

A close-up photograph of a male worker wearing a white hard hat with a red headlamp, safety glasses, and a red jacket. He is looking down at a task, with a yellow-gloved hand holding a tool visible on the left. The background is blurred, showing an industrial setting.

# WEST EDMONTON TRANSMISSION UPGRADE PROJECT UPDATE

December 2017

# PROJECT INFORMATION

In preparation for the next phase of the West Edmonton Transmission Upgrade Project, we are sending you this information to inform you of updates to the proposed above ground transmission project and ask for your feedback.

Since September 2016, we have discussed the project with over 850 stakeholders. We assessed the input we received from occupants, residents, homeowners and businesses through one on one consultations completed in person, at one of our open houses, or over the phone. As a result of discussions with stakeholders and other new information, we have refined our preliminary routes and incorporated additional routing options for consideration. These changes are outlined on the map included in this package.

In this project notice you will learn more about how the potential routes were refined and how stakeholder feedback and other new information was utilized to develop additional routing options. As we move forward, we remain committed to consulting with you about this project. Our goal is to continue to involve you and respond to your questions. Further details regarding the next steps in the consultation process are discussed later in this notice.

**Thank you to everyone who took the time to participate in the consultation process to date.**

## Project Background

This proposed project involves upgrading the transmission system in Edmonton. It will improve the reliability of the transmission system and reduce the risk of customer outages.

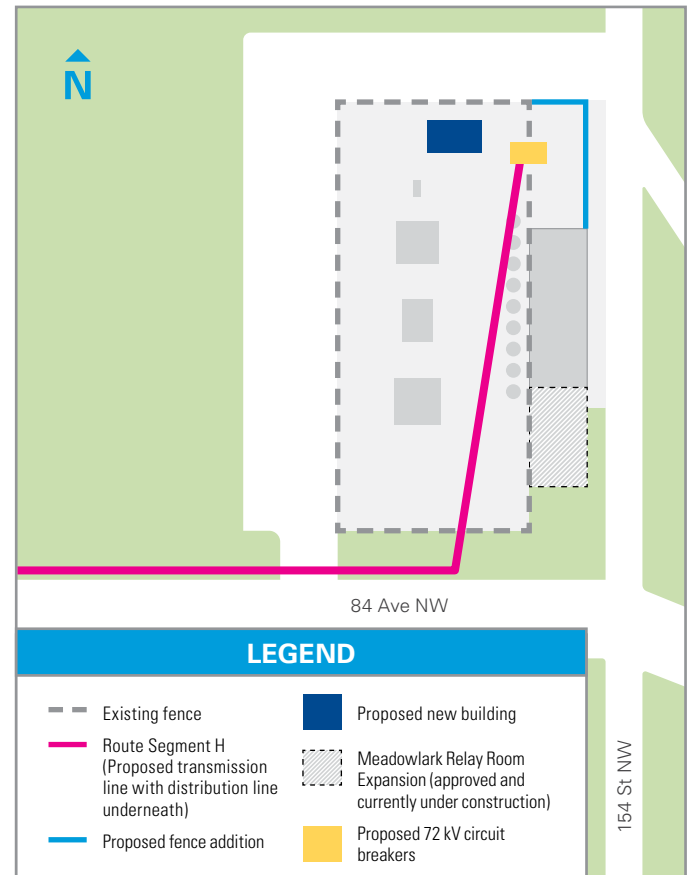
The proposed project includes:

- Constructing approximately 11 km of above-ground 72 kilovolt (kV) transmission line from the Poundmaker substation (18944 105 Avenue) to the Meadowlark substation (15404 84 Avenue).
- Adding two 72 kV circuit breakers and associated switches and equipment to the Meadowlark substation. This is a revision from the information included in the original project notice, which indicated that one circuit breaker was required.
- Adding one 240 kV/72 kV transformer, one 240 kV circuit breaker, one 72 kV circuit breaker and associated switches and equipment to the Poundmaker substation.
- Expanding the existing fences at both the Poundmaker and Meadowlark substations. This is a revision from the information included in the original project notice regarding the Meadowlark substation.

## Poundmaker Substation



## Meadowlark Substation



# TRANSMISSION LINE ROUTE LOCATION UPDATE

During the process of determining potential routes, we took the following factors into consideration in an effort to find routes with the lowest overall impact:

- Residential
- Electrical
- Visual
- Environmental
- Cost
- Special Constraints

We previously notified you of the routes we identified for the proposed transmission line. We proposed these route options because they generally follow existing linear disturbances such as roadways, designated Transportation/Utility Corridors, and existing distribution utility right-of-ways. When we refine routes or develop additional routes, we consider the factors listed above, any new information and consultation feedback.

