



May 1, 2007

**Re: Heartland Transmission Development Presentation for Industry, March 23, 2007**

Dear Stakeholders

On March 23, 2007 the AESO held an Information Session to explain our outlook for major transmission reinforcement into the Fort Saskatchewan area to meet an expected significant increase in electricity demand.

Just over 40 stakeholders were able to attend; thank you. The feedback we received from the session has been very positive. For the most part attendees have told us the information was useful and clear.

We are committed to keeping you informed. On the following pages we have assembled a list of the questions asked at the session and have provided brief responses to each.

If you have any further questions or would like to make comments, we now have a toll-free telephone line dedicated to the project at 1.888.866.2959 or you can send an email to [stakeholder.relations@aeso.ca](mailto:stakeholder.relations@aeso.ca). You can also visit our web site for more information, [www.aeso.ca](http://www.aeso.ca).

Sincerely,

Neil Millar  
Vice President Transmission  
AESO

## **Questions, Comments and Responses**

### ***1) There are other Upgraders with aggressive timetables that have not yet been publicly announced; do your growth forecasts include these?***

The AESO has already received requests for interconnection from many new customers in the Fort Saskatchewan as well as Fort McMurray areas. The AESO had additional discussions with stakeholders that hold an interest in these regions to ensure their projects were included in the load forecast over the next ten years.

### ***2) I need more specific information about where these transmission lines may go.***

The AESO is currently in very preliminary stages in studying transmission reinforcement into the Heartland area. We are continuing to develop our need assessment as well as a high-level technical analysis of the alternatives to be considered in the next stage of the planning process. More specific information about where the transmission lines may be located, as well as the type of reinforcement will become a part of the next stage of the planning process. We will be presenting several high-level alternatives for stakeholder input at open houses scheduled for June 2007. The AESO will file a Need Identification Document (NID) with the Alberta Energy and Utilities Board which will include a recommendation for transmission reinforcement into the Heartland area for approval. Detailed routing is assessed at the next stage.

The Transmission Facility Owner (TFO) is responsible for detailed engineering and specific siting of the proposed development. The TFO(s) will also conduct a consultation process to develop a specific route for the transmission development and will ultimately file a Facilities Application, which will include a specific route proposal, for approval with the Alberta Energy and Utilities Board.

### ***3) You will have a major challenge to get this done right the first time; there are environmental consequences to be considered.***

Absolutely. Environmental considerations are one of the key factors in determining how best to proceed. We take into account not only environmental aspects but also effects on landowners, technical attributes and cost in our considerations of what kind of transmission capacity reinforcement is needed and where lines would appropriately be sited.

### ***4) I would like to know the specifics as they related to local communities in the Heartland area. Should Redwater, for example, be prepared to offer assistance to your plants? Are there implications socially or politically for our community?***

The AESO is an independent, not-for-profit organization responsible for planning the transmission grid for Alberta. Our role does not include planning or constructing plants, it is to provide them with the transmission access they request. However, the AESO expects the industrial developers have been or will be communicating with local municipal authorities in the Heartland area to discuss both the impacts and the benefits of these developments.

### ***5) How does a potential new transmission line in the Fort Saskatchewan area affect a potential Montana-Alberta tie line?***

As the Heartland area and the proposed area for the Montana-Alberta tie-line (MATL) are a large distance from each other, we do not anticipate a large direct effect of one development on the other. With that being said, the Alberta Interconnected Electric System forms an interconnected transmission grid throughout and across the province and is connected with other jurisdictions.

**6) Will the Montana-Alberta tie-line help with reliability of the transmission system?**

The Montana-Alberta Tie-Line (MATL) is a merchant transmission facility. A merchant transmission line is a non-utility transmission line that is constructed and operated by a third party. The third party sells transmission service on a wholesale basis to other companies. The line is an opportunity service and therefore the developer of a merchant transmission line is not guaranteed a return on its investment and must compete in a free economic market to sell the transmission service. In general, interconnections assist the reliability of the Alberta Interconnected Electric System, but the AESO is not relying specifically on the MATL project to support any aspect of the Alberta system.

