

British Columbia Hydro and Power Authority

BC Hydro F2020 - F2021 Revenue Requirements Application

Information Request No. 1

Submitted by Ian Cullis

May 1, 2019

## 1.0 Executive Summary

Housing affordability impacts every resident of British Columbia with effects amplified in the low-income rental sector. The affordable housing sector provides much-needed security to low-income renters through stable and supportive housing. Unfortunately, the sector has been characterized by historically low investment, aging buildings, rising deferred maintenance, and high energy use.

BCNPHA has developed the most comprehensive data on non-profit housing properties in the province. In 2010, BCNPHA's research department collected details on 975 buildings to form the basis of our asset database. Since then, BCNPHA has collected partial information on a further 2,200 sites. From this database, we know that buildings in the non-profit sector are ageing, with the majority built in the 1980s and 1990s, and a decreasing number built in the early 2000s. Due to ageing buildings and lack of investment the Facility Condition Index (FCI) has reached poor levels, with the FCI growing past 20 %. Deferred maintenance levels have now risen to over an alarming \$800 million and increasing by over \$100 million per year.

In conjunction with high deferred maintenance, the non-profit sector has an aggregated energy consumption of over 1,113 e-GWh, with over \$50 million in utility costs, and more than 138 kilotonnes in CO<sub>2</sub>e emissions. A 40% energy consumption reduction in the sector will realize over \$20 million in savings and 52 kilotonnes of CO<sub>2</sub>e annually! Supporting the non-profit sector is an effective way to reach this goal. The non-profit housing sector is considerably constrained due to its ambitious mission to support those who need affordable housing and programming.

It is important to look beyond consumption and towards energy *intensity*. Building Energy Performance Index (BEPI) is an effective metric for identifying energy conservation opportunities by a measure a building's energy use intensity. The average BEPI for residential buildings in British Columbia is 222 kWh/m<sup>2</sup>, while the average for Canada is 281 kWh/m<sup>2</sup>. The BEPI for the BC non-profit sector is much higher at 309 kWh/m<sup>2</sup>, and 35% of the sector has a BEPI over 550 kWh/m<sup>2</sup>.

To support affordability in British Columbia, it is important that BC Hydro support and implement programs to benefit both low income tenants and non-profit housing providers, and ensure that these programs are successful, by increasing spending, measure types, eligibility, and support by modifying the total resource cost (TRC) calculation.

## 2.0 DSM Moderation

In BC Hydro's submission to the BC Utilities Commission, it outlines a plan to moderate spending on demand side management (conservation), even though it lays out the economic benefits of conservation. Why is BC Hydro continuing to moderate spending on demand side management, when

funding these activities have a positive return on investment, increase employment, and increase affordability. These are the sections outlining the benefits and reasoning for moderation;

- 2.1 Page 10-5; *the average portfolio utility cost of the DSM Plan is less than the market price of export electricity. This means that the DSM Plan provides a net benefit for customers by reducing our overall revenue requirements.*
- 2.2 Page 10-21; *from the DSM program are less than the price BC Hydro could receive on the market for any resulting surplus energy*
- 2.3 Page 10-15; *in this application, BC Hydro has continued the moderation approach given the ongoing energy surplus and to limit forecast rate increases. The proposed expenditure schedule continues to provide customers with broad opportunities to save electricity and reduce their bills*
- 2.4 Appendix X page 4; *of demand-side management represents a moderation compared to the level of demand-side management recommended in the 2013 Integrated Resource Plan. This moderation strategy arose in response to the identification of an extended period of surplus electricity and the need to address rate increase pressures*

### 3.0 Low Income Support

BC Hydro and the BC Utility Commission have a mandate from the Provincial government to increase affordability for British Columbian's. Why are wait times for the Social Housing Retrofit Support Program (SHRSP) long, incentive offers limited, and spending low? The HERO program includes incentives for heat pumps, why not open these to the SHRSP? Here are some references from the revenue requirements document;

- 3.1 Page 10-5; *BC Hydro has made modifications to its DSM programs in response to BCUC directives, the Government of B.C.'s priorities around affordability and changes in the Demand-Side Measures*
- 3.2 Page 10-24; *Increasing Home Renovation Rebate offers, including expanding heat pump measures to benefit customers in regions without access to natural gas; • Launching a new Social Housing initiative for qualified social housing providers*
- 3.3 Appendix X page 15; *Commercial program has also launched a new Social Housing Retrofit Support Offer for Multi-Unit Residential, providing an opportunity for qualifying social housing providers to minimize their operating costs and improve whole building performance.*
- 3.4 Appendix X page 45; *Social Housing Retrofit Support Offer Newly introduced for fiscal 2019 is the Social Housing Retrofit Support Offer for Multi-Unit Residential that provides an opportunity for qualifying social housing providers (e.g., BC Housing, and the B.C. Non-Profit Housing Authority) to minimize their operating costs and improve whole building performance of their facilities through the more efficient use of natural gas and electricity. This offer is a partnership between FortisBC Energy Inc., FortisBC Inc., BC Hydro and the Government of B.C. (through Efficiency B.C.) and is offered throughout the British Columbia service territories of the utilities. Customers are allowed to utilize any of the four offers below: Energy study funding to review the potential energy conservation measures. Implementation support that provides engineering design, tendering and project management Rebates for upgrading eligible technologies for lighting, HVAC and commercial kitchen Rebates for low-carbon electrification opportunities*

3.5 Page 10-8; *“the relatively low level of DSM spending for residential customers (including low-income customers)”*

#### 4.0 TRC Calculation

BC Hydro includes a few measures/costs when calculating the TRC, why doesn't BC Hydro include items like fire risk, or use a modified TRC for low income programs to enable greater support. BC Hydro also assumes that energy efficiency is the new baseline when calculating energy savings due to their programs. How does BC Hydro ensure market change has occurred and energy inefficient measures or like for like retrofits are not continuing?

4.1 Appendix X page 19; *maintenance costs in commercial and industrial facilities, and extended equipment life. These are referred to as customer non-energy benefits, and where they can be quantified, are included in the Total Resource Cost Test*

4.2 Appendix X page 3; *however BC Hydro support plays an important role in the achievement of savings. BC Hydro's codes and standards initiatives are coordinated with programs to help drive efficient technologies and practices*

#### 5.0 GHG Emissions

Can BC Hydro release the calculation and assumptions used when calculating the GHG emissions and impact of BC hydro's electricity supply?

5.1 Appendix X page 18; *Hydro's electricity is clean, but demand-side management avoids the environmental impacts associated with the construction and operation of new electricity infrastructure. Continued energy efficiency efforts will enable the increased use of BC Hydro's clean electricity and its associated environmental benefits, stretching availability for new electrification opportunities*

5.2 Appendix X page 30; *BC Hydro seeks to influence our residential customers to purchase more energy efficient products, and leverages the retail channel to activate these transactions. The Retail Appendix X Fiscal 2020 to Fiscal 2022 Demand-Side Management Business Plan – Conservation and Energy Management Fiscal 2020 to Fiscal 2021 Revenue Requirements Application Page 31 Program aims to advance the adoption of more energy efficient products by working with market partners to have the energy efficient products available on store shelves throughout B.C. at affordable price points, supported by knowledgeable sales staff*