## Routing Refinements

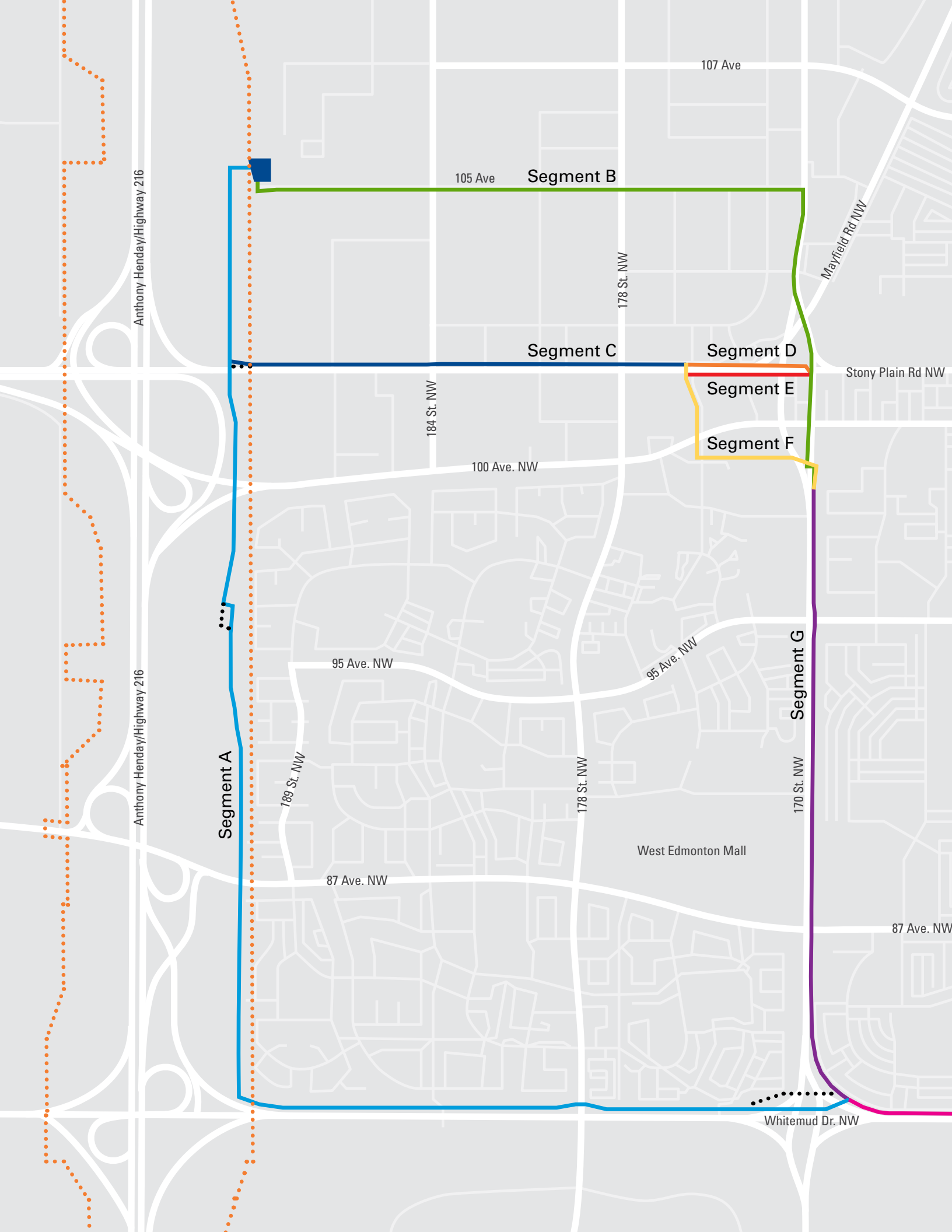
As outlined on the enclosed map, several refinements were made to the routes included in our notice from September 2016. These changes were made in response to stakeholder feedback and other new information. These refinements include alignment changes and proposing an above ground connection to the Meadowlark substation.

## Additional Routes under Consideration

Based on feedback received and additional routing assessments, we attempted to reduce potential project related impacts by adding several routing alternatives that we will be consulting on over the coming months. These additional routes are shown on the enclosed map.













## Additional Routing Information

Based on feedback collected at earlier stages of the project, cross section images were developed to help stakeholders visualize the project.





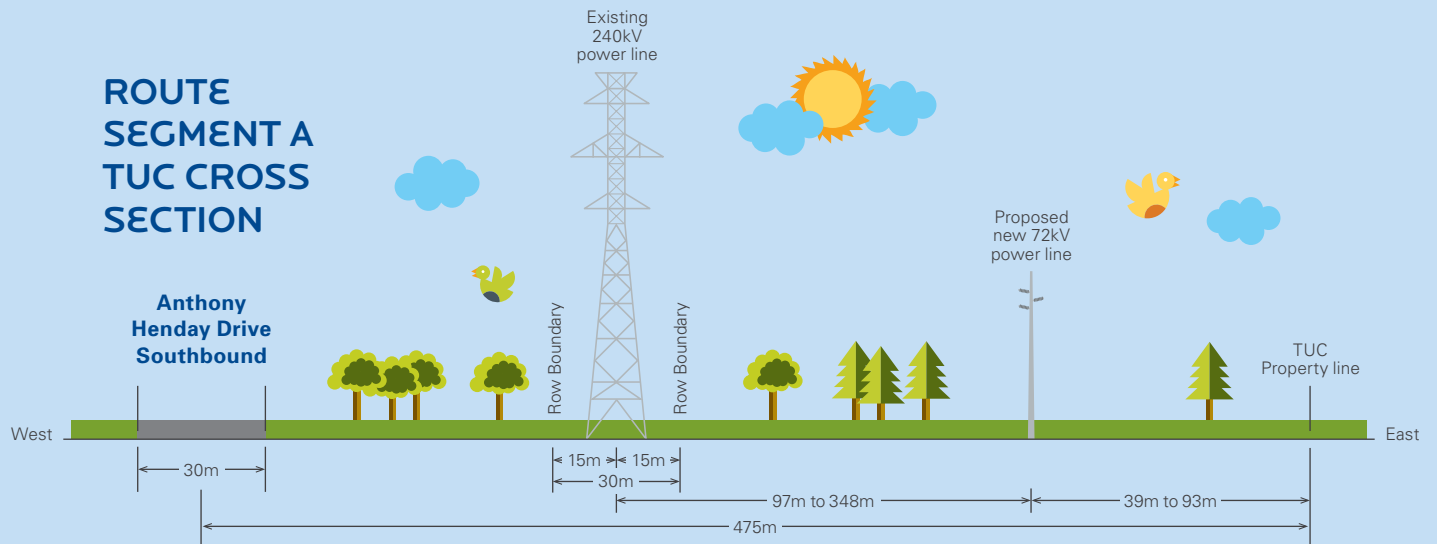
## LEGEND

-  Poundmaker Substation
-  Meadowlark Substation
-  Route Segment A
-  Route Segment B  
(Transmission line is proposed to be strung on one side of existing structures for a portion of this segment)
-  Route Segment C
-  Route Segment D
-  Route Segment E
-  Route Segment F
-  Route Segment G
-  Route Segment H  
(Proposed transmission line with distribution line underneath)
-  TUC boundaries
-  Rejected routing

