Anarchist Mountain Community Society and
Regional District Of Okanagan-Similkameen (AMCS-RDOS)
Response to BC Sustainable Energy Association and Sierra Club BC IR No. 1
FortisBC Inc. 2017 Cost of Service Analysis and Rate Design Application

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1.0 Topic: Qualifications to provide expert evidence
Reference: Exhibit C3-7, AMCS-RDOS Evidence, pages 1 and 51 of pdf

Preamble:

The evidence is identified as an "Expert Submission on Residential Rate Design" by Nicholas Marty. Mr. Marty's one-page CV (page 51 of the pdf) makes no reference to prior experience as an expert witness before regulatory tribunals, and no reference to prior experience with utility rate design.

1.1 Has Mr. Marty ever been recognized as an expert witness before a Canadian or American regulatory tribunal? If so, please provide details.

AMCS-RDOS Response

No

1.2 What involvement has Mr. Marty had regarding utility rate design, apart from BC Hydro's RIB rate and FBC's RCR? Please provide copies of any articles or reports Mr. Marty has produced regarding utility rate design.

AMCS-RDOS Response

FBC's RCR was the result of a Government policy initiative to promote energy efficiency and reduce greenhouse gas emissions. In its "Residential Conservation Rate – Background" statement (included in an email to Mr. Marty on November 27, 2013) the BCUC stated:

> "In 2007, the Government of British Columbia issued its Energy Plan, which set out the Province's commitment to reduce greenhouse gas emissions and maximize conservation efforts. One Policy Action of the Energy Plan is to "explore with B.C. utilities new rate structures that encourage energy efficiency and conservation. The Rate is intended to help achieve the Policy Action of the Energy Plan and to create conservation awareness among all users."

From 1989 to 2007, Mr. Marty worked at a senior level in the Federal Government on developing, implementing and evaluating policy measures to promote energy efficiency and reduce greenhouse gas emissions. Mr. Marty also has extensive regulatory experience as an economist at the National Energy Board.

As a result of this work, Mr. Marty has substantial expertise on the subject of conservation rates, and direct experience turning complex economic concepts into effective policy and program initiatives.

1.3 Is Mr. Marty a member of the Anarchist Mountain Community Society? Is he a director or officer of the Society?

AMCS-RDOS Response

Mr. Marty is a member of the Anarchist Mountain Community Society. He is not a director or officer of the Society.

1.4 Would it be accurate to say that Mr. Marty has a lengthy history of campaigning against FBC's RCR?

AMCS-RDOS Response

That statement is not accurate.

Mr. Marty has been involved in issues concerning the RCR since 2013.

As a resident of FBC's service area, Mr. Marty became aware of the RCR soon after its introduction. He observed that the majority of residents were experiencing rate and bill reductions as a direct result of the RCR while residents that were energy efficient but using electricity for space and water heating were subject to major rate and bill hikes.

Given his expertise as the former Director, Policy Development and Analysis, with the Office of Energy Efficiency, he realized that the RCR was incorrectly designed and, as a result, was having many adverse consequences.

At the suggestion of local MLA, Ms Linda Larson, the AMCS forwarded a petition to the BCUC and the Ministry of Energy & Mines to end the rate discrimination that was occurring under the RCR.

Mr. Marty and the Chair of the AMCS subsequently had a conference call with Mr. Bennett, the Minister of Energy at that time. During this conference call, Mr. Marty presented his analysis of the flaws in the RCR design and the resulting adverse impacts on many rural residents.

Mr. Bennett subsequently requested more information from the BCUC concerning the impact of BC Hydro's and FBC's RIB rates on customers. The Minister also encouraged Mr. Marty to participate in the resulting BCUC RIB Rate Report proceedings. Mr. Marty was an intervener in these proceedings. He did not request PACA funding and participated at his own expense.

During the consultations for the upcoming 2017 FBC Residential Rate Design Application, the Chair of the BCUC encouraged Mr. Marty to intervene in support of a customer group, stating in a letter to him: "your participation and representation of your interests would be valuable to a review of the rate design application, once filed."

2.0 Topic: RIB rate design principles
Reference: Exhibit C3-7, AMCS-RDOS Evidence, page 5 (p. 6 of pdf)

Citation:

"A properly designed two-tier RIB Rate must be cost-based, using the following design principles:

1. Tier 1 Rate equal to the Flat Rate;

2. Tier 2 Rate equal to the marginal cost of new supply; and

3. Threshold(s) set so that each customer has some consumption in Tier 2 but not so much as to be unable to avoid a bill increase by improving energy efficiency,"

2.1 Please provide references in support of this statement.

AMCS-RDOS Response

Please refer to AMCS-RDOS response to BCUC IR#1, 1.1

2.2 Does Mr. Marty agree that class revenue neutrality is an essential principle of a properly designed two-tier RIB rate?

