

MINISTRY OF ENERGY AND MINES

BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** Honourable Bill Bennett, Minister of Energy and Mines
- II ISSUE:** British Columbia Utilities Commission review of BC Hydro's Residential Inclining Block Rate and FortisBC's Residential Conservation Rate.
- III BACKGROUND:**

Most residents in British Columbia pay for electricity on a two-tier rate (residential inclining block rate or RIB rate from BC Hydro or a residential conservation rate (RCR) from FortisBC). FortisBC's RCR is similar in design and intent to BC Hydro's RIB rate. Under the two-tier rates, customers pay a lower price for electricity consumed over a billing period up to a threshold, and a higher price for electricity consumed above the threshold. These two-tier rates were implemented by BC Hydro and FortisBC between 2008 and 2012.

In August 2008, the British Columbia Utilities Commission (BCUC) determined that it was in the public interest for BC Hydro to implement the new RIB rate and required the new RIB rate structure go into effect October 1, 2008 for approximately 1.6 million residential customers. Under the RIB rate, customers pay 8.29 cents per kilowatt hour (kWh) for the first 1,350 kWh they use over an average two-month billing period. Above that amount, customers pay 12.23 cents per kWh for the balance of the electricity used during the billing period.

The Step 1 to Step 2 threshold was set at 1,350 kWh per billing period, approximately 90 percent of the median consumption of BC Hydro's residential customers. The Step 2 rate was established at BC Hydro's current estimate of the cost of new energy supply.

The BCUC directed FortisBC to implement its RCR on July 1, 2012 with the goal of promoting energy conservation. About 71 percent of FortisBC customers are paying the same or less than what they were with the previous flat rate. The Block 1 rate is 9.562 cents per billing period for the first 1,600 kWh of electricity, which increases to the Block 2 rate after the first 1,600 kWh billed at 14.761 cents per billing period.

Before the two-tier rates were implemented, residents in British Columbia paid one flat price for all electricity they consumed. These structures are intended to provide an incentive to conserve energy by charging a relatively high price for use above a certain threshold. Reports filed with the BCUC have since shown that the rates are delivering conservation without creating higher bills overall.

Following these decisions, customers with high consumption complained about rate increases due to the stepped rate structure and the impact of these increases on customers with electric heat, particularly those with low incomes. In response, Minister Bennett requested, in July 2016, that the BCUC provide information on customers with high bill

impacts due to the second tier rate, on the rate's impact on low-income customers, and on the potential for conservation programs to mitigate those impacts.

IV DISCUSSION:

In addition to consulting with utility customers, the BCUC has consulted with BC Hydro and FortisBC on the RIB and the RCR. Both utilities submitted their reports to the BCUC on September 30, 2016 (see Table 1 for more information).

BC Hydro is in the midst of its Rate Design Application (RDA) in which intervenor groups comment on its proposed rate structures. The BC Old Age Pensioners Association (BCOAPO) submitted a proposal for a low-income rate they call an Essential Services Usage Block. The block would provide low-income customers with a \$0.04 per kWh discount on up to 400 kWh of electricity use per month; this would increase other residential customers' electricity bills by 1.5%. BCOAPA is also proposing the creation of a \$5.4 million crisis intervention fund by adding a \$0.25 surcharge on every customer's bill, and changes to BC Hydro's business practices that would provide further support to low-income households.

Overall electricity bills are influenced by choice of heating fuel, the quality of the building's insulation and building envelope, and factors like square footage, windows, and other features chosen by the homeowner. Public comments received by the BCUC indicate that stepped rates have had an impact on some customers. Customers are complaining that even after making energy efficiency improvements, they are still seeing high utility bills that they cannot afford to pay, especially during the winter months.

Over this past summer, the BCUC held a public consultation process which involved over 370 residents and municipalities to get feedback on the rate's impact on ratepayers. The majority of the respondents live in areas not served by natural gas. However, arguments that the rate discriminates against customers in areas not served by natural gas are not strongly supported by the data. FortisBC found that half of all homes with no access to natural gas had lower bills as a result of the RCR.

In addition, despite making significant conservation and energy efficiency improvements, a large number of the 370+ respondents to the BCUC's public consultation process indicated that they now use wood burning stoves to either replace or supplement space heating in the winter months. Respondents have indicated that this has resulted in poor air quality in some areas of the Province.

As the review of RIB rates is taking place at the same time as BC Hydro's RDA, information collected in the development of the report may influence the BCUC's recommendations on residential rates.