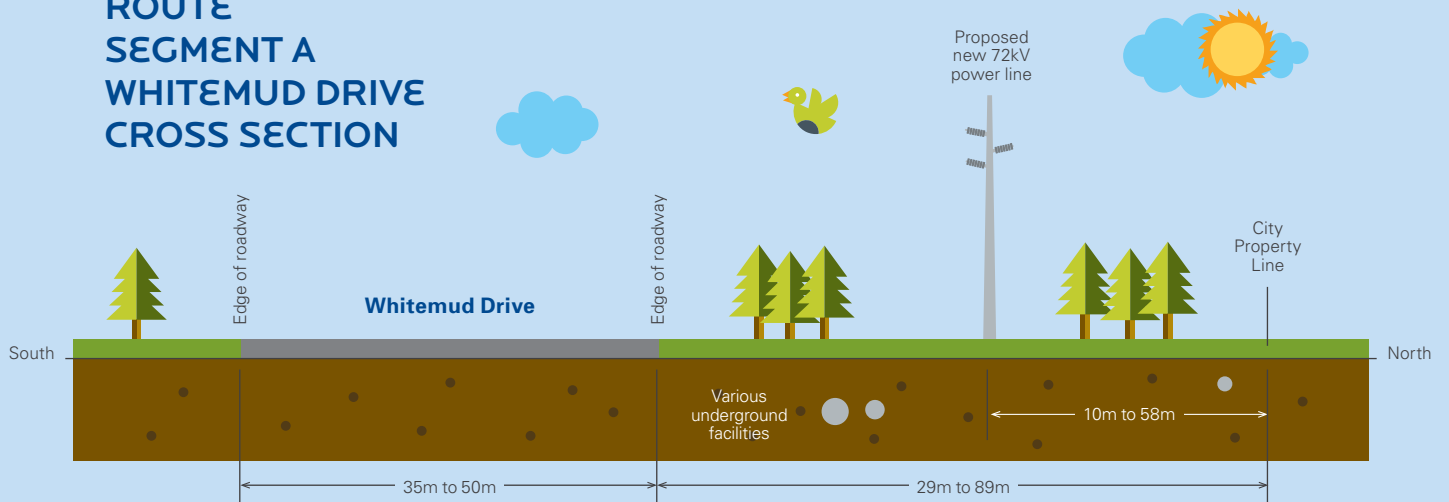
## What is a Transportation/Utility Corridor (TUC)?

The Government of Alberta established Restricted Development Areas (RDAs) in the mid-1970s, the lands in these areas were designated for TUC uses. As defined by the Government of Alberta the intended primary uses within TUCs are linear transportation and utility facilities, which includes power transmission lines.

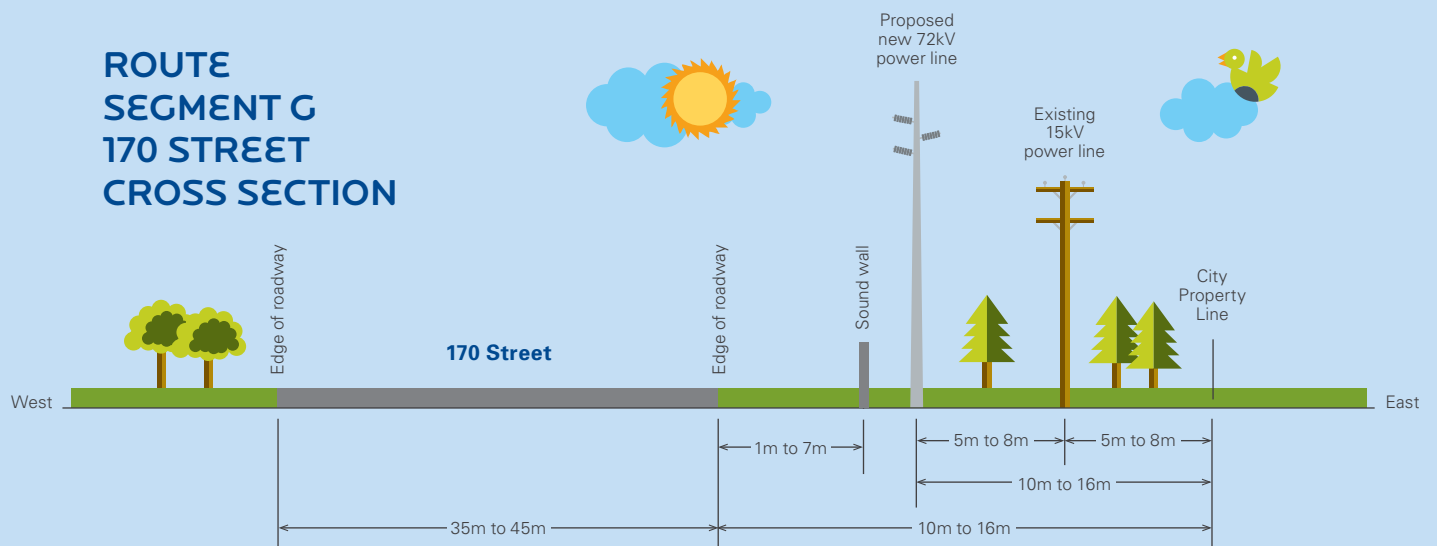
## ROUTE SEGMENT A TUC CROSS SECTION



## ROUTE SEGMENT A WHITEMUD DRIVE CROSS SECTION



## ROUTE SEGMENT G 170 STREET CROSS SECTION



\*Drawings are not to scale (NTS) and dimensions are approximate

## Future Routing Decisions

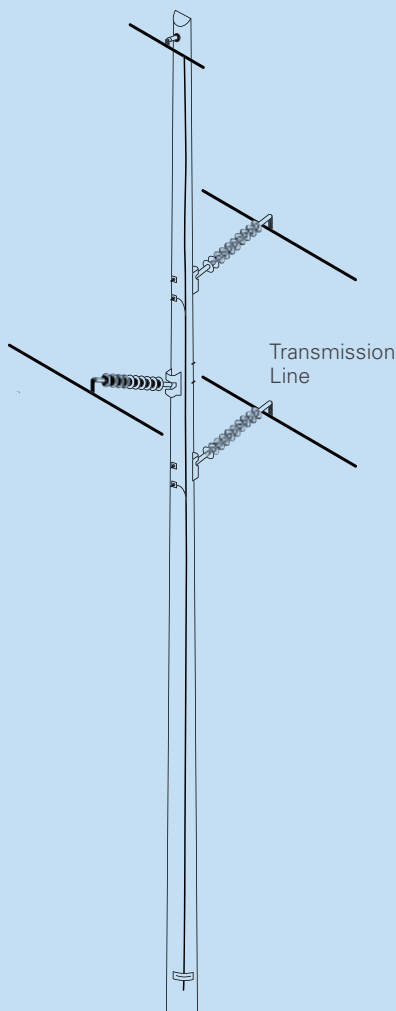
At this time, a preferred route has not been selected. After consulting on the routing refinements and new routing alternatives mentioned above, the project team will prepare a Facility Application to be filed in early 2018 with the Alberta Utilities Commission (AUC). This application will present a preferred route and any potential alternative routes identified by EPCOR. Following submission of the application, the public will continue to be able to provide feedback to both EPCOR and the AUC for consideration. If approved, the AUC will make the final decision on routing and one route will be approved for construction.