AMCS-RDOS Response

Yes

2.3 For clarity, please define fully what Mr. Marty means by "Flat Rate" in this statement of principles.

2.3.1 Is Mr. Marty's "Flat Rate" based on class revenue neutrality and the same residential class consumption that is assumed for the RIB rate?

2.3.2 If not, please fully explain the methodology and assumptions and provide an example in which this approach has been used elsewhere.

AMCS-RDOS Response

Yes, to 2.3.1

2.4 Please provide a detailed explanation, using numerical examples, of how the "properly designed two-tier RIB Rate" described in the Citation would not over-recover the utility's revenue requirement from the residential class.

AMCS-RDOS Response

A properly designed two-tier RIB Rate would not over-recover the utility's revenue requirement if a sufficient number of customers undertook energy efficiency measures and reduced their

electricity consumption close to their threshold levels. This is shown in the example below.

If all customers reduced their consumption by 10%, then all customers would end up paying the flat rate. In fact, this might result in an under-recover of the utility's revenue requirements since the total amount of electricity consumed would now be 10% lower.

House	kWh	Threshold	Tier 1 $0.08/kWh	Tier 2 $0.12/kWh	Avg Rate $/kWh	Change In Demand	Avg Rate $/kWh
A	30,000	27,000	27,000	3,000	.084	-10%	.080
B	9,000	8,000	8,100	900	.084	-10%	.080

Flat Rate = $0.080; Marginal Cost = $0.120

Under a RIB Rate structure, the threshold(s) is the key determining factor as to whether there is an under or over-recovery of the utility's revenue requirements. Depending on customer responses to the RIB Rate, the threshold might require subsequent adjustments. The RCR avoids an over-recovery of revenue by redistributing the excess revenue obtained from high use electricity customers to low use customers; cross-subsidizing the rates of the latter below the flat rate.

As noted in AMCS-RDOS evidence, Table 4.3, p. 26, according to FBC's calculations, more than $6.6 million will be redistributed in 2018, in this fashion, from high use electricity customers (those consuming more than 15,000 kWh per year) to low use electricity customers.

When FBC (or any utility) sets it rates prospectively on a forecast cost of service, there will be an over or under recovery of revenue to some degree. It is the nature of forecasts that they are not perfect.

In all cases, there will need to be a further adjustment of rates. That said, it is harder to forecast the revenue impact of complex rate structures, such as RIB or TOU rates, compared to a flat rate. Both RIB and TOU rate structures aim to change customer behaviour and behavioural changes are difficult to predict with a high degree of certainty.

2.5 Does Mr. Marty agree that a two-tier RIB rate could not have "threshold(s) set so that each customer has some consumption in Tier 2" without having multiple thresholds? Alternatively, please provide a detailed explanation, using numerical examples, of how this could be done.

AMCS-RDOS Response

Yes, it would be necessary to set personal thresholds or segmented market thresholds.

2.6 Does Mr. Marty agree that a two-tier RIB rate could not have threshold(s) set such that each customer would be able to avoid paying the Tier 2 price by improving energy efficiency without having multiple thresholds? Alternatively, please provide a detailed explanation, using numerical examples, of how this could be done.

AMCS-RDOS Response

Yes, it would be necessary to set personal thresholds or segmented market thresholds.

2.7 Please provide a detailed explanation, using numerical examples, of how the third stated principle could be met in successive years. If in Year One a customer would have seen Tier 2 but takes conservation and efficiency measures to reduce his or her consumption to the threshold, how would the RIB rate cause the customer to see Tier 2 in Year Two?

AMCS-RDOS Response

If in Year 1 a customer had taken conservation and efficiency measures to reduce his/her consumption to the threshold, that would indicate that the customer is aware of the Tier 2 rate and is acting in response to it. This is the objective of the RIB rate.

The RIB rate would cause the customer to see Tier 2 in Year 2 if the customer subsequently increased his/her consumption. In this way, the RIB rate would provide an ongoing incentive to the customer to keep his/her consumption from rising back up to a point where it is significantly above the Tier 1 level.