**7) Does the load forecast you've made for Fort Saskatchewan already take into account "behind the fence" generation?**

Yes. "Behind-the-fence" generation, or generation that is being built, operated and maintained by the customer for its own use, is taken into account in the load forecast.

**8) So are you working with companies that generate electricity and encouraging them to build near load?**

When the industry restructured in Alberta, generation development was deregulated. As such, market forces determine how much and where generation will develop and these decisions lie solely with potential developers of generation.

The AESO is an independent, not-for-profit organization responsible for planning the transmission grid for Alberta. Our role does not include planning or constructing plants, it is to provide them with the electricity requirements they request. However, the AESO expects the industrial developers have been or will be communicating with local municipal authorities in the Heartland area to discuss both the impacts and the benefits of these developments.

**9) How is the AESO working with Upgraders for development of co-generation facilities?**

Co-generation, or generation that simultaneously produces both electricity and another form of useful thermal energy (such as heat or steam), used for industrial, commercial, heating, or cooling purposes, is a potential option for developers. The AESO works with customers to understand the nature of their load and behind-the-fence generation and how that relates to the transmission service they request. However, as referred to in the preceding answer, the AESO does not mandate or approve generation development.

**10) How can electricity generators be encouraged to build plants near load areas like Fort Saskatchewan?**

As previously mentioned, market forces determine how much and where generation will develop. One of the items a generation developer might consider is the loss factor associated with addition of load and for generation at a particular location. For a full description of loss factors please visit our website at [www.aeso.ca](http://www.aeso.ca) and follow the path Transmission > Loss Factors. Also, generator system contribution charges vary by location, with a higher charge in areas that are generation-surplus, and lower charges that are generation-deficient.

**11) Are you proactive or reactive in understanding what electricity generating companies are planning and where?**

The AESO is proactive in remaining aware of new emerging generation technologies and trends and communicates with generation developers and customers throughout the planning process. However, the competitive nature of the generation industry does not require all or any information to be disclosed to the AESO. As such, the AESO must be flexible in its planning

process as well, to ensure the most up-to-date information is being included in planning the transmission system.

***12) What is the expected cost for all of this new transmission by 2016 for the ratepayer? Will your Needs Identification Document application include a projected cost to the ratepayer?***

A very high-level preliminary estimate of the cost of new transmission development would be in the range of \$100 to \$200 million. This equates to approximately \$0.10 to \$0.20 per month for the average residential consumer. The cost of transmission development is allocated across all customers in the province, including Industrial, Commercial, Residential and Farm customers.

***13) What would the AESO do if a 1,200 MW Nuclear Plant was proposed and approved in Fort McMurray?***

The AESO would address the addition of both new load and new generation, including a 1,200 MW Nuclear Plant in Fort McMurray, in the planning process and adjust or amend plans for transmission reinforcement accordingly.

***14) What is the AESO's role in the wholesale market?***

The AESO facilitates Alberta's hourly wholesale electricity market, which has approximately 200 participants and about \$7 billion in annual energy transactions, and is accountable for the administration and regulation of the load settlement function. At the heart of Alberta's wholesale real-time electricity market is the System Coordination Centre (SCC), which is staffed 24 hours a day, seven days a week by a team of system controllers. The SCC features advanced technology that provides the infrastructure for real-time electric system operations. The Energy Management System enables system controllers to dispatch electricity to meet demand and monitor the status of the provincial electric system.

***15) How does the AESO participate in the market?***

The AESO does not participate in the wholesale electricity market, other than to purchase transmission system line losses at the prevailing pool price. The AESO also procures a portfolio of operating reserves for the Alberta Interconnected Electric System (AIES) that are consistent with Western Electric Coordinating Council (WECC) standards through market-like structures. The portfolio is made up of three classes (Active, Standby and Backstop). All reserves are procured daily in a competitive market via the Alberta Watt Exchange Limited (Watt-Ex) and an over the counter (OTC) market.

