

Where does my power come from?

Yukon Energy has started working with Yukoners to chart the course for the territory's electricity future in the short to medium term. The 2016 Resource Plan will cover electricity needs over the next 20 years. To help you get involved in the planning, we have prepared a series of articles that will provide you with a baseline of knowledge about electricity in our territory. This is the first in the series.

Electricity. It's been called "the great enabler" of modern society. It's hard to imagine operating in a world without it. Everything from hospitals and schools to offices and homes are powered by some form of electricity, and many of us have come to take that for granted. But have you ever thought about what it takes to get that power to you?

There are three basic steps:

Generation

It all starts with a power source. For much of Yukon, that source is hydroelectricity. Yukon Energy is the main generator of power in the territory. It uses three hydro plants – one in Mayo, another at Aishihik, and the third and largest one in Whitehorse. There is also a small hydro station owned by ATCO Electric Yukon on Fish Lake in Whitehorse. Yukon Energy's hydro facilities – along with a small amount of wind and a tiny bit of solar – provide more than 99 percent of the power needs for most Yukoners.

The rest comes from diesel or liquefied natural gas.

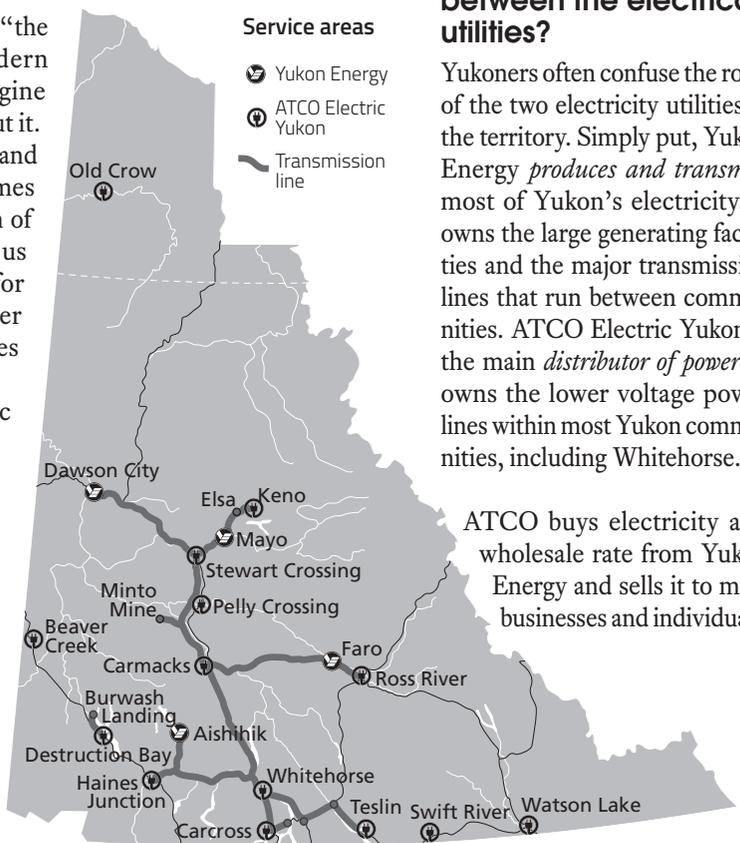
Note that if you live in one of the Yukon communities not connected to Yukon Energy's transmission system (Watson Lake, Old Crow, Destruction Bay, Burwash Landing, Beaver Creek or Swift River), you get your power from local diesel generators owned and operated by ATCO Electric Yukon.

Here in Yukon we are not connected to the North American transmission system. This means that we have to produce all our own power, and we can't sell the electricity to other jurisdictions if we have excess power. That brings with it a whole set of challenges that we will discuss in the next article in this series.

What's the difference between the electrical utilities?

Yukoners often confuse the roles of the two electricity utilities in the territory. Simply put, Yukon Energy *produces and transmits* most of Yukon's electricity. It owns the large generating facilities and the major transmission lines that run between communities. ATCO Electric Yukon is the main *distributor of power*; it owns the lower voltage power lines within most Yukon communities, including Whitehorse.

ATCO buys electricity at a wholesale rate from Yukon Energy and sells it to most businesses and individuals.



Transmission

Once the electricity is generated, it travels at the speed of light (300,000 kilometres per second) through hundreds of kilometres of transmission lines owned by Yukon Energy. Those high voltage lines are supported by sub-stations, transformers and more than 10,000 utility poles.

Distribution

When the electricity reaches the community that needs it, transformers convert it to a lower voltage so it is safe to use in your homes and offices.

There are some exceptions. Yukon Energy sells power directly to customers in Mayo, Dawson, Faro and a few smaller communities. If you're not sure who supplies you with power, check your electric bill. If it's from Yukon Energy, then Yukon Energy is your power supplier. If your bill is from ATCO, then ATCO is your supplier.

99% renewables

1% diesel/LNG

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