



Rental Diesels in Faro

December 2, 2020

With thanks and gratitude

Yukon Energy recognizes that we live and work on the Traditional Territories of Yukon First Nations.

We give thanks to the Ross River Dena Council for allowing our facilities and this project to take place on their Traditional Territory.

Today's discussion

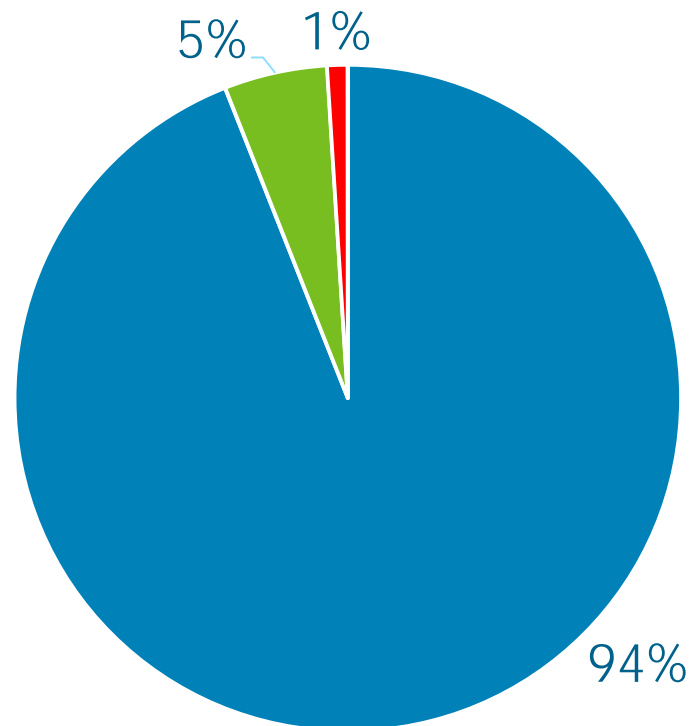
- Why diesel?
- Why more now?
- Why Faro?
- When will they be used?
- What does it mean?
- What does the future hold?
- Discussion

Why diesel?

It's a key part of our electricity mix

Our electricity mix

Generation Sources, 2015-2019 average



■ hydro ■ LNG ■ diesel

Yukon's electricity system is one of the greenest in Canada, using mostly hydro.

We're an isolated grid, not connected to any other province or territory. We need to be self-sufficient.

Diesel prevents outages; restores power quickly

Diesel is used during:



Maintenance



Low
water



Peak
demands

← PREVENTION →



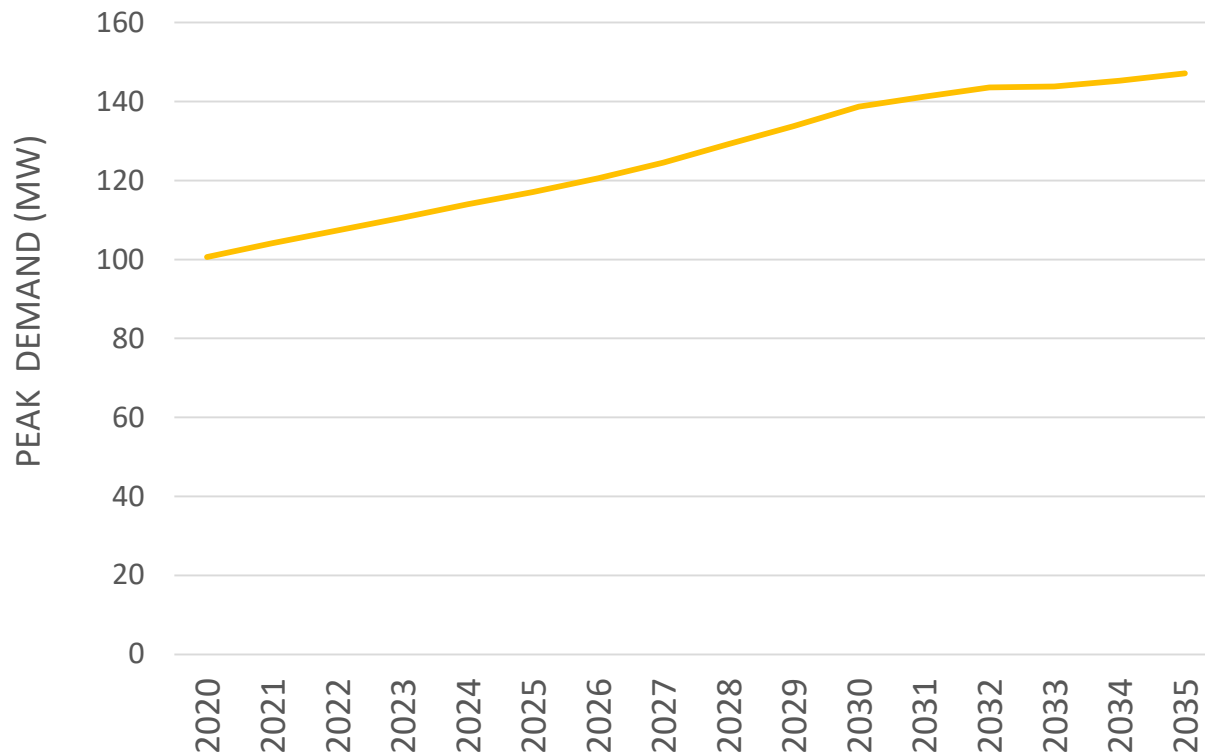
Unplanned
outages

RESTORATION

Why more now?