The energy Long-Run Marginal Cost (LRMC) determination is an important reference point for a number of BC Hydro's rate structures, most notably the RIB rate. The LRMC of firm energy is based on the weighted average price paid to independent clean energy developers through a competitive call for power process. The price reflects the cost of acquiring, integrating and delivering firm energy to BC Hydro's load centre in the Lower

Mainland. BC Hydro's current view in the RDA on the energy LRMC has shifted towards \$85 per megawatt hour (MWh) from a \$85-\$100/MWh range. This is in line with FortisBC's LRMC of \$84.94/MWh. With step two rates well above the long-run marginal cost of energy for residential customers, it is possible that the BCUC would consider modifying BC Hydro and FortisBC's conservation rates by confining rate increases to the first step, reducing the second step, or replacing the rates with a flat rate. The BCUC has not signalled to the Ministry what they will recommend in their report, however, the analysis contained in the utility reports does not suggest there are significant fairness issues for customers without access to natural gas or low-income customers.

V NEXT STEPS:

The BCUC has asked for comments on the utility reports from stakeholders in the proceeding and any interested members of the public by November 24, 2016. The BCUC's report will be released following receipt of the comments, likely in December.

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Attachment:

Table 1: Utility Responses to Minister Questions

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Ministry Question	FortisBC Electric	BC Hydro
1. Do the residential inclining block rates cause a cross-subsidy between customers with and without access to natural gas service?	- No. Although the analysis suggest that a higher revenue to cost ratio is positively correlated for customers without access to natural gas, it is difficult to ascribe a causal relationship as other high-use factors may not be accounted for.	- Results show that the revenue to cost ratio for customers without access to natural gas is 95% for customers with access to natural gas and 90% (using a fully allocated cost of service approach) for customers with access to natural gas. -BC Hydro does not view this result as substantive given the inherent limitations to its analysis.
2. What evidence is available about high bill impacts (greater than 10% as a result of the adoption of the residential inclining block rates) on low-income customers?	- Higher than average bill impacts are a result of relatively high consumption regardless of income. The average bill impacts for all customers with consumption below 30,000 kWh per year is less than 10%, suggesting that average bill impacts above 10% did not typically occur until consumption exceeded 30,000 kWh level. - Data indicates that 90% of FortisBC customers are below the high bill impact definition.	- BC Hydro data indicates that a majority of low-income customers benefit from lower rates under the RIB rate structure, with 88% experiencing lower rates and less than 1% experiencing bill increases of greater than 10%.
3. What evidence is available about factors that lead to high energy use and, therefore, bill impacts for customers without access to natural gas, including low-income customers?	- High energy use dwellings have a higher proportion of characteristics that require more electricity use than non-high-use dwellings, i.e. they are larger dwelling types (higher share of single family dwellings); have a higher share of electric heating (baseboard, forced air and hot water); are older housing stock (pre 2005); have a larger share in the penetration of higher intensity electricity using appliances, such as swimming pools, hot tubs, secondary refrigerators/freezers, larger electrically heated hot water tanks, and air conditioners.	- High use customers as a group, regardless of income or access to natural gas, have a higher proportion of factors that result in more intensive use of energy, relative to the non-high use group. Factors include: the main heating equipment being electric baseboards, central forced air furnace or hot water radiant floors; electric hot water tank use; use of multiple fridges; use of multiple computers; and operating outdoor swimming pools/hot tubs.

<p>4. What is the potential for existing Demand Side Management (DSM) programs to mitigate these impacts?</p>	<p>- Customers with existing homes can access a range of energy retrofit programs. To the extent that customers participate in these programs, they have the potential to mitigate the factors that lead to high energy use.</p>	<p>- BC Hydro is of the view that its residential DSM programs provide support and coverage for high electricity users as they address the factors that lead to high electricity use. Letters of comment from customers did not identify a lack of DSM program initiatives.</p>
<p>5. Within the current regulatory environment, what options are there for additional DSM programs, including low-income programs?</p>	<p>- Overall, FortisBC's view is that its programs compare favourably with respect to the factors that lead to high electricity use and to those being offered by other utilities. - FortisBC believes the current regulatory environment is supportive of additional DSM programs, including low-income programs, as long as the measures are cost-effective on a Total Resource Cost basis.</p>	<p>- BC Hydro believes that additional changes to its DSM programs are not warranted at this time.</p>