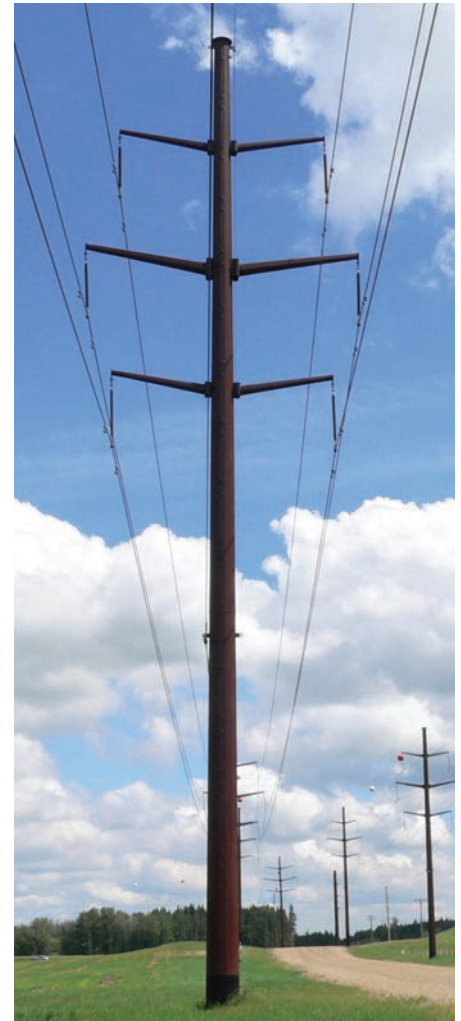
500 kV									
	<table border="1"> <tr> <td>Structure height</td> <td>30-40 m</td> </tr> <tr> <td>Structure width</td> <td>11x11 m up to 18x18 m at the base</td> </tr> <tr> <td>Right-of-way width</td> <td>N/A</td> </tr> <tr> <td>Technical solution</td> <td> <b>North</b> - D90 substation site  <b>South</b> - A140 substation site                 </td> </tr> </table>	Structure height	30-40 m	Structure width	11x11 m up to 18x18 m at the base	Right-of-way width	N/A	Technical solution	<b>North</b> - D90 substation site <b>South</b> - A140 substation site
Structure height	30-40 m								
Structure width	11x11 m up to 18x18 m at the base								
Right-of-way width	N/A								
Technical solution	<b>North</b> - D90 substation site <b>South</b> - A140 substation site								

## WHAT DO YOU THINK? BROWN FINISH STEEL STRUCTURES

To minimize visual impacts related to the transmission line, the use of brown finish steel for the structures may be an option.

Brown finish steel structures will slowly weather over time and result in a dark brown, rust-like appearance. This is different than a typical galvanized steel structure which is largely visually unaffected over time and generally maintains the original appearance. An example of a brown finish steel structure is shown below.

Tell us what you think about this as an option.





## Providing your input

---

**Stakeholder input is critical to identifying low overall impact routes and sites for this project. You can provide your input in any of the following ways.**

### ATTEND OUR PUBLIC EVENTS

We want to hear your thoughts and concerns to help us understand what is important to you as we move forward with the project. Please join us at one of our public events in the project area.

Members of our consultation, environment, electrical effects and siting teams will be available to discuss the project during the sessions. The AESO will also be available to answer questions about the need for this transmission development.

### PARTICIPATE IN A ONE-ON-ONE CONSULTATION

We will contact all occupants, residents and landowners who are on or directly adjacent to the proposed transmission line route and substation site options to gather input through one-on-one consultations.

During the one-on-one process we will document the information you provide and respond to any questions or concerns you may have about the project.

AltaLink is committed to sharing information about its projects and working with the public to gather and respond to stakeholder input and concerns. A summary of stakeholder comments will be incorporated into the application we submit to the Alberta Utilities Commission (AUC).

### CONTACT US DIRECTLY

You can contact us by telephone, email, mail or through our website. Our contact information is on the back page of this newsletter.

### EVENT INFORMATION

**TUESDAY JUNE 25, 2019 | 5 - 8 PM**

MDM Community Centre  
2802 222 Street- Bellevue, AB

**WEDNESDAY JUNE 26, 2019 | 5 - 8 PM**

Lundbreck Community Hall  
304 1 Street- Lundbreck, AB

**THURSDAY JUNE 27, 2019 | 5 - 8 PM**

Cowley Hall  
518 Railway Avenue- Cowley, AB

### PRIVACY COMMITMENT

AltaLink is committed to protecting your privacy. Your personal information is collected and will be protected under AltaLink's Privacy Policy and Alberta's Personal Information Protection Act. As part of the regulatory process for new transmission projects, AltaLink may provide your personal information to the Alberta Utilities Commission (AUC).

For more information about how AltaLink protects your personal information, visit our website at [www.altalink.ca/privacy](http://www.altalink.ca/privacy) or contact us directly via email at [privacy@altalink.ca](mailto:privacy@altalink.ca) or phone at **1-877-267-6760**.

# Next steps

---

The AESO has determined this transmission system development is needed and will file a **Need Application** with the AUC. After our consultation process is complete we will file a **Facilities Application** with the AUC. The AUC will review both the Need Application and the Facilities Application at the same time through a process in which stakeholders can participate.

