



# FOOTHILLS AREA TRANSMISSION DEVELOPMENT SOUTH CALGARY PROJECT

Proposed 138kV Transmission Line



Photo courtesy of The City of Calgary

## Project Overview

The demand for power is increasing as Calgary continues to grow. The Alberta Electric System Operator (AESO) has determined the existing transmission system in south Calgary will become overloaded as the demand for power rises. The reliability of your power supply is reduced as transmission lines become overloaded and the likelihood of power outages increases.

The AESO has identified the need to add a new 138 kV transmission line between ENMAX No. 65 Substation (intersection of Highway 22X and 88 Street SE) and ENMAX No. 41 Substation (213 Shalom Way SW) via ENMAX No.54 Substation (3023 210 Avenue SE) in order to prevent transmission line overloads in the South Calgary area.

To meet this need, ENMAX Power Corporation (ENMAX Power) has identified two viable transmission routes – a preferred and an alternate. The total length of the proposed transmission line to be constructed is approximately 14 – 22 kilometres depending upon the approved route. New equipment will be added at ENMAX Substations No. 65 and No. 41 to accommodate the new transmission line (see attached map).

*Electricity consumption in the Calgary area is forecast to increase by approximately 26 per cent in the next decade. Source: Alberta Electric System Operator*

## Potential Route Locations

During the process of determining possible route options, ENMAX Power considers the following factors to select a route(s) with the lowest overall impact:

- agricultural
- residential
- environmental
- electrical
- cost
- visual
- special constraints

After assessing several transmission route options, ENMAX Power has selected two route options, a preferred and alternate as identified in the map on the next page.

The preferred route:

- Is approximately 14 km and is the shorter of the two routes
- Is the lower cost option
- Utilizes the existing Transportation Utility Corridor (TUC)

The alternate route

- Has fewer residences at this point, however is zoned for future development
- Is the longer of the two routes at 22 kilometres
- Is the more expensive option

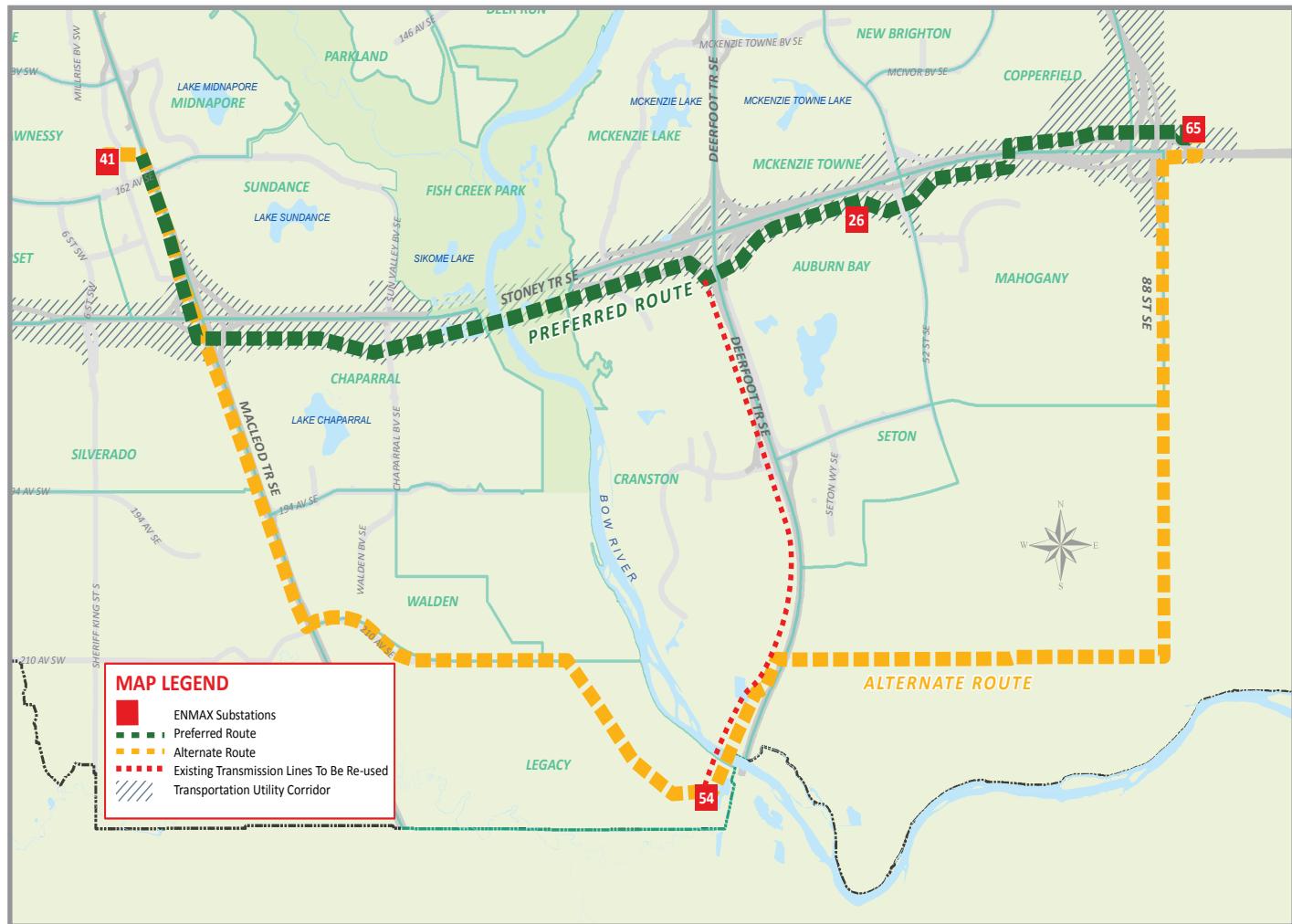
Only one route will be required for the project, however, both route options will be included in the Facilities Application (FA) submitted for decision to the Alberta Utilities Commission (AUC).



