

Article 2

Headline: Powering our lives: *generation and transmission*

Alberta's power sources

Coal: 5,893 megawatts

Gas: 4,635 megawatts

Hydro: 869 megawatts

Wind: 497 megawatts

Other renewables: 178 megawatts

(E.g. biomass, solar, run-of-river hydro)

In Alberta, we have several different types of power generators. The majority of Alberta's electricity comes from plants that use either coal or natural gas to generate power. In 2007, plants that used coal to generate electricity provided 74 per cent of the power required for the province.

In our province we also have hydroelectric power generation which can be started quickly and so it's often used when another plant has shut down suddenly because of equipment failure, or when we have a cold snap in the winter and the demand for power spikes.

We also have an abundance of new wind power projects being proposed in southern Alberta. In all of Canada, Alberta has the greatest amount of wind power connected to its system and it's growing fast.

You also may have heard of something called bio-energy. These projects use livestock manure, or waste from food or wood processing facilities to generate methane gas, electricity or thermal energy.

Yet another power generation option, micro-generation, is available thanks to advancements in small generation technologies such as solar panels, small-scale hydro and wind power. These options are providing new alternatives for consumers to generate their own electricity.

Generating electricity is step one. Now for step two: 'How can I be sure that when I turn on a light switch the power will be there?' That's where transmission comes in.

The transmission network is the backbone of an electrical system, moving power from where it's generated to where it's needed in our homes, farms, businesses and industry. It operates much like a system of highways, with major routes that connect large centres and handle a high volume of traffic and smaller, secondary routes that branch out into every community in Alberta.

The transmission system is also an important factor in making sure that we have enough power supply to meet the growing needs of our province.

Companies that develop power plants consider a number of factors when deciding where and when to build a new plant. Among other things, these developers consider financing options for their project, as well as the cost and availability of labour and the fuel they'll use to produce electricity. They also have to make sure they can get their power to the people who will use it. They depend on a reliable and efficient transmission system to deliver their product.

But power plant developers aren't just looking at these factors in Alberta. Many of these companies have operations around the world and they are watching for the best investment opportunity on the planet, not just in our province.

A strong transmission system that's operating reliably and efficiently throughout the province helps to make sure that generation is able to compete and supply Alberta's power needs. Whether coffee beans, computers or electricity, increased competition among a diverse group of suppliers who have open access to a market is key to a better deal for consumers.

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. You can email us at stakeholder.relations@aeso or call us toll-free at 1-888-866-2959.