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From: Andy Shadrack <[ashadra@telus.net](mailto:ashadra@telus.net)>

Subject: FortisBC Rate Design: Information Request #2

Kaslo

Sunday, January 31

1. Our house has about 800 square feet of floor space, and between October and April we heat with wood, keeping the temperature between 15.6 C (60 F) and 21.1 C (70 F). This winter we spent \$700 on four cords of split wood. Please provide what the equivalent cost would be if we used baseboard heaters, natural gas (not available to us), propane (used in Kaslo and Area D), oil (used in Kaslo), coal (still used in Balfour), ground source heat pumps or air sourced heat pumps.

2. FortisBC introduced a new bill in April 2007, which stated, in part:

*"Introducing your new FortisBC energy bill. To learn about all features of your new bill, take a moment to review the enclosed insert "*

Please provide a copy of that insert and also explain why FortisBC introduced the feature of comparing average current year kWh/Day usage on that bill with the average for the previous year.

3. FortisBC has stated that the unit cost of delivering power to residential customers is 8.9 cents per kWh (BCUC IR1, A78 and A78.1, page 134, line 2 and line 11, and Table BCUC A81.1, page 139, lines 6 - 8 ). Earlier, at A25.3 (page 40, line 12 - 15) and A25.4 (line 21) and A25.6 (page 41, line 4), FortisBC states that:

- i) 21,000 (22%) residential customers consume below 1,000 kWh per billing period
- ii) 23,000 (24%) consume above 3,000 kWh per billing period.

Using current billing rates (basic charge plus current energy charge/kWh, before taxes), those residential customers consuming below 1,000 kWh per billing period pay 10.05 cents per kWh or higher, and those consuming 3,000 kWh per billing period 8.4 cents per kWh or lower.

In fact FortisBC's proposed rate design continues to ensure that the more power a residential customer uses, the less he or she pays for that power, such that, at 1,906 kWh consumed over a billing period, the cost to that customer is 8.8998 cents for each kWh used, below estimated delivery cost.

Please provide an explanation, economic, social and environmental, as to why FortisBC should continue delivering power to 23,000 plus (24% plus) residential customers at below cost.

4. How many of the 21,000 residential customers consuming below 1,000 kWh, in any given billing period, can FortisBC identify as room/basement suite/apartment renters, apartment/condo and small cabin owners?

5. If I pull into a gas station and buy 2 litres of gasoline I am not charged more than if I buy 20 litres. The price per litre is the same. Similarly if I go to the grocery store and buy ten oranges one time and two the next I am not charged more for buying two than if I buy ten. And if I go to the hardware store I am not charged more for buying more or fewer screws or nails, I am charged a single unit price.

In contrast, at A26.1 (page 43, lines 6 - 18) and Table BCUC A26.1 (page 44, line 1) FortisBC appears to be proposing a minimum residential bi-monthly charge of between \$26.93 and \$32. If the BCUC accepts Fortis's proposal, with the current rate design, a residential customer would pay 17.331 cents per kWh at 250 kWh.

Using the same intervals as Table BCUC A26.1, the current billings (before taxes) to residential customers are as follows:

100 kWh: \$31.89  
 200 kWh: \$39.51  
 300 kWh: \$47.14  
 400 kWh: \$54.77  
 500 kWh: \$62.40  
 600 kWh: \$70.02  
 700 kWh: \$77.65  
 800 kWh: \$85.28  
 1,200 kWh: \$115.78  
 2,000 kWh: \$176.80  
 3,000 kWh: \$253.07  
 4,000 kWh: \$329.34

In contrast, if 8.9 cents was charged for each kWh of energy used, plus a 10% return on investment, the unit cost to a residential customer would be 9.79 cents per kWh. Again, using the same intervals as Table BCUC A26.1, residential customer billings (before taxes) would be as follows:

100 kWh: \$9.79  
 200 kWh: \$19.58  
 300 kWh: \$29.37  
 400 kWh: \$39.16  
 500 kWh: \$48.95  
 600 kWh: \$58.74  
 700 kWh: \$68.53  
 800 kWh: \$78.32  
 1,200 kWh: \$117.48  
 2,000 kWh: \$195.80  
 3,000 kWh: \$293.70  
 4,000 kWh: \$391.60

Please note that the cost differential for low-end users, when comparing current billing with a flat rate of 9.79 cents, ranges from a high of \$22.10 at 100 kWh usage over a billing period to \$6.96 at 800 kWh

usage. In contrast, at 1,200 kWh, the differential is only \$1.70 higher under the flat rate, \$19 higher at 2,000 kWh, \$58.63 at 3,000 kWh and \$62.26 at 4,000 kWh.

