

2021 Long Term Electric Resource Plan (LTERP) & 2022 Long Term Gas Resource Plan (LTGRP) – Rossland

October 10, 2019

Green items denote follow-up questions for FEI. FEI's responses use **bold black** font.

1. Introductions

- a. Attendees expressed interest in the following topics:
 - i. Opportunities for and implications of community development and economic growth.
 - ii. Implementing energy efficiency, energy management, and greenhouse gas (GHG) abatement solutions.
 - iii. The future of low carbon transportation.
 - iv. Opportunities for municipalities to collaborate with each other and with utilities to achieve shared goals.

2. Resource Planning and British Columbia's (BC) Energy Systems

- a. Attendees were surprised by the GHG emissions impact of international shipping and the GHG abatement opportunity for BC to help shift marine bunkering from marine fuel oil to liquefied natural gas (LNG).
- b. Attendees expressed interest in various energy use statistics:
 - i. **How much and where are liquefied petroleum products used in FortisBC's shared service area outside of the transportation and industrial sectors? – communities would like to target these for GHG emissions abatement.**
 - ii. **What does the data show on fuel switching between electricity and natural gas?**
 - iii. **FortisBC does have market data from its customer surveys and billing systems and will contact interested communities directly to exchange information to the extent that this is practical and possible under BC's information privacy regulations. This data reflects energy use patterns of FortisBC's customer base specifically and may thus not be representative of BC's energy users in general.**
- c. One attendee asked how FortisBC would sustain its natural gas business while achieving its 30BY30 target (reducing customer natural gas combustion emissions by 30% by 2030 over a baseline of 2007 customer natural gas combustion emissions):
 - i. FortisBC will invest in four key pillars for achieving the target: energy efficiency, renewable gases, domestic low carbon transportation, and LNG to displace higher-carbon fuels outside of BC.
 - ii. This investment will enable FortisBC to support the province and its customers as BC transitions to a lower carbon economy.
 - iii. In addition to helping tackle global climate change, FortisBC's approach makes business sense as it supports sales while contributing to BC's policy objectives and providing solutions to customers.
 - iv. **In relation to this discussion, one attendee asked if FortisBC could procure sufficient renewable gas supply to meet its 30BY30 target.**

1. **FortisBC will discuss the resource options that will support its 30BY30 target during the development, publication and public hearing for the 2022 Long Term Gas Resource Plan.**

3. Electricity Planning Dialogue

- a. Attendees discussed various opportunities and considerations around electric vehicles (EVs):
 - i. Utilities should proactively manage EV charging load – options include:
 1. Customer education – how best to charge batteries in order to extend their longevity and minimize peak impacts on the electric grid.
 2. Time of Use rates – this risks creating a second peak throughout the day and may not be as easy for customers to understand.
 3. Automated controls that shape the charging load and could even rely on the energy stored in EVs for peak smoothing functions (vehicle-to-grid technology) – such management can increase battery cycling and thus reduce battery longevity (customers would need to be compensated for this effect).
 - ii. Some concern exists that outdoor EV charging ports could cause electricity theft.
 - iii. One attendee notes that they were unable to find the EV charging rebates available online.
 - iv. One attendee notes that their community was thinking of moving fleets to EVs in order to aim for significant decarbonization of its fleet energy use.
- b. Attendees also discussed distributed generation opportunities and considerations:
 - i. Organizations and community members are pursuing solar photovoltaic (PV) self-generation opportunities because they believe this is the right thing to do (proving a concept that the rest of the world can use) – economic considerations are secondary.
 - ii. Community solar approaches have seen strong customer demand in the Kootenays:
 1. Community members who purchase a stake in a community solar project continue receiving their solar credit even if they move.
 2. Community approaches enable solar investment for community members who do not have suitable solar deployment space in their own dwellings.
 - iii. Commercial entities are unlikely to invest in community solar projects – if a solar PV investment was feasible and economic for an organization, it will likely have invested already and will thus not be a candidate for community solar participation.
 - iv. Commercial entities are still uncomfortable with investing in local battery storage – better net metering rates could help increase distributed generation.
 - v. New buildings that reach Step 5 on the BC Energy Step Code ladder represent an opportunity for distributed generation – utilities should explore methods (including blockchain-powered approaches) for such buildings to trade their electricity supply.
 - vi. In light of California’s wildfires and their impacts on electricity service, attendees are interested in how FortisBC manages such risks and how climate change could contribute to system maintenance costs in the long term – utilities should educate communities about this issue.

- vii. One attendee suggests that FortisBC's net metering rooftop solar limit should be increased above the current level of 50 kW as the current limit is restrictive for some commercial customers.
- c. Finally, attendees expressed their preferences about the provenance of electricity supply:
 - i. For covering future supply resource needs, FortisBC has the option to invest in electricity generation in BC or to purchase electricity from the regional supply market.
 - ii. Purchases from the regional market can be cheaper than local generation – BC can use its geographic advantage in hydroelectricity to purchase cheap power during regional supply gluts.
 - iii. Market purchases may be 100% renewable or could include a portion of fossil-fueled electricity generation.
 - iv. Attendees are split on supporting relatively cheaper market purchases of renewable power versus investing in energy efficiency and supporting independent power producers in BC.
 - v. Gas-fired electricity generation offers economic value but lacks social license in BC – attendees are interested in the opportunity for fueling gas-fired power plants with renewable natural gas or hydrogen but recognize that these fuel types may be better used in direct thermal end uses (e.g. home heating).

4. Natural Gas Planning Dialogue

- a. Attendees are noticing increased interest in electrifying the built environment:
 - i. Electric heat pumps provide air conditioning during increasingly hot summers when smoke from wildfires prevents natural ventilation – this additional comfort outweighs capital cost considerations.
 - ii. Older demographics may be reaching an age where they seek to move away from wood for their energy needs.
- b. Attendees suggest that FortisBC's natural gas business unit should investigate the opportunity for retrofitting existing vehicles to natural gas – this causes extra costs but may be an opportunity for accelerating turnover of the vehicle stock to lower carbon options.
- c. One attendee asked what fleet size makes sense for compressed natural gas (CNG) as a local landfill did not find it viable.
- d. One attendee mentioned a biofuels study conducted in collaboration with the forestry industry and how there should be more discussion with FortisBC as there is a huge renewable natural gas opportunity for wood waste.
- e. Attendees expressed concern that rural communities sometimes do not have easy access to energy contractors and thus are not able to take advantage of many utility energy efficiency programs – can utilities find a way for energy efficiency programs to support self-installation?
- f. Attendees are uncertain how retrofit energy codes would be implemented across BC – they speculate this may occur via a stepwise fashion (similar to the BC Energy Step Code for new construction) and will start with energy labelling requirements for existing buildings before any performance targets are applied.
- g. Attendees suggest that the FortisBC natural gas business should encourage new connections, energy efficiency and adoption of renewable gases via an integrated customer offer:

- i. Large buildings face hurdles when trying to electrify in order to reduce GHG emissions, so they are seeking alternative solutions.
- ii. Communities and customers that are not connected to the gas system are interested in connecting in a manner that is efficient and reduces GHG emissions.

5. General Feedback and Next Steps

- a. One attendee noted it would be useful to have more information about the cost differences between different fuels like natural gas, RNG and electricity.