## Proposed Structure Type

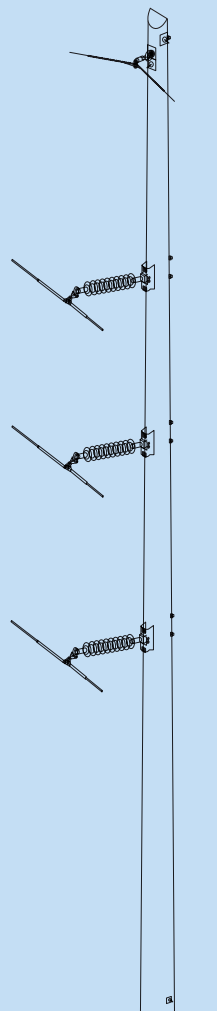
As shown below, the typical structures we are planning on using will be either wood or composite poles, ranging in height from approximately 18 to 26 metres. The poles will be single circuit, meaning they will have three wires strung across them and one overhead shield wire on top (refer to Structures A and B below). The diameter of the typical structures at the grounds surface will range between approximately 0.65 to 1.0 metres.

A portion of the proposed route follows an existing double-circuit distribution line, meaning they have two sets of three wires strung across them, one

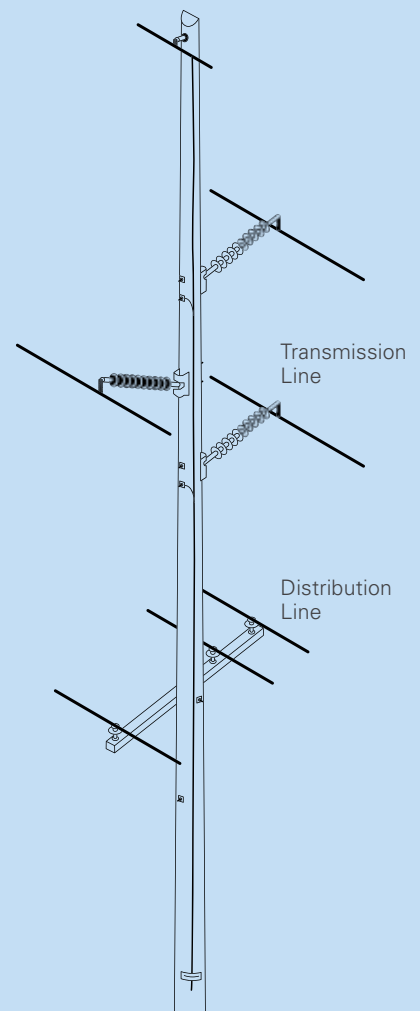
**STRUCTURE A**  
TRANSMISSION  
ONLY



**STRUCTURE B**  
TRANSMISSION  
ONLY



**STRUCTURE C**  
TRANSMISSION AND  
DISTRIBUTION



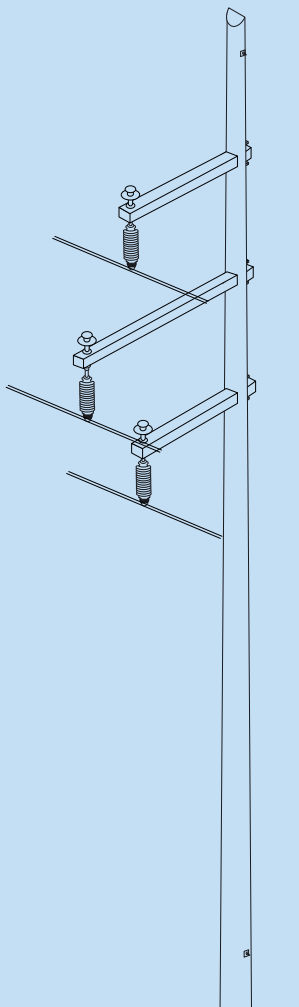
set on top of the other (shown as Route Segment H on the map). For this section, we propose to use the existing utility right-of-ways. This will involve removing and replacing some of the existing poles (approximately 14 metres tall) and installing new poles (as mentioned above ranging from 18 to 26 metres in height) that will have the new transmission line on top and one of the existing distribution circuits underneath (refer to Structure C above). One of the existing distribution circuits will be removed and relocated below ground.

A portion of Route Segment B (from the Poundmaker Substation to approximately 172 St

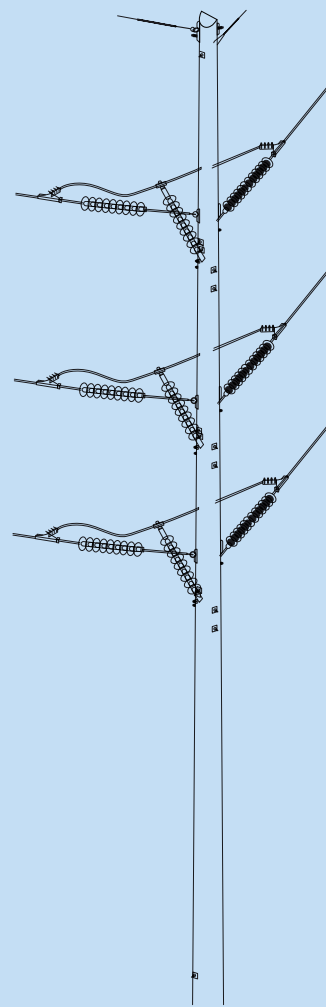
NW) follows an existing 240-kV transmission line that is only strung on one side of the structure. For this section, we propose to string the 72-kV transmission line on the unstrung side (refer to Structure D below).

The images shown below (Structures E, F, and G) represent examples of the non-typical structures that we may be required to use at certain locations along the transmission line, including where the line turns corners, has to span larger distances, or cross existing transmission lines. Non-typical structures may be wood, composite, or steel, ranging in height from approximately 18 to 34 metres.

**STRUCTURE D**  
EXISTING STRUCTURE,  
SINGLE SIDE STRUNG



**STRUCTURE E**  
SINGLE POLE VERTICAL  
DEAD END





The diameter of the non-typical structures at the grounds surface will range between approximately 1.0 to 1.5 metres.