Given the BC government's energy policy, please provide an explanation, economic, social and environmental, why FortisBC should continue to deliver a unit cost of power to residential customers who consume 100 kWh over a two month billing period at 31.9 cents, and at 8.2 cents (7.5% below cost) to a residential customer who uses 4,000 kWh.

6. At Andy Shadrack IR1 A4, in answer to Q4 (page 4, lines 26 - 28), Fortis BC states:

*"From a principle perspective, Fortis BC is not proposing or supportive of moving away from postage stamp rates to regional rates at this time".*

At Table BCMEU A45.6 (page 64, lines 8 and 9) FortisBC provides Winter Historical and Projected Load (MW) information to BCMEU.

Please provide the same data in the same format for the same residential sub-regions, for both winter and summer.

7. At BCMEU IR1 A52.2 (page 72, lines 8 - 15) FortisBC provides a rationale as to why it opposes a single rate class for municipal electric utilities:

*"FortisBC believes that each customer should pay its fair share of costs, and that the characteristics of the municipal utilities indicate that a separate rate for each customer class is appropriate and would prevent one unique customer from subsidizing another...Summerland currently has a revenue to cost ratio of 96.6%...if Summerland was grouped with the other municipalities, they would have a revenue to cost ratio of 80.4% and would effectively be subsidizing other municipal wholesale utilities as the rates were rebalanced."*

And in response to Zellstoff Celgar Limited Partnership, FortisBC provides a number of Tables: A32.1 (a) through A32.4 (d) (pages 61-76).

Please provide the residential customer revenue to cost ratio for the same sub-regions as provided to BCMEU in Table A45.6, namely North Okanagan, South Okanagan, Kootenay and Boundary.

8. At Table BCUC A81.1 (page 139, lines 7 and 8) FortisBC provides the average cents per kWh by customer class, and at Zellstoff Celgar Appendix A34.1 (page 1) provides an energy rate of 8.085 cents, plus a \$25.72 basic charge.

Please provide the same data for residential customer sub-regions as provided to BCMEU in Table A45.6, namely North Okanagan, South Okanagan, Kootenay and Boundary.

9. There are some 96,000-plus residential customers in the FortisBC residential customer class. According to Statistics Canada data some 500 persons lived in the BCH Lardeau Wholesale area at the 2001 Census, and according to the 2006 Census Grand Forks Wholesale has approximately 1,862 dwellings, Kelowna Wholesale 47,727 dwellings, Nelson Wholesale 4,427 (plus parts of Electoral Areas E and F of the RDCK), Penticton Wholesale 15,271 and Summerland Wholesale 4,726.

In response to the answer to Andy Shadrack IR1 at A4 (page 4, lines 23 - 28), please explain, economically, socially and environmentally, how FortisBC can then justify giving a different answer to BCMEU at A52.2 (page 72, lines 8 - 18) than they did to Mr Shadrack.

10. At Table BCUC A81.1 (page 139, lines 7 and 8) FortisBC clearly demonstrates that it is prepared to design rates for wholesale customers with residential dwelling numbers as follows:

Lardeau Wholesale 317\*  
 Grand Forks Wholesale 1,862  
 Nelson Wholesale 4,427+  
 Summerland Wholesale 4,726  
 Penticton Wholesale 15, 271  
 Kelowna Wholesale 47,727

\* In the 2006 Census, Area D, Regional District Central Kootenay, had a population of 1,525 and a total number of dwellings of 250. Extrapolating from the 2001 Cenus data, the Lardeau Wholesale area had about one-third of the Area D population, and one-third of the dwellings would be 317.