### What is a Transportation Utility Corridor?

In the mid-1970s, the Government of Alberta established Restricted Development Areas (RDAs) around Calgary. The lands included in these RDAs were designated to accommodate linear transportation and utility facilities. These uses include ring roads (and associated interchanges), stormwater management facilities, petroleum pipelines, power transmission lines and municipal regional water, sanitary and storm sewer lines.

## Rendering – map of route options



### Preferred Route - green

The Preferred Route runs from ENMAX Substation No. 65 west along Highway 22X to MacLeod Trail in the TUC and then north on MacLeod Trail to ENMAX Substation No. 41. The existing double circuit transmission line along Deerfoot Trail from 22X to ENMAX Substation No. 54 will be used to connect this new line to ENMAX Substation No. 54.

The Preferred Route is the least costly of the two routes. In addition, the route passes through the TUC specifically allocated by the provincial government for utility facilities such as power transmission lines.

### Alternate Route - yellow

The Alternate Route proceeds south on 88 Street from ENMAX Substation No. 65 to 210 Ave; west on 210 Ave, via ENMAX Substation No. 54 to MacLeod Trail and then north to ENMAX Substation No. 41.

The Alternate Route currently impacts a lower number of residences; however, it is adjacent to several undeveloped areas which are zoned for future residential development and have conceptual plans in place for new and emerging communities.

# Transmission Structures

The proposed single circuit transmission structures for both the preferred and alternate routes would be self-supporting steel monopoles and will have a:

- Height of 18 to 24 metres ( 58 to 78 feet)
- Distance between structures of 100 to 125 metres (325 to 410 feet)



*Examples of single circuit steel monopoles*

## *Transmission line*

*To move our electricity from power generating facilities to local areas, ENMAX Power relies on a system of high-voltage power lines across Alberta, including our own 288 kilometre transmission network within the City of Calgary. These transmission lines enter a substation where a transformer reduces voltage to a level that can be safely delivered to customers.*



## Electric and Magnetic Fields (EMF)

ENMAX Power understands some individuals may have concerns regarding electric and magnetic fields (EMF). Scientific evidence to date has not established adverse health effects resulting from exposure to power frequency EMF at levels normally encountered in homes, schools and offices. However, we continue to monitor this issue through our work with the Canadian Electrical Association's task group, and recognize no single study will resolve this issue. Information and in-home measurements are available to our customers so they can make their own informed decisions regarding this issue.