### Transmission Lines and Substations

Transmission lines are like highways, moving high-voltage electricity from generating stations to distribution points (called substations) where the high-voltage electricity gets stepped down to lower voltages.

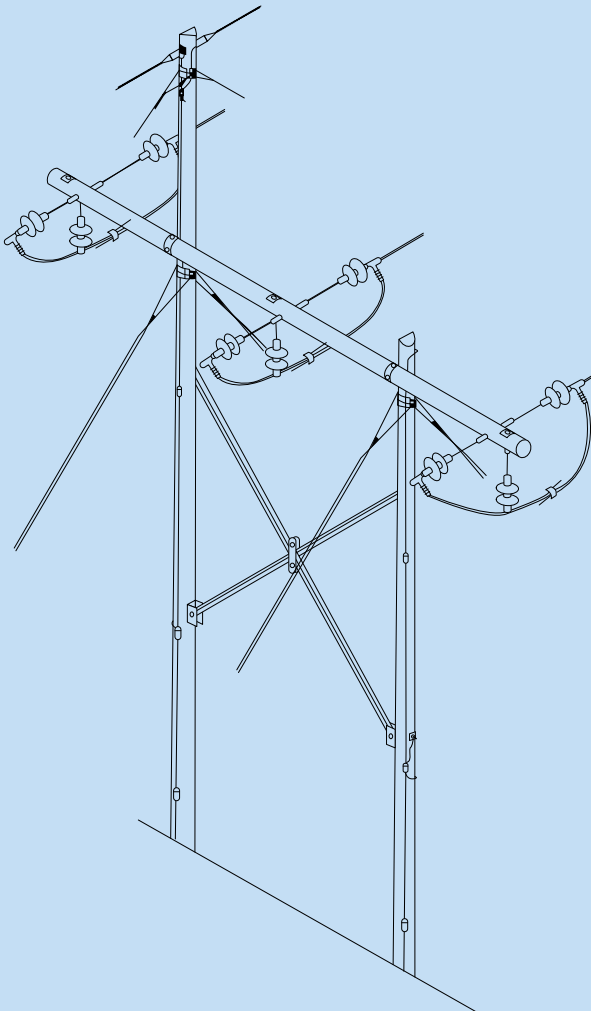
### Distribution Lines

Once voltages are stepped down at a substation, the electricity travels along distribution wires. These lines are the ones that leave a substation and make their way to our homes or businesses.

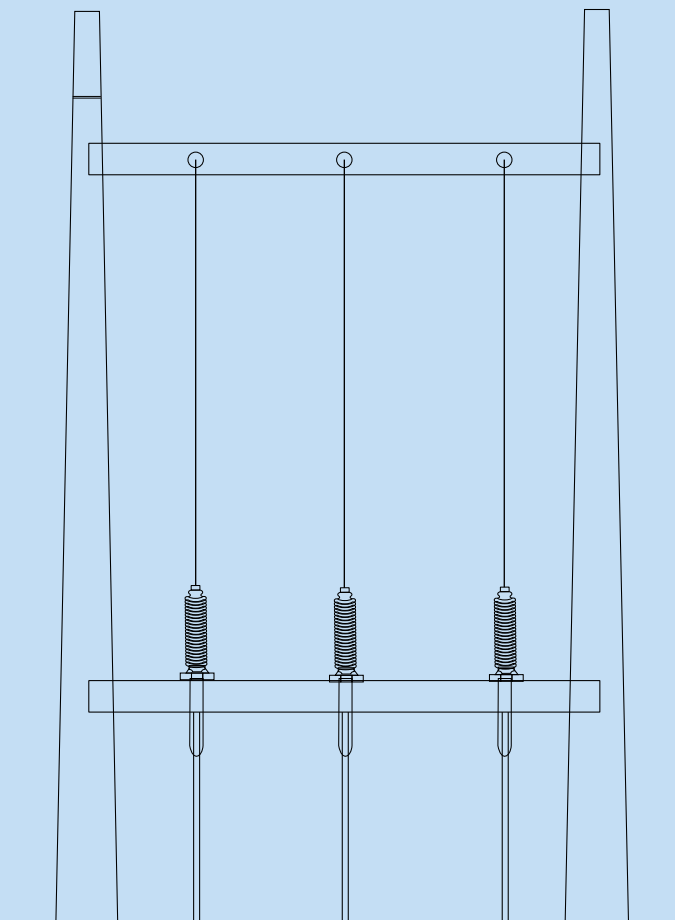
### Consultation Update

Throughout our discussions with stakeholders, various concerns and questions were brought forward. The following section outlines some of the more frequent feedback communicated by stakeholders, as well as how we have addressed or how we will address the concern.

**STRUCTURE F**  
TWO POLE DOUBLE  
DEAD END



**STRUCTURE G**  
SUBSTATION GANTRY  
STRUCTURE



*Structure G is proposed at the Meadowlark Substation. A similar structure is also proposed at the Poundmaker Substation.*

### Environmental Considerations

Stakeholders told us it is important to minimize potential impacts to the environment. In addition to refinements made to previously proposed routing to avoid or reduce potential impacts, additional routing was also developed that collectively considered potential environmental impacts. This included limiting disturbance to existing vegetation and natural areas, focusing on disturbed/developed areas (transportation corridors, industrial areas) and placing routing near other existing developments. Environmental impacts will be assessed as part of our Facility Application to the AUC.

### Visual Impacts

In order to reduce the potential visual impacts associated with the project, where possible, existing linear disturbances (roads, transmission/distribution lines) were followed or overbuilt and routing in residential and recreational areas was minimized to reduce the potential visual impacts associated with the project.

In determining routing options, we strive to be separated from residences while minimizing impacts to existing and planned underground utilities and infrastructure. For example, along Whitemud Drive, a major transportation corridor, proposed routing has been located as far from residences to the north as possible while still complying with separation requirements from the roadway and other subsurface utilities.

### Construction Impacts

We understand that construction impacts can be challenging; however, they are generally short term in nature and our construction staff will work as quickly and safely as possible to minimize any potential inconvenience. All proposed work spaces for the project will be safe and secure and construction activities will comply with the City of Edmonton bylaws. These include occupational health and safety requirements, as well as EPCOR's internal health, safety and environment program. It

is anticipated that work will be generally undertaken between 7:30 a.m. and 5 p.m. and it will comply with the City of Edmonton's Community Standards bylaw for noise control. You can expect to see activity that is typical to construction, including company or contractor vehicles and equipment in your neighbourhood. If approvals are granted, we anticipate that outages will be required in certain areas throughout construction. If a planned service power interruption is required in your area, we will notify you in advance.

