

Article 3

Headline: Powering our lives: *connecting to other power markets*

Alberta was an electricity island until the early 1950's. Before that time our provincial power system was separate from the rest of North America, which meant power generators in the province needed to produce all the electricity Albertans used. It also meant that if there was an unexpected equipment failure, or a major power outage from a severe storm, we couldn't ask our neighbours for some help to keep the lights on.

But that's all changed. Today, Alberta has two transmission interconnections, called interties; one with B.C. and the other with Saskatchewan. These connections go further than our two neighbouring provinces. The entire North American transmission system is interconnected and Alberta is a part of that system; so are most other Canadian provinces.

Thanks to our intertie with B.C., we are connected to the transmission system through the Pacific Northwest to the northern portion of Baja California, Mexico, and all or portions of the 14 western states in between. This intertie, a 500-kilovolt (kV) transmission line built in the early 1980s, runs from a substation near Langdon, east of Calgary, through southern Alberta to connect with B.C.'s transmission system east of Cranbrook, B.C. This intertie was designed to allow up to 1,000 megawatts (MW) to be exported and 1,200 MW to be imported into Alberta.

There are many benefits to being connected to other power systems. For example we can help each other out in emergency situations - immediately. Electricity can't be stored effectively so when a light switch is turned on the power must be there in the same instant. An absence of intertie capacity could impact reliability because Alberta would not be able to access imported power if a generating unit or a transmission line in Alberta suffered an outage.

Interties are beneficial for a competitive market because they allow power to be imported when the electricity can be purchased at a lower price from another jurisdiction, or when our existing system does not have enough electricity to meet demand. Such purchases reduce the volatility of prices when in-province power is scarce.

If there is not enough access to other markets and generators are unable to sell their surplus power we end up with a less attractive market for generation investors. Less generation investment increases the chance of future power scarcity in Alberta.

Interties are important to Alberta because they offer competitive supplies from out-of-province, improved reliability, reduced price volatility and support in emergencies.

Today we are unable to take full advantage of all the benefits of our existing interties because there have been no major reinforcements to Alberta's backbone transmission system in the past 20 years. Our interties are operating well below their design capability because the backbone of our transmission system is running near full capacity and it can't move any more power to the interties. The AESO is currently working with industry

on a number of initiatives to increase the capability on the already strained provincial electric system while at the same time ensuring that Albertans can depend on the power to be there when they need it today and in the future.

The AESO is a not-for-profit organization that doesn't own or operate any power facilities and has no commercial interest in the industry. The AESO is driven by a public interest mandate to make sure that the system for keeping the lights on serves the needs of Albertans today and in the future.