



## Transmission Reinforcement in South Calgary South Calgary 69 kV Upgrade

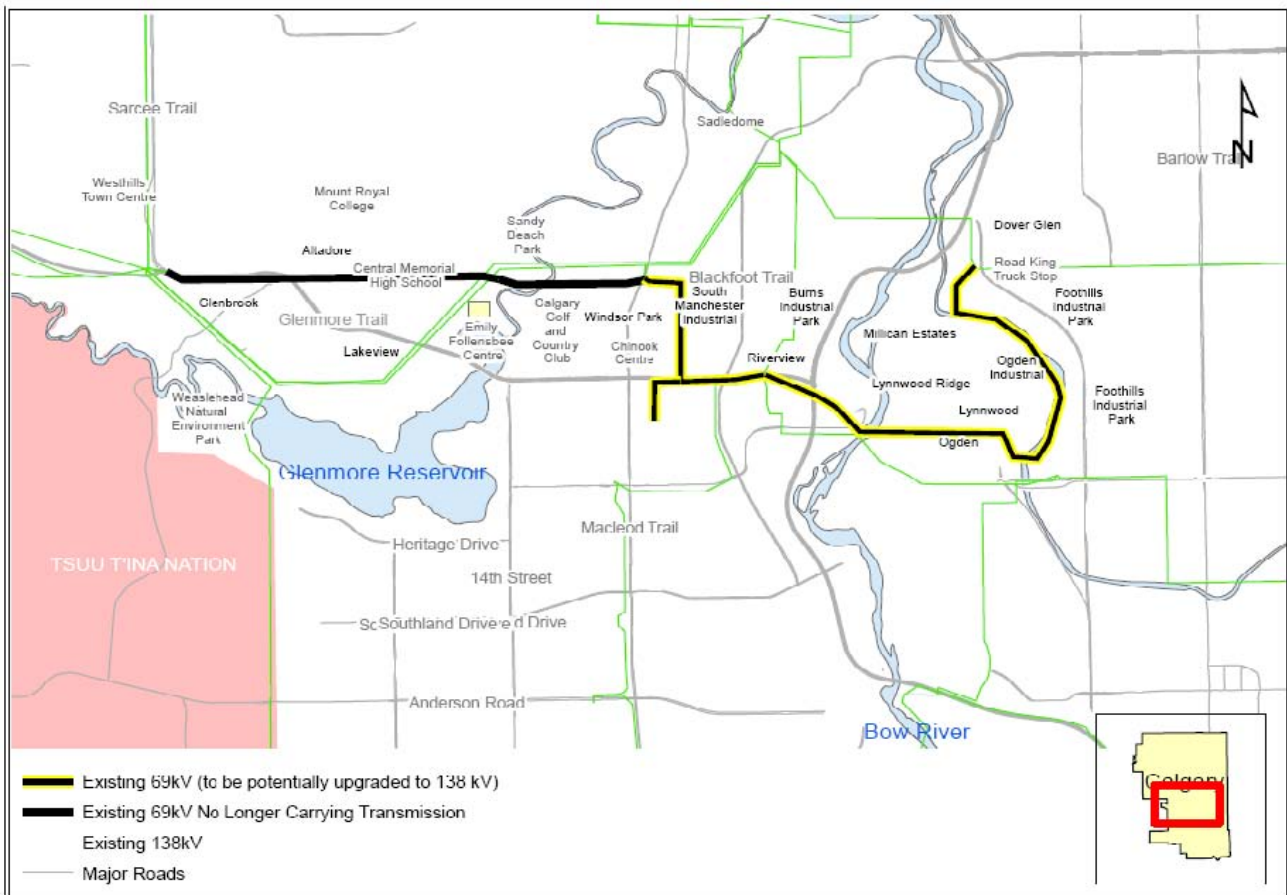
For more information please contact the AESO at 1-888-866-2959, [www.aeso.ca](http://www.aeso.ca) or [stakeholder.relations@aeso.ca](mailto:stakeholder.relations@aeso.ca)

### Who is the AESO?

Alberta's transmission system, sometimes referred to as the Alberta Interconnected Electric System (AIES), is planned and operated by the Alberta Electric System Operator (AESO). The transmission system is comprised of the high-voltage lines, towers and equipment (generally 69 kV and above) 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.