Peak demand for electricity
is growing

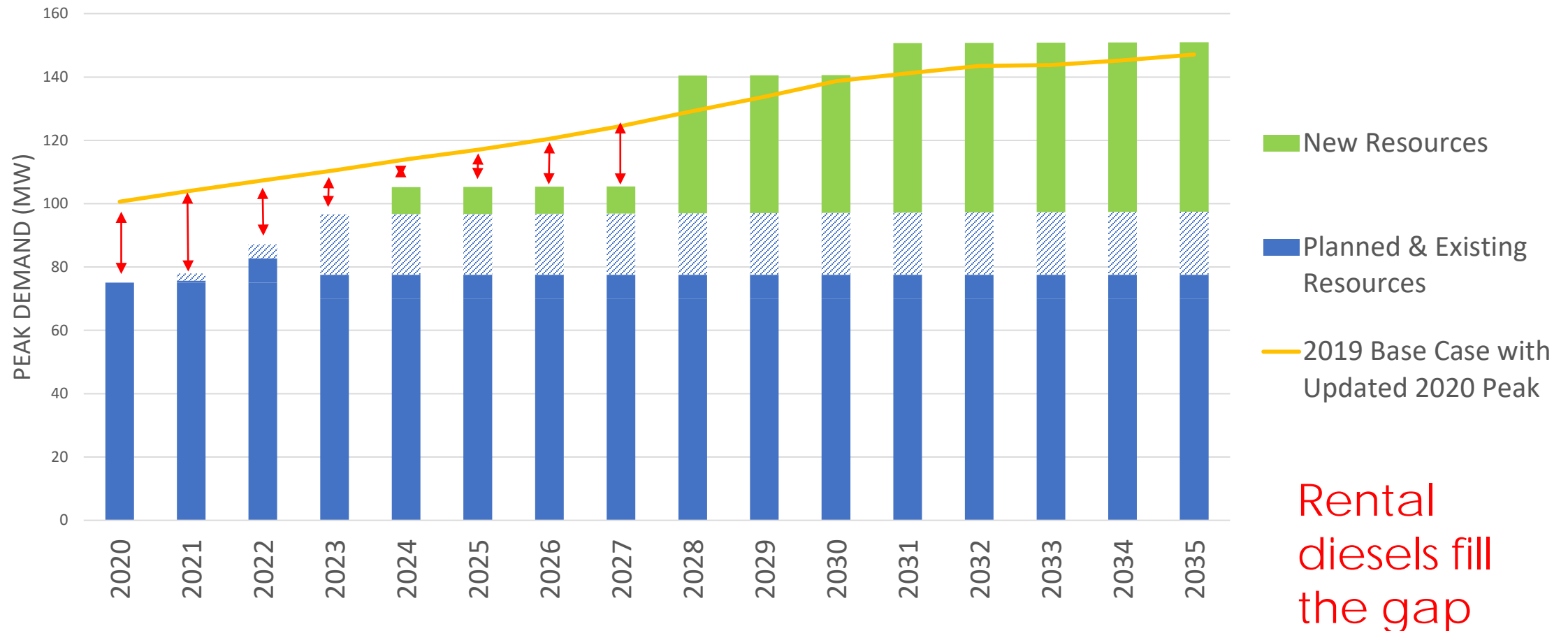
We expect peak demand for electricity to grow by 40% in the next 10 years



Why?

- Continued growth in population & electricity use
- Policy actions to address the climate change emergency

Rental diesels are needed to fill the gap until new projects are built



Why Faro?

The ideal second site for rentals

Whitehorse is full



Project location considerations

Site specific:

- Existing diesel sites only
- Allowances in existing air permit
- Space for units, fuel and substation

General:

- Whitehorse is maxed out
- Operating efficiencies (output and resources)
- Cost efficiencies

Faro as the preferred site



- An existing diesel plant
- Space within the fence line
- Allowance in air permit
- Centrally located

Site layout



Space in our yard



Equipment and fuel tanks



New substation



Rental units



Commissioning



When will they be used?
To keep the lights on

Running the rentals



Monthly for testing



During cold
weather for
peaking



In case of an
emergency

What does it mean?

Environment, sound and air assessments

Environmental & socio-economic assessments

The Faro diesel plant has been assessed under YESAA three times since 2008.

Each time, the YESAA assessment has determined that the facility is not likely to have any significant adverse effects on the environment or human health.

Sound assessment

BC Noise Control Best Practices Guideline – permissible sound level at nearest receptor*: 58 dB

Existing Site	With Rentals
58 dB	<1 dB change

Note: nearest point of reception is barracks bldg. on Ketza Ave.

Air assessment

Rental units are more efficient and have lower emissions than the existing permanent units.

Annual facility emissions are well under those permitted by the Yukon Ambient Air Quality Standards.

An irritant (NO_x) may be present under extreme conditions, very infrequently and for short periods of time.

What does the future hold?

Upgrades and improvements on site

Diesel in Faro will be critical in keeping the lights on

- Immediate:** Diesel will be used to keep the lights on.
- Next year:** A proposal to YESAB for an expanded air permit.
- 2-3 years:** Replacing an old diesel unit with newer model.
- 8-10 years:** Rentals used each winter until renewables built.
- Long-term:** Diesel used to prevent & restore outages and during emergencies.

Discussion

Thank you for your time