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MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable John Horgan, Premier of British Columbia

II ISSUE: An overview of FortisBC's current and planned activities

III BACKGROUND:

In 2004, Newfoundland-based Fortis Inc., the largest investor-owned distribution utility in Canada, acquired all the distribution, transmission and generation assets of the West Kootenay Power and Light Company and renamed it FortisBC Inc. In 2007, Fortis Inc. purchased Terasen Inc., which included the Terasen Gas group of companies, from Houston-based Kinder Morgan Inc. In July 2010, Terasen Inc. and FortisBC Inc. started sharing the same leadership team, and in March 2011, the Terasen group of companies began operating under the FortisBC brand name. Today, the natural gas and electricity businesses continue to operate as before, as separate legal entities, while sharing the name FortisBC.

The FortisBC group of companies (collectively FortisBC) provides electricity, natural gas, and thermal energy services to more than 1.1 million homes, businesses and transportation customers in 135 communities in BC. FortisBC Inc (electricity) has 7,200 kilometres (km) of electricity transmission and distribution power lines and four hydroelectric generating plants in the Okanagan and Kootenays regions. FortisBC Energy Inc. (natural gas) owns and operates 48,700 km of natural gas transmission and distribution pipelines throughout BC as well as two liquefied natural gas (LNG) storage facilities at Tilbury Island in Delta, and Mt. Hayes near Ladysmith. In addition, FortisBC Holdings Inc. and FortisBC Midstream Inc. hold additional investments in electricity and gas infrastructure within the province.

FortisBC delivers approximately 21% of the total energy consumed in BC. Although residential customers comprise 90% of its customer base, annual demand from the residential sector is only 35% of the total energy delivered. Conversely, industrial customers count for less than 1% of FortisBC's customer base but account for nearly 40% of total annual gas demand. Commercial customers represent 9% of FortisBC's customer base and consume just over a quarter of the total energy delivered.

IV DISCUSSION:

Enbridge Update

On October 9, 2018 Enbridge experienced a natural gas pipeline rupture near Prince George. When a pipeline is restricted, such as the case with Enbridge, first priority is given to those customers who hold firm service commitments. Firm service, also called uninterruptible service, is service that is intended to be available at all times. Services to homes and small businesses are usually firm. Some businesses that cannot

afford interruptions, such as hospitals, also have firm service and short-term back-up fuel sources in the event of interruption.

The rupture occurred on a 36-inch natural gas transmission pipeline, causing the natural gas being transported to ignite. The fire on the pipeline was extinguished, and the line was isolated and fully depressurized. As a precaution, an adjacent 30-inch natural gas transmission pipeline owned and operated by Enbridge was also depressurized.

No FortisBC infrastructure was affected; however, these transmission pipelines are the two main lines through which gas is moved onto FortisBC's gas system and serves 70% of FortisBC customers. Without gas flowing into the system, there is a risk of loss of service to a significant number of customers south of Prince George.

On the evening of October 10, FortisBC received notification that Enbridge had National Energy Board (NEB) approval to restart its 30-inch natural gas line, and had begun the process to return it to service. Due to gas supply constraints, the entire province will be limited to 50% to 80% of normal levels. This means that the natural gas system will be challenged in times of high demand throughout the winter.

FortisBC is actively working to make more gas available including working with TransCanada to maximize output of the Southern Crossing pipeline that feeds into the Interior from Alberta.

On October 31, 2018, Enbridge announced it had completed repairs to its 36-pipeline, about two weeks ahead of schedule. The Minister and Deputy Minister of Energy, Mines and Petroleum Resources (EMPR) have written to federal Minister Sohi and Enbridge, respectively, urging safe and timely resumption of gas deliveries to avoid the public safety and economic implications of natural gas shortages over the winter months.

Climate Action – Clean Growth Pathway

FortisBC has emphasized that its natural gas utility will continue to be a critical component of a decarbonized energy system in BC. Its natural gas infrastructure is a multi-billion dollar asset that provides reliable, safe, affordable and high-quality energy services to British Columbians. This infrastructure is designed to serve difficult-to-decarbonize end-uses such as building and industrial heating and heavy-duty freight. Additionally, BC's gas infrastructure is equipped to handle decarbonization pathways that use drop-in fuels such as Renewable Natural Gas (RNG) and hydrogen, along with other key mitigation options like carbon capture and storage.

FortisBC's submission to the Clean Growth Strategy calls for four significant shifts in our energy systems by 2030 to foster market transformation:

- Making significant investments in both low and zero carbon vehicles and infrastructure in the transportation sector;
- Transitioning from higher carbon energy sources to lower carbon sources by ramping up RNG deployment;
- Positioning BC as a vital domestic and international LNG provider to lower greenhouse gas (GHG) emissions; and

- Increasing our investment in energy efficiency in the built environment and developing innovative energy projects BC's communities.