If the AUC approves the facility application, we will provide you with more detailed information regarding potential construction impacts prior to any work starting.

### Noise

We do not anticipate an increased level of noise as a result of the proposed project and its operation. As part of the AUC's requirements, a Noise Impact Assessment (NIA) will be completed and submitted with the Facility Application to ensure that the proposed project will not exceed permissible sound levels (PSL).

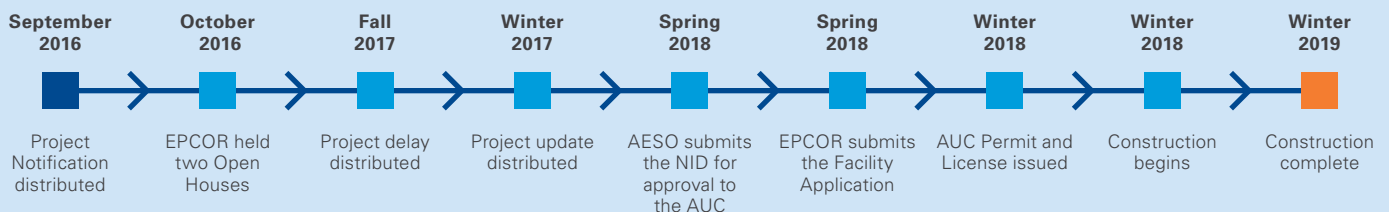
### The location of Route A in the TUC

We worked with Alberta Transportation, Alberta Infrastructure, and other stakeholders in the area to find a potential route that addresses numerous interests along the TUC. These interests include a location that would minimize impacts to residences, reduce potential environmental impacts, and consider proximity to existing and planned infrastructure within the TUC.

### Underground Routing Alternatives

The costs associated with installing underground transmission facilities are considerably more expensive than overhead. As a result, when evaluating potential routes and route refinements, EPCOR generally only considers underground transmission lines when there is not a viable above ground option.

## REVISED PROJECT TIMELINE



## The Regulatory Process

The AESO is responsible for determining the proposed transmission development, which involves adding the transmission line and the equipment at the Meadowlark and Poundmaker substations. The AESO will submit a Needs Identification Document (NID) with the AUC in spring, 2018 in support of this project.

The project team is preparing a Facility Application to be filed in spring 2018 with the AUC. Feedback we receive from stakeholders regarding the project will be incorporated as part of the Facility Application.

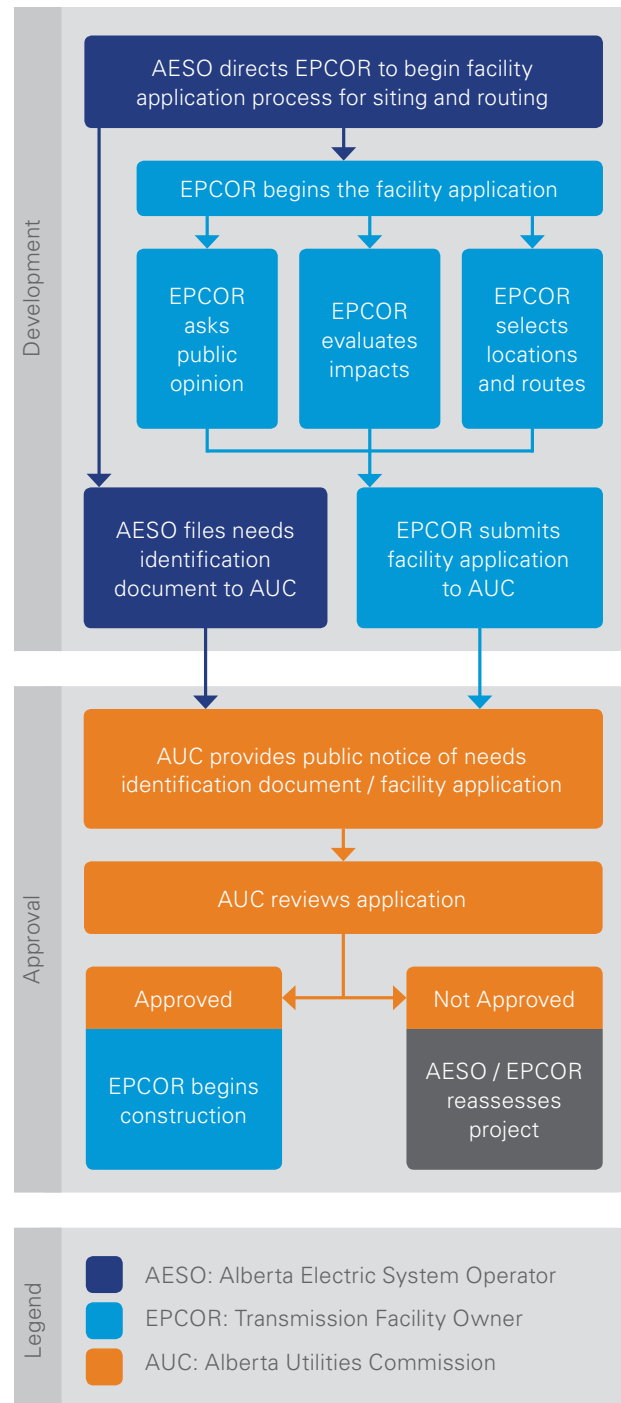
The AUC must approve the Needs Identification Document and the Facility Application before upgrades to the transmission system can begin. The final decision on routing will be made by the AUC and, although more than one route may be proposed by EPCOR, the AUC will approve one route. No construction can begin until all required approvals are in place. For more information on the regulatory process, including links to the AESO and AUC websites please visit our website at [www.epcor.com/consultation](http://www.epcor.com/consultation). We have also enclosed the AESO'S Updated Need Overview and the AUC's brochure entitled Public Involvement in a Proposed Utility Development for more information about how you can participate in the regulatory process.

## More about the Alberta Electric System Operator (AESO)

The 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 refer to the AESO's Need Overview Update included with this package, or 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 or you can make concerns known to an EPCOR representative who will communicate them to the AESO on your behalf. This process may include disclosure of your personal information to the AESO.

