# Courtenay

May 17, 2017

1. **Introductions**
    a. Attendees are interested in the following topics:
        i. Coordinating with FortisBC Energy Inc. (FEI) to support industrial development and population growth while also helping to meet Greenhouse Gas (GHG) emissions reduction targets.
        ii. Renewable Natural Gas (RNG) and other renewable energy sources.
        iii. Energy security (in relation to both the diversity of energy supply as well as its resilience to natural disasters) and the impacts of electrification.
        iv. Reducing GHG emissions in transportation fleets.
        v. Opportunities for conservation and energy management, especially for municipal facilities and residential customers.
2. **About FEI**
    a. FEI's natural gas compressor stations currently do not include cogeneration (waste heat recovery or electricity generation in addition to compression) but FEI is monitoring the business case for such an approach.
    b. Depending on system and demand conditions, FEI's Mount Hayes LNG storage facility can sustain Vancouver Island natural gas demand for about ten days (natural gas linepack may add another one or two days, depending on conditions).
    c. Historically, FEI was able to recover the cost of its conservation and energy management programs from natural gas ratepayers; under current BC regulations, FEI is able to treat program expenditures similarly to investments in natural gas infrastructure.
    d. FEI does not operate a natural gas distribution system on Texada Island because the Island does not host sufficient population to support the cost of depressurizing natural gas from transmission pressures and for implementing a distribution system.
    e. Public Sector Organizations (PSOs) are able to use their participation in FEI's RNG program to reduce their reportable GHG emissions.
    f. A sub-set of FEI's Natural Gas for Transportation (NGT) programs supports marine operators with switching to natural gas for marine bunkering:
        i. Switching to natural gas from higher carbon bunkering fuels, reduces GHG emissions and harmful air pollutants, such as nitrous oxides.
        ii. For example, FEI has pioneered truck-to-ship LNG bunkering with BC Ferries (this is a world-first achievement).
3. **Planning Environment**
    a. Vancouver Island has access to limited energy supply (local sources or transmission from the Lower Mainland); as a result:
        i. Vancouver Island needs to conserve energy (in order to mitigate energy security and supply cost risks);
        ii. Protect existing local supplies; and
        iii. Develop additional local supply (e.g. RNG) to ensure economic growth and competitiveness.
    b. Energy planners on Vancouver Island are concerned about any actions that reduce the diversity of its energy supply.
    c. PSOs:

i. GHG emissions reduction targets prevent these entities from increasing their natural gas consumption.
ii. Fuel switching to biomass will likely allow PSOs to meet their current GHG emissions reduction targets but may be insufficient to meet future targets.
iii. Vancouver Island municipalities now do have separated waste streams and would benefit from more aggressive FEI engagement to develop RNG projects; capital costs often prevent municipalities from proceeding and the window of opportunity for such projects is small.
iv. Municipalities in the north of Vancouver Island do conduct GHG abatement cost studies to support their climate action plans:
    1. Electrification (based on heat pumps) and waste heat recovery appear to be cost effective GHG abatement options; electrification does not generate significant energy cost savings but does reduce GHG emissions.
    2. However, municipalities seek to ensure a diverse energy system with some built-in redundancy, so they are reluctant to move away from natural gas infrastructure.
    3. Municipalities and other PSOs would appreciate additional funding and support for their abatement cost studies; they have not conducted much sensitivity analysis on their reference case assumptions (e.g. carbon or natural gas price forecasts).
v. Overall, local governments have limited capacity to assess and shape the long term trajectory of BC's energy infrastructure, so they rely on senior levels of government to set the right framework (this point emerged based on a discussion about programs that support electrification).

d. Commercial and industrial customers:
    i. For businesses, energy options and security of supply matter in addition to energy costs.
    ii. Large industrial customers do rely on energy cost forecasts and do conduct sensitivity analyses on energy and carbon prices.
    iii. Some businesses (and even residential customers) rely on wood as a hedge against potential increases in electricity rates; wood combustion can have negative air quality impacts but reducing wood energy supply requires other energy sources to offset any decreases in wood use.

**4. Demand Side Management**

a. Municipalities in the north of Vancouver Island are considering how to support implementation of the BC Energy Step Code:
    i. Municipalities are monitoring the use of incentives for Step Code support but have not proceeded aggressively on this yet:
        1. The region is experiencing strong population growth and thus needs to approve and construct new dwelling quickly.
        2. Despite strong growth, new construction is not significant in relation to the size of the existing building stock (and thus represents a limited GHG abatement opportunity).
    ii. Buyers are reluctant to pay more when procuring dwellings but the cost of land far outweighs construction and upgrade costs; some dwelling owners are unable to afford energy performance upgrades because land prices are high).

**5. Closing Observations and Workshop Feedback**

a. Attendees generally expressed good satisfaction with the workshop.