

Highlights of the Draft 2011 Long-term Transmission Plan

The AESO's draft *2011 Long-term Transmission Plan* (2011 LTP or the Plan) provides a blueprint for the development of Alberta's electrical system — one that can accommodate the province's growth for the next 40 years. It details the transmission facilities needed to meet forecasted growth, ensure continued reliability, facilitate the fair, efficient and openly competitive operation of the market, and support long-term economic and social development in Alberta.

2011 LTP Highlights

- The draft 2011 LTP reconfirms the need for four Critical Transmission Infrastructure (CTI) projects previously identified and approved under the Government of Alberta's *Electric Utilities Act* as well as the major regional transmission projects identified in the 2009 LTP. These projects have been reviewed and reflect updated cost estimates and changes to in-service dates where appropriate. Changes to in-service dates are consistent with the updated forecasts of demand growth.
- No new CTI projects are being proposed within the draft 2011 LTP.
- The draft 2011 LTP has identified several smaller additional regional projects required to facilitate timely execution of connection requests from customers while meeting the Alberta Reliability Standards that became effective in 2010.
- The draft 2011 LTP is dynamic, comprehensive and flexible, reflecting the complexities of project development as well as the variability of industries and business cycles.
- The draft 2011 LTP presents an integrated, comprehensive and strategic upgrade of the transmission system that meets statutory requirements, aligns with government policy respecting electricity, meets load growth, and facilitates development of Alberta's abundant natural resources.
- The magnitude of the planned transmission build detailed in the draft 2011 LTP reflects current and future needs, while also recognizing that minimal bulk system transmission infrastructure has been built in Alberta since the early 1980s.
- The AESO's forecasts show demand will increase by more than three per cent a year until 2029 — the equivalent of adding two cities the size of Red Deer to the power system each year. Demand for electricity will nearly double in the next 20 years, with 13,000 megawatts (MW) of new generation needed.
- The draft 2011 LTP provides efficient, reliable, cost effective solutions to Alberta's electric transmission system and facilitates non-discriminatory system access service to customers by timely implementation of transmission system enhancements.
- The draft 2011 LTP has been prepared considering inputs from various sources including consumers, market participants, public information sessions and third party experts.
- The AESO is reinforcing its commitment to transparency by introducing a supplement that will be updated every six months to track and publish project updates, plus any material changes to the forecast, including refined project cost estimates.

2011 LTP Cost impact

- As part of the planning requirement for the projects identified in the draft 2011 LTP, the AESO prepares estimates of the capital costs and timing of the transmission facilities expected to be required.
- The total estimated cost for the projects identified in the draft 2011 LTP required to 2020 is \$13.5 billion (in 2011 dollars). This is slightly less than the estimated cost of the 2009 Plan (\$14.5 billion in 2008 dollars).
- The draft 2011 LTP includes more than 50 regional projects and supports more than 200 customer connection requests which account for approximately 60 per cent of the total estimated cost (\$8.3 billion) and four CTI projects designated in legislation which account for approximately 40 per cent of the total estimated cost (\$5.2 billion).
- Nearly 55 per cent of the projects are in development stages, with \$3 billion at the needs identification stage and approximately \$5.2 billion at the facilities application stage. The remaining projects (45 per cent) are in the planning stage representing approximately \$ 5.3 billion.
- The new transmission projects identified in the draft 2011 LTP will reduce operating and maintenance costs associated with older transmission facilities which are being replaced and, in some cases, removed. The additional capacity resulting from the new projects will allow flexibility in operation and permit optimal management of the transmission system.
- The projects will improve the efficiency of the transmission system and reduce the amount of energy lost in the form of heat. The transmission projects will also reduce costs resulting from transmission system congestion which can prevent the operation of low-cost generation.
- The total cost of all the transmission projects in the draft Plan will be recovered over the life of the transmission facilities, which is typically more than 40 years.
- Not all projects are built at the same time, and the cost impact of the projects in the draft Plan will occur gradually as the projects are placed in service over the years from now until 2020.
- For every \$1 billion spent on transmission, the cost to the average residential consumer is about one dollar per month. Transmission charges account for approximately 10 to 20 per cent of the total residential bill for electricity.
- Estimated project costs are refined as projects move forward and technical scoping, engineering studies, stakeholder consultation and additional in-depth analysis are completed.
- Transmission planning is an ongoing process. Changes in economics, government policy, project timelines and customer connection requests are continuously monitored to assess their impact on forecasting.
- By staging projects and adjusting in-service dates accordingly, the AESO ensures it only builds to the capacity needed.
- The allocation of costs of transmission is in direct correlation to the use of the transmission system. The highest users pay the highest costs for building new transmission. Transmission costs in Alberta are split in the following ways:
 Industrial: 61% Commercial: 19% Residential: 16% Farms: 4%
- It is challenging to estimate the impact of the transmission projects, given potential changes to project cost estimates and timing. To make this process easier for interested parties, the AESO is developing a rate impact model for the *2011 Long-term Transmission Plan* which will be provided in working Microsoft Excel format on our website, at www.aeso.ca.