OWEN · BIRD
LAW CORPORATION

PO Box 49130
Three Bentall Centre
2900-595 Burrard Street
Vancouver, BC
Canada V7X 1J5

Telephone 604 688-0401
Fax 604 688-2827
Website www.owenbird.com

Direct Line: 604 691-7557
Direct Fax: 604 632-4482
E-mail: cweafer@owenbird.com
Our File: 23841/0159

June 8, 2017

VIA ELECTRONIC MAIL

British Columbia Utilities Commission
6th Floor, 900 Howe Street
Vancouver, B.C.
V6Z 2N3

Attention: Mr. Patrick Wruck
Commission Secretary and Manager, Regulatory Support

Dear Sirs/Mesdames:

Re: FortisBC Inc. 2016 Long Term Electric Resource Plan (LTERP) and Long Term Demand Side Management Plan (LT DSM Plan) - Project No. 3698896

We are counsel to the Commercial Energy Consumers Association of British Columbia (CEC). Attached please find the CEC's first set of Information Requests to the BC Sustainable Energy Association with respect to the above-noted matter.

If you have any questions regarding the foregoing, please do not hesitate to contact the undersigned.

Yours truly,

OWEN BIRD LAW CORPORATION

Christopher P. Weafer

CPW/jj
cc: CEC
cc: FortisBC Inc.
cc: Registered Interveners

COMMERCIAL ENERGY CONSUMERS ASSOCIATION OF BRITISH COLUMBIA

INFORMATION REQUEST #1 TO BC SUSTAINABLE ENERGY ASSOCIATION

FortisBC Inc. 2016 Long Term Electric Resource Plan (LTERP) and Long Term Demand Side Management Plan (LT DSM Plan) - Project No. 3698896

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1. **Reference: Exhibit C5-5 page 4**

Fortis does not provide evidence to substantiate its claim that high DSM savings targets are too risky. Actually, many jurisdictions in North America routinely achieve high savings goals through DSM programs, and are often required by regulators to do so. These savings goals are often considerably larger than those contemplated by Fortis. In its response to Staff IR, Fortis provides estimates of savings as a percent of total load for 2018-2022 from the 2016 LT DSM Plan. These estimates range from 0.5% in the low scenario to 0.8% in the max scenario.[2] Even accounting for any mitigating factors in the comparisons, these are substantially lower savings than have been achieved in other jurisdictions in North America. For example, according to the 2016 ACEEE State Scorecard, three U.S. states achieved net savings greater than 2.0% of sales in 2015, and an additional thirteen states achieved savings between 1.0% and 2.0% of sales. In all, nineteen states achieved greater than the 0.8% savings that Fortis contemplates in its Max scenario, and many of these states have been achieving high levels of savings year after year.[3]

1.1. Please provide any targets that have been established by regulators in the other jurisdictions that routinely achieve high savings goals through DSM programs and are required by regulators to do so, if any.

1.2. Please identify the 19 jurisdictions referenced that achieved greater than the 0.8% savings.

1.3. Please identify the jurisdictions that are winter peaking and those that are summer peaking.

1.4. For each of the 19 jurisdictions please provide the mix of energy options utilized and explain why they may be applicable to the FortisBC jurisdiction.

1.5. If the BCUC were to identify a preferred minimum target for Fortis, what preferred minimum would Mr. Grevatt consider as being appropriate at this time and over the next five years. Please explain.

1.6. What is the correlation, if any, between the states that achieved high savings and the energy (electricity, natural gas) prices in those states? Please explain and provide quantification of the prices and the DSM savings.

2. Reference: Exhibit C5-5 page 6

The Northeast Energy Efficiency Partnerships (NEEP) facilitated a collaborative process that included manufacturers, efficiency program sponsors, and consultants to develop its "Cold Climate Air-Source Heat Pump Specification." For equipment to qualify to be listed as meeting the specification it must, among other things, have a COP @ 5° F (-15° C) >1.75 (at maximum capacity operation).[8] Much of the equipment included in this specification is designed to perform in heat pump mode without electric resistance backup at temperatures as low as -25° C. The equipment that meets this specification will perform much differently, and much more efficiently, than the equipment that was tested in the 2010 study cited by Fortis as evidence that heat pumps are not reliable in terms of system planning.

2.1. Have electrical utilities in the United States created DSM incentives for customers installing heat pumps that meet the "Cold Climate Air-Source Heat Pump Specification?" Please explain and elaborate on the types of incentives that are utilized.

2.2. Have DSM programs been successfully implemented that incent the installation of only those equipment models that meet a certain specification? Please explain.

2.3. Please compare electrical heating efficiency in the 2010 study cited by Fortis with currently available equipment at ambient temperatures of 0, -15 and -25 degrees Celsius.

2.4. Please comment on the cost-effectiveness of currently available electrical heating efficiency versus gas heating, and provide quantification where possible.

3. Reference: Exhibit C5-5 page 12

Line loss values used in cost effectiveness analyses should reflect the full value of the benefits that DSM provides. Fortis recognizes and reports on the capacity benefits that derive from energy efficiency measures. Line losses are greater at times of greater load, and logically the line loss reductions associated with energy efficiency that occurs during times of peak demand also occur at times of greater load. The Regulatory Assistance Project[30] (RAP) states:

> "First, energy efficiency measures typically provide significant savings at the time of the system peak demand, and that time occurs when the line losses are highest. The avoided line losses can add as much as 20% to the capacity value measured at the customer meter.
>
> Second, because they are reducing loads, including marginal line losses, energy efficiency measures also reduce the level of required generating reserves.
>
> Each of these benefits increases the economic savings provided by energy efficiency investments. The compounding of a 20% marginal line loss savings and a 15% reserves savings can produce a 44% total generating capacity benefit, over and above the peak load reduction measured at the customer's meter."[31]

Energy efficiency provides significant peak demand benefits whose value should be reflected in cost effectiveness screening. Therefore, the line loss values used in cost effectiveness screening should reflect marginal, rather than average values.

3.1. Has a firm correlation been established that all or specific energy efficiency measures provide significant savings at the time of system peak demand as they relate to line losses? Please explain.

3.1.1. If so, can the marginal line loss at peak times be applied to DSM cost effectiveness calculations in its entirety? Please explain.

3.1.2. If not, what proportion could reasonably be applied? Please explain and provide quantification of any values.

3.2. Does the RAP study suggest that FBC's methodology of using average line loss is inadequate when calculating energy and capacity requirements? Please explain.

3.2.1. Could inclusion of data relating to line losses at times of system peak demand affect FBC's Load Resource Balance? Please explain and provide quantification to the extent possible.

3.2.2. How would Mr. Grevatt expect the employment of this information to impact FBC's expected requirements for generation or capacity related infrastructure? Please explain.

3.3. If Fortis were to measure resistance and calculate actual line losses at the time of system peak demand how would Mr. Grevatt recommend that the information be incorporated into the capacity requirement forecasts?

3.3.1. What impact would Mr. Grevatt expect to see? Please explain and provide quantification to the extent possible.

3.4. Would the fact that FBC's system is winter peaking (colder wires) have an effect on marginal line losses? Please explain and provide quantification where possible.