Electric and magnetic fields are invisible lines of force surrounding any wire or device that uses electricity. They are created whenever electricity flows through a wire (eg. overhead power lines, electric appliances, or electrical cords or wiring) because these fields are found wherever there is electricity.

For further information, please visit

[https://www.enmax.com/Safety/electrical-safety/electric-and-magnetic-fields-\(emf\)](https://www.enmax.com/Safety/electrical-safety/electric-and-magnetic-fields-(emf))

### *Safety and Reliability*

*Calgarians rely on us every day to provide them with safe and reliable power. As our city grows, so do our needs for electricity. At ENMAX Power, we are committed to providing long-term, innovative solutions to meet the growing demands of our city.*

### What is a Substation?

Substations are important components of the electrical infrastructure required to keep reliable electricity available for customers. Substations consist of high voltage electrical equipment like transformers, switchgear, circuit breakers and associated devices.



## Industry Partners and the Regulatory Process

The AUC must approve this project before upgrades to the system can begin. The AUC is a quasi-judicial agency that ensures the fair and responsible delivery of utility services.

Before any work takes place, the AESO identifies a transmission system requirement and determines the manner in which that need can be met. The AESO is then required to submit a Needs Identification Document (NID) outlining their recommendation to the AUC for review and approval.

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 newsletter 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 your concerns known to an ENMAX Power representative who will communicate them to the AESO on your behalf.

In Alberta, the system that delivers electricity to consumers is owned, built and maintained by companies known as Transmission Facility Owners (TFOs). Based on system requirements, the AESO will direct a TFO to determine routing and infrastructure. In this instance, ENMAX Power is the TFO as the proposed project occurs in ENMAX Power's service territory and will explore various alternatives to locate the transmission lines, considering routing, environment, costs, stakeholder input and project components.

ENMAX Power submits an FA to the AUC for review and approval describing how it proposes to meet the requirements for the transmission project. The application includes technical details, routing and results of the participant involvement program. The NID created by the AESO and the application created by ENMAX Power will be submitted for AUC review simultaneously.

The AUC then reviews both the NID application from the AESO and the FA from ENMAX Power. The AUC ensures there is an opportunity for interested parties to provide feedback and input on the applications before a decision is made. Additional information on participant involvement is included in the AUC booklet as part of the information package.



