

Who is the AESO?

As an independent system operator, the Alberta Electric System Operator (AESO) leads the safe, reliable and economic planning and operation of Alberta's interconnected power system. The AESO also facilitates Alberta's fair, efficient and openly competitive wholesale electricity market.

The AESO is a not-for-profit organization, acting in the public interest of 3.5 million Albertans with a workforce of approximately 380 employees. The AESO owns no assets and has no affiliation with or financial investment of any kind in the electricity industry.

The AESO has an independent board that provides governance and direction to its operations and regulatory oversight is provided by the Alberta Utilities Commission.

The AESO operates the grid to North American Electric Reliability Council and Western Electricity Coordinating Council (WECC) reliability standards. As a WECC member, the AESO is part of an organization whose members represent the electric power systems involved in bulk power generation and transmission serving the 14 western United States, British Columbia and Alberta. The AESO is also a member of the ISO/RTO Council, an advocacy organization representing the interests of the 10 independent system operators in Canada and the U.S.

Operations – The AESO directs the coordinated operation of Alberta's power grid on a 24/7 basis, dispatching energy to keep electricity supply and demand in balance at all times and directing restoration activities in the event of a major system disturbance.

Markets - The AESO develops and operates Alberta's energy only, wholesale electricity market and facilitates approximately \$8 billion (2011) of energy transactions annually, involving about 160 market participants. A market participant is any entity that supplies, generates, transmits, distributes, trades, exchanges, purchases or sells electricity, electric energy, electricity services or ancillary services.

Transmission - The AESO plans and develops the provincial transmission system, including our interties with neighboring jurisdictions British Columbia and Saskatchewan. The AESO strives to ensure the system is reinforced and expanded to ensure continued reliability and to keep pace with Alberta's growing demand for power. System reliability in turn facilitates the competitive energy only market and encourages investment in new generation supply. The AESO provides system access, interconnecting all types of generation (coal, gas, wind, biomass, solar) and load to the grid.

AESO Key Facts:

- Average load factor of 82 per cent of system peak
- Total system demand in 2011 was 73,600 GWh
- Approximately 26,000 km of transmission lines and 530 substations
- Single control area of 660,000 km²
- 13,939 MW of total installed capacity (available electricity) comprised of:
 - 6263 MW coal
 - 5538 MW gas
 - 879 MW hydro
 - 861 MW wind generation and,
 - 398 MW of "other" which includes biomass and solar power

- All time system peak (highest level of electricity consumption recorded) of 10,609 MW set January 16, 2012
- Demand for power in Alberta increased 84 per cent over the past 20 years with the peak demand growth forecasted to average 3.2 per cent per year for the period 2011-2030
- The AESO's forecasts suggest over the next 20 years 11,000 MW of new generation is needed to ensure we have enough power to meet the needs of Albertans
- Over 4,300 MW of existing generation is expected to retire within the next 20 years
- Alberta is a net importer of electricity importing 3,591 GWh and exporting 119 GWh in 2011
- Alberta's pool price has a ceiling of \$999.99/MW and a floor of \$0/MW
- The average pool price for 2011 was \$76.22/MWh