

An isolated grid and what that means for me

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 second in the series.

You may have heard Yukon Energy talk about the fact that we are an “isolated grid.” But what does that mean, and how does that affect you?

Most other areas of Canada and the United States are part of a large electricity system that connects electricity producers and electricity consumers through a series of transmission and distribution lines, and related facilities. But Yukon is not a part of that system. That creates some challenges when it comes to maintaining and planning for the electricity needs of the territory.

For one thing, it means we must produce all our own power. Unlike many other jurisdictions, we can't ask our provincial or territorial neighbours to provide

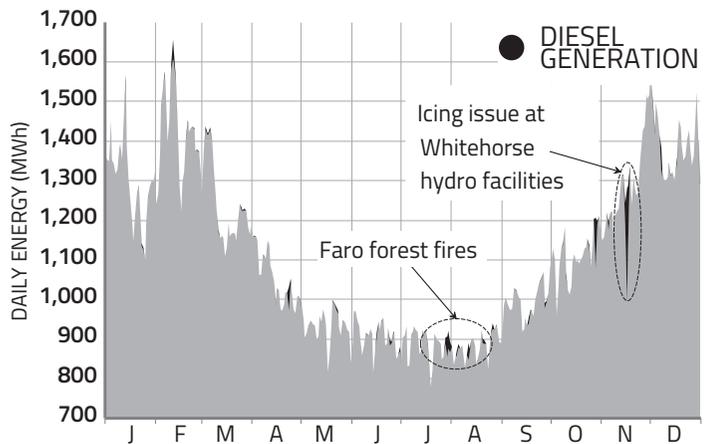
us with electricity if we run short. Likewise, if we have more power than we need at any given time, we have no way of selling it to our neighbours. It becomes a balancing act when planning for the future. We must build enough, but not too much.

It's because we are an isolated grid that we must have reliable back-up electricity, or “dispatchable” electricity as it is known. If we have a shortage of

reality is that liquefied natural gas or diesel are the only power sources currently available to us that can be dispatched fairly quickly. We don't like to use these thermal sources any more than is necessary; however, there are times when they are a lifeline for Yukoners.

Someone might ask, “Why not use wind for back-up?” The answer is provided in another article, but in brief, it's because

Renewable and diesel generation in 2014



renewable power for any reason (remember, 99.6 percent of the power we produced last year was from renewable sources), we need an energy source that we can count on, to keep the lights on and businesses operating. At -40° C, electricity is not a luxury; it is a necessity.

While we'd like our back-up power to be renewable, the

wind doesn't blow 100 percent of the time, so we can't count on it in an emergency. However, we are looking at storage options that could help us find new sources of dispatchable renewable power.

For more in this series, visit yukonenergy.ca