## More about the Alberta Utilities Commission (AUC)

The AUC is an independent, quasi-judicial agency of the province of Alberta. The AUC is responsible to ensure that the delivery of Alberta's utility service takes place in the public interest. The AUC



must approve this project before upgrades to the system can begin. For more information about how you can participate in the process, please visit the AUC website.

[www.auc.ab.ca/AUCPublicInvolvement](http://www.auc.ab.ca/AUCPublicInvolvement)

# CONTACT US

As we move forward, we are committed to consulting with you. We will continue to involve you in the process, address your concerns and to respond to your questions. Your feedback regarding this project is important to us and will be directly incorporated into the Facility Application that we will file with the AUC.

If you have any questions or would like to provide input on the project, please contact us:

**780-412-4040**

**[consultation@epcor.com](mailto:consultation@epcor.com)**

**[www.epcor.com/consultation](http://www.epcor.com/consultation)**

For more information about the need for this project please contact:

**Alberta Electric System Operator (AESO)**

**1-888-866-2959**

**[Stakeholder.relations@aeso.ca](mailto:Stakeholder.relations@aeso.ca)**

**[poweringalberta.com](http://poweringalberta.com)**

For more information about the regulatory process please contact:

**Alberta Utilities Commission (AUC)**

**780-427-4903 (for toll-free access, dial 310-0000 before the 10 digit number)**

**[auc.ab.ca](http://auc.ab.ca)**



EPCOR respects your right to privacy. Any personal information we collect about you, including your name, address, phone number and email address will be used only in regards to this project. Please visit [epcor.com](http://epcor.com) for more information on EPCOR's Privacy Policy.

# Need for the West Edmonton Transmission Upgrade Project in the City of Edmonton

*EPCOR Distribution and Transmission Inc. (EPCOR) has applied to the Alberta Electric System Operator (AESO) for transmission system access to improve the reliability of the power system in the Edmonton area. Distribution of the original AESO Need Overview began in September 2016. The AESO has since revised its proposed solution and schedule to respond to EPCOR's request, as described below. EPCOR's request can be met by the following solution:*

## REVISED PROPOSED SOLUTION

- Add a new 72 kilovolt (kV) transmission line from the Poundmaker substation to the Meadowlark substation.
- Upgrade the existing Poundmaker substation, including adding one 240/72 kV transformer, one 240 kV circuit breaker, one 72 kV circuit breaker and associated equipment.
- Modify the existing Meadowlark substation, including adding two 72 kV circuit breakers and associated equipment. Originally, only one 72 kV circuit breaker was proposed.
- Upgrade the existing Garneau substation, including replacing three existing 72/14.4 kV transformers with three 72/14.4 kV transformers of higher capacity.

## REVISED NEXT STEPS

- The AESO has revised its schedule. The AESO now intends to apply to the Alberta Utilities Commission (AUC) for approval of the need in mid-2018.
- The AESO's needs identification document (NID) application will be available on the AESO's website at [www.aeso.ca/grid/projects](http://www.aeso.ca/grid/projects) at the time of its application to the AUC.

*The following organizations have key roles and responsibilities in providing access to the transmission system:*

## THE AESO

- Must plan the transmission system and enable access to it for generators and other qualified customers.
- Is regulated by the AUC and must apply to the AUC for approval of its NID.

## EPCOR

- Is the transmission facility owner in the City of Edmonton.
- Is responsible for detailed siting and routing, constructing, operating and maintaining the transmission facilities.
- Is regulated by the AUC and must apply to the AUC for approval of its transmission facilities applications.

## WHO IS THE AESO?

The Alberta Electric System Operator (AESO) plans and operates Alberta's electricity grid and wholesale electricity market safely, reliably and in the public interest of all Albertans. We are a not-for-profit organization with no financial interest or investment of any kind in the power industry.

We appreciate your views, both on the need for transmission system development and proposed transmission plans. If you have any questions or comments, please contact us directly.

## CONTACT US

**Alberta Electric System Operator**  
**Jennifer Vollmer**  
AESO Stakeholder Relations

[stakeholder.relations@aeso.ca](mailto:stakeholder.relations@aeso.ca)  
**1-888-866-2959**

2500, 330-5th Avenue SW  
Calgary, AB T2P 0L4  
Phone: 403-539-2450

[www.aeso.ca](http://www.aeso.ca) | [@theaeso](https://twitter.com/theaeso)



**Step 6: The public hearing process\***

The public hearing process provides an opportunity for those who have been unable to resolve their concerns with the applicant and have made a filing, to express their views directly to a panel of Commission members. The panel reviews the initial filings and grants what is referred to as standing to those who may be directly and adversely affected by the proposed project. Standing is necessary to continue involvement as an intervener in the proceeding which may include the filing of evidence and participation in an oral or written hearing.

The AUC will issue a notice of hearing setting out the hearing date, location and additional process steps and deadlines. An AUC public hearing operates similarly to a court proceeding and is a quasi-judicial process. The general public is welcome to attend as an observer and the hearings are often broadcast online so that those interested can listen-in.

Participants in a hearing can either represent themselves or be represented by legal counsel. In addition, participants may hire experts to assist in preparing and presenting evidence to support their position.

Persons who hire legal counsel or technical experts must be aware that while reimbursement for the costs of legal and technical assistance may be available under Rule 009, recovery of costs is subject to the Commission assessing the value of the contribution provided by counsel and technical experts. People with similar interests and positions are expected to work together to ensure that any expenditures for legal or technical assistance are minimized and costs are not duplicated.

**Step 7: The decision**

For electric transmission facilities, the need for transmission development filed by the Alberta Electric System Operator to the AUC must be considered to be correct unless someone satisfies the Commission that the needs application is technically deficient, or that to approve it would be contrary to the public

interest. For electric needs applications, the Commission can either approve, deny, or send the application back with suggestions for change.

Commission decisions made about applications filed for a specific utility development, including electric transmission lines, gas utility pipelines and power plants, may be approved, approved with conditions or denied. Decisions are typically released within 90 days from the close of the record as a written report. The decision, available on the AUC website, will summarize the Commission's findings and state its reasons for the decision with any conditions or approval time limits if applicable.

Sometimes needs and facility applications are considered together in a single proceeding.