If in subsequent years, there were indications that the threshold had been set too high and that the RIB Rate were no longer providing an incentive to be more energy efficient, the threshold could be adjusted.

2.8 Please provide examples of any utilities and/or jurisdictions that have implemented a RIB rate design that complies with the three principles stated in the Citation.

AMCS-RDOS Response

It appears that California has implemented a RIB rate design that complies with these three principles.

3.0 Topic: Fuel for space and water heating
Reference: Exhibit C3-7, AMCS-RDOS Evidence, page 5 (p. 6 of pdf)

Citation:

"The most important residential consumption factor, by far, is whether the home uses electricity, rather than other fuels, for space and water heating, which together account for 78% of a typical home's energy consumption."

3.1 Please describe what is meant by "a typical home" in the citation. The mean? The median? Does "home" refer to single family dwellings or to all types of premises of residential customers?

AMCS-RDOS Response

Please refer to AMCS-RDOS response to BCUC IR#1, Q 1.6

3.2 Please provide documentary support for the assertion that space and water heating together account for 78% of a typical home's energy consumption.

AMCS-RDOS Response

Please refer to AMCS-RDOS response to BCUC IR#1, Q 1.6

4.0 Topic: Mr. Marty's RIB rate design
Reference: Exhibit C3-7, AMCS-RDOS Evidence, pages 5-6 (pp. 6-7 of pdf)

Citation:

"Table 2.1 illustrates how a properly designed RIB Rate should work. Customer A is a high use electricity customer (consuming 30,000 kWh per year) and Customer B is a low-use customer (consuming 9,000 kW per year). Such consumption levels are consistent with two identical households with identical levels of efficiency, different only to the extent that the high use customer uses electricity for space and water heating while the low use customer uses natural gas. The Tier 2 threshold is equal to 90% of each customer's total electricity consumption." [underline added]

4.1 In the RIB Rate described by Mr. Marty, is each customer's Tier 2 threshold determined (a) by his or her consumption in the current billing period, or (b) by his or her consumption in some historical period?

AMCS-RDOS Response

In its 2008 RIB Application, BC Hydro described the Customer Baseline Load (CBL) approach as being one "that sets the individual customer thresholds based on a percentage of historic use" (2008 BC Hydro RIB Application, BCUC Reasons for Decision, September 24, 2008, Section 3.2)

4.2 If each customer's Tier 2 threshold is based on the consumption in the current billing period, please explain:

4.2.1 how this differs from paying a flat, blended rate equal to the weighted average of the Tier 1 rate (90%) and the Tier 2 rate (10%); and

4.2.2 how this results in the customer seeing a marginal price equal to the Tier 2 rate, rather than to the blended price.

AMCS-RDOS Response

Not applicable.

4.3 If in Mr. Marty's proper RIB rate design each customer's Tier 2 threshold is determined by the customer's historic consumption, please explain:

4.3.1 how the threshold would be determined,

4.3.2 if, and how, these values would be normalized for year-to-year climatic variability,

4.3.3 if, as in the example, both customers reduce their consumption by 10% in response to the higher Tier 2 Rate, what their thresholds would be in the second year, and

4.3.4 how a threshold would be set for new residential customers.

AMCS-RDOS Response

BC Hydro, in its 2008 RIB Application, surveyed a number of utilities and identified the CBL Structure as one option for establishing the RIB threshold(s). There are many design complexities associated with this option including how it would deal with climatic variability and how it would be set for new customers.

The design complexities of RIB rates and the associated risk of committing design errors is one reason why AMCS-RDOS is recommending an immediate return to a flat rate.

4.4 Please provide documentation to support the assertion that annual consumption levels of 30,000 kWh and 9,000 kWh are consistent with identical households differing only in the lower use customer using natural gas.

4.4.1 Please reconcile this assertion with the list of characteristics differentiating a 30,000 kWh home from a 10,000 kWh home reported in FBC's 2016 submission to the BCUC and cited by Mr. Marty on page 17 of the evidence.

AMCS-RDOS Response

These annual consumption levels were provided by FBC in its response to AMCS-RDOS IR#1, Q 4.1.

5.0 Topic: RIB rate design
Reference: Exhibit C3-7, AMCS-RDOS Evidence, pages 6-7 (pp. 7-8 of pdf)

5.1 Would Mr. Marty consider the PG&E approach, using a tiered rate system with multiple thresholds, to be a valid approach in the FBC service territory? If not, why not?