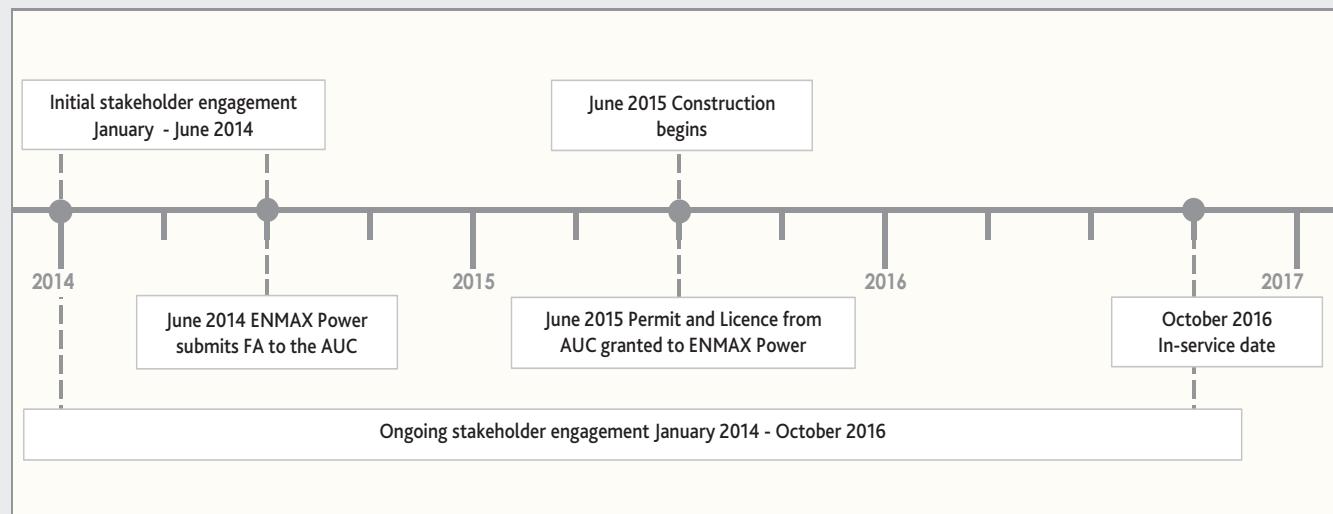
## Privacy Commitment

ENMAX Power is committed to protecting your privacy. Your personal information that is collected will be protected under ENMAX's Privacy Policy and Freedom of Information and Protection of Privacy Act. As part of the regulatory process for new transmission projects, ENMAX Power may provide your personal information to the Alberta Utilities Commission. If there is more than one TFO involved For more information about how ENMAX Power protects your personal information, visit our website at <https://www.enmax.com/Legal/privacy> or contact us directly via email at [privacy@enmax.com](mailto:privacy@enmax.com).

## Proposed Schedule

ENMAX Power plans to file the FA with the AUC in late June 2014. Subject to approvals being granted, ENMAX Power expects construction to begin in June 2015 with a proposed in-service date of October 2016.

## Proposed Project Schedule



## Open Houses

ENMAX Power and AESO representatives will be available at open houses to share information, gather your input and address any questions or concerns you may have. We hope to see you there.

Date	Location	Morning	Evening
April 1, 2014	Heritage Pointe Golf Course #1 Heritage Pointe Drive, DeWinton	11:00 am - 2:00 pm	4:00 pm - 7:00 pm
April 2, 2014	Century Hall Heritage Room, 11 Cranarch Road SE, Calgary	11:00 am - 2:00 pm	4:00 pm - 7:00 pm
April 3, 2014	South Fish Creek Recreation Centre Super 8 Room, #100, 333 Shawville Blvd. SE	11:00 am - 2:00 pm	4:00 pm - 7:00 pm
April 8, 2014	South Fish Creek Recreation Centre Super 8 Room, #100, 333 Shawville Blvd. SE	11:00 am - 2:00 pm	4:00 pm - 7:00 pm
April 9, 2014	Century Hall Heritage Room, 11 Cranarch Road SE, Calgary	11:00 am - 2:00 pm	4:00 pm - 7:00 pm



## About ENMAX Power

ENMAX Power Corporation, a subsidiary of ENMAX Corporation, and its predecessors have provided Albertans with safe and reliable electricity for more than 100 years. One of the most reliable urban utilities in Canada, ENMAX Power owns, operates and maintains the distribution and much of the transmission network in and around Calgary, which are activities regulated by the Alberta Utilities Commission. Non-regulated subsidiaries of ENMAX Power provide engineering, procurement, and construction services as well as maintenance for electrical servicing of residential and commercial developments and light rail transit systems. Visit our website at [enmax.com](http://enmax.com)

*For more than 100 years, ENMAX has delivered safe and reliable electricity in Calgary. Moving electricity from the point where it is generated to our customers' homes and businesses is split into two areas: transmission and distribution.*

## Commitment to Community

ENMAX Power is committed to being a responsible corporate neighbour in the community. This commitment includes providing timely and meaningful engagement with stakeholders about this project.

We have developed a comprehensive public involvement program to provide opportunities for area residents, occupants and landowners to be informed about this proposal and to engage with ENMAX Power in dialogue from the planning phase through to construction.

## More Information

Your input is very valuable to us. We will work with you to ensure you get answers to your questions and your concerns are understood. For more information about the proposed transmission line, please contact:

### ENMAX Power Corporation

Phone: (403) 514-1471

E-mail: [stakeholderrelations@enmax.com](mailto:stakeholderrelations@enmax.com)

Website: [enmax.com/transmissionprojects](http://enmax.com/transmissionprojects)

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

### Alberta Electric System Operator (AESO)

Phone: 1-888-866-2959

E-mail: [stakeholder.relations@aeso.ca](mailto:stakeholder.relations@aeso.ca)

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

For more information about the regulatory process, please contact:

### Alberta Utilities Commission (AUC)

Phone: (780) 427-4903

(Toll free: dial 310-0000 before the 10 digit number)

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