**Step 8: Right to appeal**

A participant in a hearing who is dissatisfied with the decision of the Commission may request that the Commission review and vary its decision. Such a request must follow the procedure set out in Rule 016: *Review of Commission Decisions*.

A dissatisfied participant may also file a leave to appeal motion in the Court of Appeal of Alberta within 30 days from the date the decision is issued.

**Step 9: Construction and operation**

Any applicant that receives a permit to construct and licence to operate a facility from the Commission must adhere to any conditions that were set out in the decision. If you notice something during the construction or operational phases of a project that concerns you, bring this to the applicant's attention. If you are not satisfied with the response you receive, please bring your concerns to the attention of the AUC.

**\*Denotes opportunity for public involvement**

**The Alberta Utilities Commission is committed to ensuring that Albertans whose rights may be directly and adversely affected by utility development in Alberta have the opportunity to have their concerns heard, understood and considered. If you believe you may be directly and adversely affected, you can become involved in the AUC application and review process.**

**Contact information**

Phone: 780-427-4903  
Email: [consumer-relations@auc.ab.ca](mailto:consumer-relations@auc.ab.ca)

Dial 310-0000 prior to the 10-digit number and then press 1 for toll-free access anywhere in Alberta.

**Information session**

It is our goal to ensure that you understand the process, and your opportunities for involvement in proceedings to consider utility development applications. For those interested in having an AUC staff member further explain the application and review process or answer questions you may have about your involvement in utility development proceedings, please contact us as we may schedule a formal information session for you. The virtual information session on our website, found under Involving Albertans, will also provide you with further details which could assist you in understanding the process and having your say in a utility development proceeding.

This brochure provides general information only. Specific participation opportunities may differ depending on the type of application.



**Public involvement in a proposed utility development**

*Understanding your rights and options for participating in a proceeding to consider applications for a proposed project in your area*

Application process	
Step 1*	Public consultation by the applicant.
Step 2	Application filed with the AUC.
Step 3	The AUC issues a notice of application or notice of hearing.
Step 4*	Interested parties submit filings to the AUC with any outstanding issues or objections.
If the AUC does not receive any submissions, the application will be reviewed and a decision may be made without a hearing.	
Step 5*	The AUC issues a notice of hearing, if it was not already issued in Step 3. <ul style="list-style-type: none"><li>Continued opportunity for consultation and negotiation with the applicant.</li></ul>
Step 6*	Public hearing.
Step 7	The AUC issues its decision. Below are the options the AUC may consider for: Needs applications from the Alberta Electric System Operator: <ul style="list-style-type: none"><li>Approval of application.</li><li>Return to the Alberta Electric System Operator with suggestions.</li><li>Denial of application.</li></ul> Facilities applications: <ul style="list-style-type: none"><li>Approval of application.</li><li>Approval of application with conditions.</li><li>Denial of application.</li></ul>
Step 8	Option to appeal decision or ask the AUC to review its decision.
Step 9	Approvals, construction and operation of facility, if approved.

## Having your say

Early discussions with the applicant about proposed utility developments will often result in greater influence on what is filed in the application for approval. Utility developments include natural gas pipelines, electric transmission lines and substations (including Alberta Electric System Operator needs identification documents), and power plants. Should you have concerns related to a proposed utility development, it is best to have early and ongoing discussions with the applicant.

If your objections cannot be resolved, or you have outstanding concerns upon the filing of an application with the AUC, you have an opportunity to submit an initial filing with your objections in writing to the AUC containing the following information:

- How you may be affected by the proposed project and the location of your land or residence in relation to it or any alternative proposed in the application.
- The potential effect the proposed project may have on your property or interest in the property .
- A description of the extent to which you may be affected, and how you may be affected in a different way or to a greater degree than other members of the general public.

Following this initial filing, you may be able to fully participate in the proceeding. This could include having legal representation and participation in a public hearing. It is important to note that any applied for routes and segments (preferred and alternate) could be chosen as the approved route in the AUC decision.

### Step 1: Public consultation prior to application\*

Prior to filing an application with the AUC for the approval of a proposed utility development, the applicant is required to conduct public consultation in the area of the proposed project, so that concerns may be raised, addressed and if possible, resolved.

The requirements for consultation and notification, namely the participant involvement requirements, are set out in Rule 007 for electric facilities and Rule 020 for gas utility pipelines.

Potentially affected parties are strongly encouraged to participate in the initial public consultation, as early involvement in discussions with an applicant may lead to greater influence on project planning and what is submitted to the AUC for approval.

### Step 2: Application to the AUC

When the participant involvement requirements have been completed, the proponent of the utility development files an application with the AUC. The application must indicate the issues which came up during the public consultation and any amendments considered or made to the project. Any unresolved objections or concerns which arose from the public consultation must be identified in the application.

\*Denotes opportunity for public involvement

### Step 3: Public notification

The Commission will issue a notice when it receives an application that, in the Commission's opinion, may directly and adversely affect the rights of one or more people. The notice is typically sent by mail to residents in the project area and may also be published in local newspapers. The notice will provide key dates, contacts and participation information for those interested in becoming involved in the application process.

### Step 4: Public filings to the AUC\*

If you have unresolved objections or concerns about the proposed project filed with the AUC for approval and wish to participate in an AUC proceeding, you must make an initial written filing. Your filing must include your contact information, concern or interest in the application, an explanation of your position and what you feel the AUC should decide. Please be aware that any information or materials filed with the AUC, except information granted confidentiality, is available to the public.

### Filing your concerns

The eFiling System is a web-based tool created to manage applications and filings made to the AUC through a proceeding-based review. This system gives access to all public documents associated with applications filed with the AUC and is the most efficient way to provide your input to the AUC and monitor the related proceeding filings.

Those who do not have access to the Internet can send filings, evidence and other material by mail or fax and the AUC will upload the submission on your behalf.

### Participant cost reimbursement

A person determined by the Commission to be a local intervener can apply for reimbursement of reasonable costs incurred while participating in an AUC proceeding. Details regarding recovery of participants' costs are described in Rule 009: *Rules on Local Intervener Costs*.

### Step 5: Consultation and negotiation\*

The Commission supports ongoing efforts to reach a positive outcome for the applicant and all affected parties. The Commission encourages the applicant and those who have made filings to continue to attempt to resolve any outstanding issues. If all concerns can be satisfactorily resolved this may eliminate the need for a formal hearing. However, if there continues to be unresolved issues, typically those matters will be addressed at an AUC public hearing.