### Why is Transmission system reinforcement needed for the South Calgary area?

The AESO has identified the need for reinforcement of a section of the transmission system running through south Calgary between Sarcee Trail, in the southwest, and Ogden Road, in the southeast. The map below shows the location of this potential reinforcement. This section of the transmission system currently has a transmission capacity of 69 kV. This section of the transmission system needs to be improved; aging equipment, increasing demand for power in the areas served by this section of the transmission system in the Calgary area and a need for restoring operational flexibility are the main drivers for this need.



*The map above shows the area of possible transmission development in south Calgary. Please see text below for a detailed description of work proposed.*



### **What kind of electric transmission reinforcement is needed?**

Technical studies conducted by AESO planners indicate that the optimal way of meeting increased demand for electricity and improving operational flexibility in the Calgary area is to divert power flow from a portion of the existing 69 kV route and to upgrade the remaining portion of this section to 138 kV. The AESO and Transmission Facility Owner ENMAX are currently conducting a joint consultation program to study the social impacts of this proposed solution.

The proposed solution calls for power to be diverted away from the section of line between ENMAX No. 28 Substation (4941 - 50 Street SW, near the intersection of Glenmore and Sarcee) and ENMAX No. 10 Substation, (5119 - 14 Street SW, near Altadore Park). This section is shown in thick black line on the map above. The section between ENMAX No. 10 Substation and ENMAX No. 23 Substation (2412 - 50 Avenue SE, north of 50 Avenue between Barlow Trail and Ogden), shown highlighted yellow on the map, would be upgraded to 138 kV.

The section of existing 69 kV transmission route, between ENMAX No. 28 Substation and ENMAX No. 10 Substation (through Glamorgan and Altadore) will no longer be used. Instead power will be diverted along the existing 138 kV steel tower route (just south of the existing 69 kV route and north of the Glenmore Reservoir). Although poles along this section will no longer carry transmission lines, they may continue to carry distribution lines. The transmission lines and related equipment from this section will be salvaged for use elsewhere in the system.

The solution proposed by the AESO will create operational flexibility; that is, the proposed solution provides system controllers, who operate the transmission system, with better options when faced with circumstances that affect power flow such as unplanned outages and fluctuations in demand. Specifically, the solution provides increased capacity (it will allow system controllers to move more electricity through this section of the system) and redundancy (it creates a back up in case an outage occurs).

At over 40 years old, the equipment along this section should be replaced; it has come to the end of its useful life. Our studies, however, show that the cost of replacing the equipment amounted to nearly the same cost of the work proposed (i.e., diverting power and upgrading the lines to 138 kV). The proposed solution also adds operational flexibility. We must, however, present this alternative to residents and businesses along the route before applying to the Alberta Utilities Commission (AUC).

### **When will the AESO file its application to the Alberta Utilities Commission?**

We intend to submit a Needs Identification Document in March, 2009, with the Alberta Utilities Commission (AUC). This document will include more detailed information about the need for this reinforcement and provide greater detail about our proposed solution. Transmission Facility Owners ENMAX and AltaLink are currently developing detailed Facilities Applications and intend to submit their applications at the same time. These applications will include recommendations for specific siting and routing based on public consultation activities carried out jointly with the AESO.

The target in-service dates for various phases of this reinforcement are anticipated between 2009 and 2011.

*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 eligible Transmission Facility Owner(s). 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 1-888-866-2959 or at [stakeholder.relations@aeso.ca](mailto:stakeholder.relations@aeso.ca).*