For more information about the need for this project please visit the AESO's website at: [www.aeso.ca/grid/projects/SATR-CRPC](http://www.aeso.ca/grid/projects/SATR-CRPC)

To learn more about the AUC process and how you can become involved, please refer to the brochure included in this package titled *Public involvement in a proposed utility development*.

## ONGOING SURVEY ACTIVITY

### Environmental surveys

From now until fall 2019, AltaLink will be conducting seasonal environmental surveys along the potential routes for the proposed Chapel Rock to Pincher Creek Area Transmission Development. The surveys are conducted by helicopter or on foot. Ground based surveys on private land will only occur after landowner permission is received. When conducting all surveys we work to minimize disruption to residences, area users, livestock and wildlife.

### Geotechnical surveys

AltaLink will be conducting geotechnical drilling to perform soil investigation at various locations within the project area as required. Where these activities require access to your private property, an AltaLink representative will be in contact with you.

## ELECTRIC AND MAGNETIC FIELDS (EMF)

AltaLink recognizes that people have concerns about exposure to Electric and Magnetic Fields (EMF) and we take those concerns very seriously. Everyone in our society is exposed to EMF from many sources, including:

- power lines and other electrical facilities
- electrical appliances in your home
- building wiring

National and international organizations such as Health Canada and the World Health Organization have been conducting and reviewing research about EMF for more than 40 years. Based on this research, these organizations have not recommended the general public take steps to limit their everyday exposure to EMF from high voltage transmission lines.

If you have any questions about EMF please contact us:

**visit:** [www.altalink.ca/emf](http://www.altalink.ca/emf)

**email:** [emfdialogue@altalink.ca](mailto:emfdialogue@altalink.ca)

**phone:** 1-866-451-7817 (toll-free)

## ANTICIPATED PROJECT SCHEDULE

**Notify and consult with stakeholders**  
Fall 2018 to Summer 2019

**File application with Alberta Utilities Commission (AUC)**  
Fall 2019

**Start construction if project is approved**  
2021 (earliest)

**Complete construction**  
2023 (earliest)

Although we attempt to follow the anticipated project schedule it is subject to change. We will continue to provide you with updated schedule information if required as the project progresses.

## DEFINITIONS

### Need application

The AESO submits Need Applications to the AUC for review. A Need Application describes why a transmission project is required. The AUC may review a Need Application at the same time it reviews a Facilities Application, or may review each application separately. The AUC must approve a Need Application before construction can begin.

### Facilities application

AltaLink submits Facilities Applications to the AUC for review. A Facilities Application describes how AltaLink proposes to meet the requirements for a transmission project. It includes routing details, results of the participant involvement program and technical details. Facilities Applications must be approved by the AUC before construction can begin.



## CONTACT US

To learn more about the proposed Chapel Rock to Pincher Creek Area Transmission Development, please contact:

### ALTALINK

1-877-267-1453 (toll-free)

stakeholderrelations@altalink.ca

AltaLink's transmission system efficiently delivers electricity to 85 per cent of Albertans. Dedicated to meeting the growing need for electricity, AltaLink connects Albertans to renewable, reliable and low-cost power. With a commitment to community and environment, AltaLink is ensuring the transmission system will support Albertans' quality of life for years to come. Learn more at [www.altalink.ca](http://www.altalink.ca).

---

To learn more about the application and review process, please contact:

### ALBERTA UTILITIES COMMISSION (AUC)

780-427-4903 (toll-free 310-0000 before the number)

utilitiesconcerns@auc.ab.ca

The Alberta Utilities Commission (AUC) ensures the fair and responsible delivery of Alberta's utility services. AltaLink submits applications for new transmission projects to the AUC and the AUC reviews them in a public process.

---

To learn more about Alberta's electric system and the need for the project, please contact:

### ALBERTA ELECTRIC SYSTEM OPERATOR (AESO)

1-888-866-2959 (toll-free)

stakeholder.relations@aeso.ca

The Alberta Electric System Operator (AESO) is an independent, not-for-profit organization responsible for the safe, reliable and economic planning and operation of the provincial transmission grid. For more information about why this project is needed, please visit [www.aeso.ca](http://www.aeso.ca). If you have any questions or concerns about the need for this project you may contact the AESO directly. You can make your concerns known to an AltaLink representative who will collect your personal information for the purpose of addressing your questions and or concerns to the AESO. This process may include disclosure of your personal information to the AESO.

A copy of the AESO's newsletter for the Chapel Rock to Pincher Creek Area Transmission Development is included in this package and can be found here: [www.aeso.ca/grid/projects/SATR-CRPC](http://www.aeso.ca/grid/projects/SATR-CRPC)

---

## INCLUDED IN THIS INFORMATION PACKAGE:

- Project maps
- Detailed route and site analysis
- AUC brochure:  
*Public involvement in a proposed utility development*

## SUBSCRIBE TO THIS PROJECT

1. Visit [altalink.ca/projects](http://altalink.ca/projects)
2. Search for the project title
3. Click **Subscribe to Updates**

## LET'S TALK TRANSMISSION

 [www.facebook.com/altalinktransmission](http://www.facebook.com/altalinktransmission)

 [www.twitter.com/altalink](http://www.twitter.com/altalink)