Please explain why, if it is discriminatory to lump Summerland Wholesale in with the other Wholesale customers under a single rate, it is not also discriminatory to lump residential customers in under one single rate instead of determining revenue cost ratios for the North Okanagan, South Okanagan, Boundary and Kootenay?

11. According to Statistics Canada, Census 2006:

<http://www12.statcan.ca/census-recensement/2006/dp-pd/hlt/97-550/Index.cfm?TPL=PI&Page=RETR&LANG=Eng&T=305&SR=1&S=0&O=A&RPP=9999&PR=59&CMA=0>

the number of dwellings usually occupied varies - for example, as follows:

Area D, Regional District Central Kootenay 74.6%  
 Yahk 83.5%  
 Castlegar 94.9%

At OEIANRI and HID IR1 A11.1.2 (page 23, lines 19 and 20) FortisBC makes the claim that:

*"...250 kWh over two months...is characteristic of an unoccupied building without electric heat..."*

i) Given the varying usual rates of occupancy stated above, please explain what factual evidence FortisBC has for the stated claim to OCEIANRI and HID above.

ii) Further, please explain why such consumption rates could not equally come from low income renters in single rooms, apartments and small cabins, in which there are only a few lights, a small fridge, no washer, dryer or freezer, and sometimes no water heater.

12. OEIANRI and HID IR1 Q16.4 (page 47, lines 1 - 4) asks FortisBC how:

*"...the Energy Charge at 7.627 cents/kWh for Residential and with no other charges supports the claim that the Company has proposed rate structures that encourage energy efficiency and conservation..."*

Given cost/price evidence provided in questions 3 and 5 of this document above, please definitively explain how the introduction of AMI in 2013 and TOU in 2014 will address the price discrimination being experienced by the 21,000 FortisBC residential customers in 2010 who use less than 1,000 kWh in any given billing period.

13. At Wait A6 (page 3, lines 12 and 13) FortisBC states that the intent of a TOU differential is to:

*"...incent conservation, it is not necessarily cost based. The differential is intended to discourage consumption during peak periods".*

At BCUC A7.2 (page 12, lines 7 and 8) FortisBC states:

*"...energy shortfall associated with the peak capacity gap - currently at about 18 GWh of annual requirements - will grow to approximately 131 GWh by 2028..."*

and at line 27 and 28 and page 13, line 1 FortisBC states:

*"Collectively, the FortisBC Plants, the BC Hydro PPA and the Brilliant PPA provided, in 2008, about 99% of the Company's energy requirements, but only about 76% of its peak capacity requirements..."*

i) Please explain how introduction of AMI in 2013 and TOU in 2014 addresses the fact that FortisBC increasingly cannot meet non-peak capacity loads.

ii) Further, please explain, if the objective is to "*incent conservation*", why an increasing block rate design does not give better incentive to residential consumers considering purchase of, for example, compact fluorescent bulbs and LEDs, energy efficient appliances, or switching to a solar hot water heater and/or fridge.

iii) Further still, how does AMI and/or TOU encourage a residential consumer to buy an energy efficient fridge, freezer, front loading washing machine or on demand water heater?

14. It is assumed that the cheapest source of power for FortisBC is that produced by its own Plants, then through long term purchase agreements with BC Hydro and the Brilliant Power Corporation (aka Columbia Power Corporation/Columbia Basin Trust).

i) Is this assumption correct, and is it true that all three of these sources of power are primarily produced on the Kootenay River between Nelson and Castlegar?

ii) Please explain how much of FortisBC's energy requirements and peak capacity requirements were met by FortisBC Plants in 2008 and 2009, and in which sub-regions, in accordance with Table BCMEU A45.6, North Okanagan, South Okanagan, Kootenay and Boundary, FortisBC Plants produced this power.

iii) Further, please explain in which sub-regions, as per above, FortisBC met its own energy requirements and peak capacity with its own Plants, and what percentage of overall requirements and peak capacity were met in sub-regions where it could not meet either or both.

Respectfully submitted,  
Andy Shadrack