1) Investments in Transportation

i. Natural Gas in Transportation

As a natural gas service provider, FortisBC Energy is striving to align its business with evolving climate action policies, which are likely to see, among other actions, a shift away from fossil fuels toward greater use of renewables. As such, FortisBC has been developing new lines of business, including compressed natural gas (CNG) and LNG in transportation, along with RNG, as well as trying to expand its natural gas customer base in order to respond to changes in BC's marketplace.

In meeting these goals, FortisBC has been proactive in accessing initiatives under the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR). FortisBC's programs have contributed greatly to the overall accomplishments under this regulation. To date, the GGRR has resulted in commitments for more than 749 natural gas vehicles and 7 seven marine vessels. The adoption of natural gas for these vessels and vehicles is expected to result in the reduction of over 71,000 tonnes of CO2e emissions annually. In addition, FortisBC has completed construction on a total of 12 fueling stations under the GGRR: seven CNG stations; and 5 LNG stations.

ii. Electric Vehicle Charging Infrastructure Initiatives

FortisBC, in partnership with the Community Energy Association, is participating in the Accelerate Kootenays project, a two-year, $1.5 million multi-stakeholder initiative that includes the deployment of a 13 Direct Current Fast Charger (DCFC) network in the Kootenays. With access to provincial, federal and other partner funding opportunities, FortisBC plans to invest $0.2 million to construct, own and operate the five DCFC stations.

On December 22, 2017, FortisBC submitted an application to the Commission for approval of rate design and rates for electric vehicle (EV) charging which will, in part, cover the costs of the installation and ownership of five DCFC stations located along the Highway 3 corridor in Greenwood, Christina Lake, Castlegar, Salmo and Creston. On January 12, 2018, the BCUC approved an interim time-based rate of $9.00 per 30 minute period for charging at FortisBC owned DCFC stations. The BCUC deferred a decision on a permanent rate structure pending the completion of an inquiry it has initiated to explore questions around the regulation of EV charging services in BC.

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iii. The BC Low Carbon Fuel Standard

The *Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act* (Act) and the Renewable and Low Carbon Fuel Requirements Regulation (Regulation) (together the BC Low Carbon Fuel Standard, or BC-LCFS), support the Province's climate action objectives by reducing BC's reliance on non-renewable fuels, reducing the environmental impact of transportation fuels, and contributing to a new low-carbon economy. Under the program, participants may supply more low carbon fuels, acquire credits through a Part 3 Agreement, and/or trade credits with other suppliers.

FortisBC is interested in earning credits for lower carbon LNG used in trans-pacific shipping under the BC-LCFS. The program does not currently apply to marine bunker fuel because it is not used in substitution for diesel. A fuel can generate credits only if it replaces diesel which is not the case for High Sulfur Fuel or Marine Gas Oil, the two most common marine fuels used in shipping. EMPR is currently consulting on approaches that would provide incentives to reduce the carbon intensity of those fuels, and therefore make additional compliance credits available to the credit market.

FortisBC has been an active participant in the consultation discussion, and EMPR will continue to work with the utility as the program evolves.

2) Transitioning to Renewable Natural Gas

FortisBC's voluntary RNG program, launched in 2011, gives customers the option of designating 5%, 10%, 25%, 50% or 100% of their natural gas use as RNG. The acquisition of RNG is a notional concept. Customers do not actually receive the RNG molecules. Instead, FortisBC injects an equivalent amount of RNG into the FortisBC distribution system to displace fossil fuel natural gas that otherwise would have been brought into the system. Customers also receive a credit on the BC carbon tax on their bill. There is no need to upgrade appliances or do anything differently because RNG has the same properties as conventional natural gas, but is GHG-neutral.

Currently, the RNG program has over 9,100 customers, a mix of both residential and commercial customers including the University of BC, Thrifty Foods and Lush Manufacturing, and demand is rising. For the average household using 90 gigajoules of natural gas every year, the cost for signing up for a 5% blended RNG is $2.63 extra per month.

BC is the only jurisdiction in North America to have a utility program for RNG. Gas utilities have a large role in supporting BC's transition to lower carbon fuels. In general terms, EMPR supports the adoption and expansion of RNG programs as part of the Province's overall efforts to reduce GHGs. Amendments to GGRR, made in 2017, have already enabled FortisBC and other natural gas utilities to establish a Renewable Portfolio Allowance. Gas utilities may acquire RNG supplies at a maximum price of $30/gigajoule (GJ), up to a total annual volume that is not to exceed 5% of the total volume of natural gas sold in 2015.