AMCS-RDOS Response

No. In FBC's service territory the marginal cost of new electricity supply is below the flat rate. RIB rates only provide a better signal to encourage energy efficient consumption behaviour in the circumstances where marginal cost is above the flat rate.

5.2 Please compare the advantages and disadvantages of the PG&E approach, compared to the "properly designed two-tier RIB Rate" described on page 5 (page 6 of pdf) of his evidence, with respect to:

5.2.1 Fairness,

5.2.2 Conservation incentive, and

5.2.3 Administrative complexity.

AMCS-RDOS Response

The California RIB rate appears to have all of the major features of a "properly designed RIB rate".

5.3 Please compare the advantages and disadvantages of the PG&E approach, compared to a flat rate, with respect to:

5.3.1 Fairness,

AMCS-RDOS Response

The PG&E approach would likely not score as well on the "fairness" principle as a flat rate. While PG&E has set differentiated thresholds based on location, whether summer or winter, and whether home heating is electric or natural gas, it does not appear to differentiate on the basis of other important features such as large and small homes and the number of people in a particular dwelling.

In addition, all RIB rates can be viewed as unfair to the extent that they reward customers for being energy inefficient. Energy inefficient customers will generally find it easier to reduce demand through energy efficiency improvements than customers who are already very energy efficient**.**

5.3.2 Conservation incentive, and

AMCS-RDOS Response

In the circumstances where the marginal cost of supply exceeds the flat rate, the PG&E approach should provide better price signals than a flat rate to encourage efficient use. In the circumstances where the marginal cost of supply is below the flat rate, the flat rate should provide the better price signals.

5.3.3 Administrative complexity.

AMCS-RDOS Response

The PG&E approach would be far more complex administratively than a flat rate.

6.0 Topic: Conservation and efficiency impact of RIB rate
Reference: Exhibit C3-7, AMCS-RDOS Evidence, page 7 (p. 8 of pdf)

Citation:

"Customers respond to higher electricity prices by investing in energy efficiency improvements, changing energy-use behaviour and/or switching to non-electric sources

of energy.

An increase in energy efficiency occurs when less energy input is used to achieve the same output or when more output is achieved using the same energy input. Replacing baseboard heating with a more efficient heat pump is an example of an action to improve energy efficiency. The higher the price, the more profitable investments in energy efficiency become. Short-term price increases will not necessarily stimulate much in the way of efficiency improvements since it does not make economic sense to replace heating systems or appliances with more efficient models until they are nearing the end of their economic lives. Thus, it may take 15 or 20 years of sustained higher prices to realize the full energy efficiency impact." [underline added]

6.1 Given that FBC's RIB Rate has only been in effect since 2012, is it reasonable to assume that many of its customers will not yet have replaced heating systems or appliances with more efficient models? If not, why not?

AMCS-RDOS Response

Yes, that is a reasonable assumption.

6.2 For those FBC customers that have not yet replaced heating systems or appliances with more efficient models, would they be more likely to do so in the future with a RIB Rate, or with a flat rate? Please elaborate on the implications, for these customers, of the proposed shift to a flat rate.

AMCS-RDOS Response

In FBC's circumstances where the marginal cost of supply is below the flat rate, the flat rate will send FBC customers the correct price signals to encourage efficient use. FBC's customers can be expected to replace heating systems or appliances with more efficient models to the extent it makes economic sense for them to do so.

6.3 Please confirm that eliminating FBC's RCR would eliminate the ability of the RCR to realize the full energy efficiency impact.

AMCS-RDOS Response

Due to its flawed design, the RCR has been encouraging customers to engage in energy inefficient behaviour (AMCS-RDOS Evidence, Section 4.1, pp 19-20).

Eliminating the RCR and replacing it with a flat rate will increase, not decrease, the likelihood that FBC's customers will engage in energy efficient consumption behaviour.

7.0 Topic: Consequences of elimination of RCR
Reference: Exhibit C3-7, AMCS-RDOS Evidence, page 19 (pdf p.20)

Preamble:

Mr. Marty says that FBC's Tier 2 rate is above the marginal cost and so customers who

pay for electricity at the Tier 2 rate are "over-conserving."

7.1 Please provide an estimate of the increase in annual energy consumption by due to FBC's residential customers no longer "over-conserving," if the RCR was eliminated as proposed by Mr. Marty.

AMCS-RDOS Response

The annual energy consumption that results from customers no longer "over-conserving" will be determined by market forces in an environment where customers are receiving the correct price signals to engage in efficient consumption behaviour. FBC has not provided sufficient data in its Application to make an estimate of the resulting change in annual energy consumption.