***16) You have indicated you hope to complete sufficient consultation to file a Needs Identification Document application by summer of this year. Considering this is a municipal election year how might that affect your plans?***

Timely transmission reinforcement into the area is being driven by the need to supply new load customers in the Heartland area. The AESO believes it has developed a prudent approach to provide transmission service, including consultation, in a timely manner, and will be working diligently to meet those dates.

***17) How can the Transmission Facility Owners file a "Facilities Application," before you have approval for your Needs Identification Document application?***

In general, the Transmission Facility Owner (TFO) will not file a facilities application until the Need Identification Document is approved by the Alberta Energy and Utilities Board. However, in this case, the TFO's will begin their studies on detailed siting and engineering of the recommended development in the need application, prior to need approval. Recent changes in regulations overseeing these aspects may be relied upon to file facility applications at the same

time as need applications; the AESO will review this option if it provides an overall more efficient process that is also more effective for stakeholders.

**18) You've indicated that if a new line isn't built it will affect transmission reliability standards. Does that mean Industrial customers will be forced to curtail load?**

Yes, there is such a possibility. If transmission reinforcement is not built to supply the proposed developments, one of the mitigative measures is to curtail load in order to maintain reliable system operation at all times and under all conditions. However, the AESO develops numerous mitigative measures, as part of reliability standards, such as utilizing any operational measures available in the event of a contingency in the area to avoid service interruptions.

**19) Are you currently concerned about reliability standards in the Fort Saskatchewan area?**

Yes, the AESO is concerned about reliability standards in the Heartland area. To accommodate the short-term need for transmission reinforcement, the AESO currently has several short-term measures being advanced. Some examples of these are the addition of more capacitor banks on the existing system in the area, as well as separating the 240 kV line 946/947L in the area. The major transmission reinforcement into the Heartland area, being discussed here, is required for the long-term need identified and is anticipated to be in-service in 2010.

**20) Can you provide information about Open Houses and locations?**

Four Open Houses were held in the Edmonton area in the first week of April.

- April 2 in Stony Plain
- April 3 in St Albert
- April 4 in Edmonton
- April 5 in Fort Saskatchewan

The Open Houses were advertised in major Edmonton daily newspapers as well as weekly community newspapers.

Another round of Open Houses was planned in the Edmonton area May 7 – 10 however, due to feedback received in through public consultation; the AESO has postponed the next round of open houses to be held in June.

**21) Are generators projected to keep building after 2016?**

Yes, the AESO anticipates both generation and load to continue to increase after 2016. The AESO is responsible for long-term planning of the transmission system and as such, prepares a 20-Year Outlook, updated every 4 years, and a 10-Year Transmission System Plan, updated every 2 years. While generation development after 2016 is uncertain, scenarios depicting potential additions of generation and load are developed for the purpose of creating a “roadmap” for transmission system upgrades.

**22) Does the AESO consider environmental concerns with generation?**

The AESO does not mandate or approve generation development in Alberta. The Alberta Energy and Utilities Board approves generation development and environmental concerns with generation are addressed by the proposed generation developer during the course of their environmental permitting process.

**23) What's the trade-off for Underground lines versus Overhead lines?**

The AESO will be studying both overhead and underground lines to satisfy the requirements into the Heartland area. Generally, overhead lines have higher visual impacts but are easier to

maintain and are less expensive than underground lines. Underground lines tend to be more expensive, and in the case of 500 kV developments, present technical and operational challenges that are difficult and expensive to mitigate when the length of underground is longer than about 16 kilometres. The AESO will also be exploring new underground technologies, such as HVDC Light, to develop transmission reinforcement alternatives in the Heartland area.

***24) Will this project require new substations?***

Yes. The AESO believes there is a need for a new substation in the Heartland area. In addition, new substations will be required for individual upgrader interconnections to the Alberta Interconnected Electric System. (AIES)

***25) If the developers of the Heartland Upgraders delay their projects can you delay your transmission development?***

Yes. The AESO is committed to adjusting the timing of transmission reinforcement in its Need Identification Document (NID) based on the most up-to-date information we have been provided.