7.2 [Does] Mr. Marty agree that the immediate elimination of the RCR Mr. Marty calls for would cause rate shock for a considerable number of FBC customers.

AMCS-RDOS Response

No. Many of the customers who will experience a rate increase due to the elimination of the RCR have, for the last 6 years, enjoyed "the benefit of a relative bill reduction without having made any effort towards conservation behaviour" (FBC 2013 RIB Evaluation Report, p 31).

These customers are free riders who have benefitted from millions of dollars in cross-subsidies due to the RCR's flawed design. Since they have received the benefit of paying less than their fair share of the costs for six years, it is fair for them to start paying their fair share at the start of 2019.

Moreover, some of the customers who will experience a "rate increase" and who are not free riders will actually benefit from the immediate elimination of the RCR. Customers who have reduced their consumption below the break-even point of 15,000 kWh by sacrificing personal comfort, giving up desired electricity-using activities or chopping wood to burn in the fireplace would benefit from being able to resume their pre-RCR lifestyle without having to pay electricity rates that are above cost.

7.3 Is Mr. Marty's justification of the rate shock caused immediate elimination as distinct from phase out that medium- and low-consuming customers deserve adverse rate impacts because they benefited in the past from the RCR?

AMCS-RDOS Response

AMCS-RDOS submits that the rate increases experienced by customers that are a direct result of the elimination of the RCR are not "adverse" and do not constitute "rate shock." (as explained in the Response to BCSEA/Sierra Club IR#1, Q 7.2)

8.0 Topic: Data sources
Reference: Exhibit C3-7, AMCS-RDOS Evidence, pages 19 and 28 (p. 20 and 29 of pdf)

8.1 Please provide the source for the information provided in each column of Tables 4-1, 4.4, 4.5, and 6.2.

AMCS-RDOS Response

Table 4-1: Please refer to AMCS-RDOS response to BCUC IR#1, Q 2.1.

Table 4-4: Please refer to AMCS-RDOS response to BCUC IR#1, Q 2.2.

Tables 4.5 and 6.2: The source of information is FBC Response to AMCS/RDOS IR#1, Q 4.1

9.0 Topic: Cost of heating with electricity or natural gas
Reference: Exhibit C3-7, AMCS-RDOS Evidence, page 23 (p. 24 of pdf)

9.1 Does Mr. Marty acknowledge that FEI's comparison of the relative costs of heating with natural gas and electricity does not take into account the cost of extending the natural gas system to new areas, the customer cost of connecting to the natural gas system, or the customer cost of natural gas space and water heating equipment?

AMCS-RDOS Response

The heating costs referred to in FBC's analysis are the customer's annual purchasing costs of the natural gas and electricity. The estimate for natural gas heating does not include the cost of extending the natural gas system to new areas, the customer cost of connecting to the natural gas system, or the customer cost of natural gas space and water heating equipment. Similarly, the estimate for electricity heating does not include the cost of extending the electricity supply system to new areas, the customer cost of connecting to the electricity grid, or the customer cost of electricity space and water heating equipment.

10.0 Topic: Price discrimination v. undue price discrimination
Reference: Exhibit C3-7, AMCS-RDOS Evidence, page 23 (p. 24 of pdf)

Citation:

"Price discrimination occurs when different customers are charged different prices for the same good or service. In economic terms, the RCR constitutes price discrimination if it is charging some customers higher rates than others, where there is no cost justification for the differential."

10.1 Does Mr. Marty consider that all "price discrimination" is unacceptable, even though the UCA only prohibits rates that are "<u>unduly</u> discriminatory"?

AMCS-RDOS Response

Not all "price discrimination" is unacceptable. "Price discrimination" is unacceptable or "undue" when there is no economic justification for it.

The price discrimination resulting from the RCR constitutes "undue" discrimination because it is the direct result of an improperly designed RIB rate, where "there is no cost basis for the current levels of the Tier 1 and Tier 2 rates that form the RCR, nor for any particular threshold and tiered pricing" (FBC Application, p 71).

11.0 Topic: Rate design
Reference: Exhibit C3-7, AMCS-RDOS Evidence, page 24 (p. 25 of pdf)

Citation:

"Tiered rates are not inherently discriminatory. As shown in Section 2, a properly designed two-tier rate system, with multiple thresholds and the Tier 2 rate equal to marginal cost would not be discriminatory because all customers would be charged roughly the same rate and that rate would be cost-based."

11.1 Would AMCS-RDOS support a properly designed two-tier rate system?

AMCS-RDOS Response

Please refer to AMCS-RDOS responses to BCUC IR#1, 1.10 and 1.11.

11.2 Does the term "multiple thresholds," which is stated to be a component of a "properly designed two-tier rate system," refer to a structure with distinct thresholds for different groups of customers, like that used by PG&E, or a structure where each customer has its own threshold which changes from year to year or from billing period to billing period?

AMCS-RDOS Response

In AMCS-RDOS Evidence, p 6 (pdf), the term "multiple thresholds" is used to refer to the Segment approach to setting thresholds and the term "percentage" thresholds was used to refer to the CBL approach as described in the Response to BCSEA/Sierra, 4.1.

Both structures were identified by BC Hydro in its 2008 RIB Application (2008 BC Hydro RIB Application, BCUC Reasons for Decision, September 24, 2008, Sections 3.2 and 4.2) and either structure could be used to implement a "properly designed two-tier rate system".

12.0 Topic: Marginal cost of new supply
Reference: Exhibit C3-7, AMCS-RDOS Evidence, page 31 (p. 32 of pdf)

Preamble:

Mr. Marty says the RCR "cannot be fixed" because FBC's marginal cost of new supply is higher than the residential flat rate.

12.1 Does Mr. Marty acknowledge that, if FBC's long range marginal cost was above its Flat Rate then an acceptable RIB Rate could be designed?

AMCS-RDOS Response

If FBC's long run marginal cost were above its flat rate, then a RIB rate could be designed that would provide better price signals than the flat rate to encourage efficient use. Whether such a RIB Rate would be "acceptable" would depend on its performance against all eight Bonbright principles plus the governmental objectives of reducing greenhouse gas emissions and mitigating local air pollution.

The complexity of designing percentage or multiple thresholds, the associated administrative costs and the risk of making design mistakes suggest that even such a RIB Rate should only be implemented in those circumstances where the potential benefits clearly exceed the potential costs.

The benefits might exceed the costs in circumstances where the marginal cost of supply is significantly higher than the flat rate and where there is an environmental imperative to reduce electricity demand in order to reduce greenhouse gas emissions.

FBC, however, has a hydro-based system, so raising electricity rates to reduce demand can encourage customers to switch to fossil fuels, thereby increasing greenhouse gas emissions and air pollution. Thus, in FBC's circumstances, the flat rate would be more appropriate than a RIB Rate even if the marginal cost of supply were greater than the flat rate.

In FBC's situation, Demand-Side Management programs, properly designed, would be more effective at promoting energy efficiency improvements than a RIB Rate because they can be targeted specifically at promoting energy efficiency without also encouraging customers to switch to fossil fuels.

13.0 Topic: Optional time of use rate
Reference: Exhibit C3-7, AMCS-RDOS Evidence, page 32 (p. 33 of pdf)

Citation:

"Customers who elect to be charged TOU rates will expect to pay an average rate that is below the default rate and would likely opt out of this rate system if that proves not to be the case. Reducing peak electricity requirements reduces the cost of supplying the electricity to customers, so there is nothing wrong with TOU customers paying an average rate that is lower than the default rate providing the rate differential does not exceed the amount of the cost savings resulting from the load shifting. If the rate differential exceeded the amount of the resulting savings, then this would constitute a cross-subsidy from customers paying the default rate to those paying TOU rates. The TOU system will need to be closely monitored to ensure that such cross-subsidization of customers does not occur." [underline added]

Preamble:

FBC estimates that, under current rates, 19% of residential customers would be better off under the optional TOU rate without any change in behaviour.

13.1 Please confirm that, if the 19% of residential customers referenced in the preamble sign up for the TOU rate and do not change their behaviour, the resulting loss of revenue would be made up by non-participating residential ratepayers and would constitute a cross-subsidization from customers paying the default rate.

AMCS-RDOS Response

This is correct under FBC's proposed TOU rates.

14.0 Topic: Testimonials
Reference: Exhibit C3-7, AMCS-RDOS Evidence, page 45 (p. 46 of pdf)

Citation:

"Residents of Anarchist Mountain, many of whom use geothermal ground-source heat pumps, frequently see their electricity consumption rise to between 7,000 kWh and 8,000 kWh, for a two-month billing period, during the coldest winter months."

Preamble:

One of the testimonials (for Resident #3) provided in Appendix C includes complete billing data for a multi-year period. The record for Resident #3 does show two-month consumption of over 8,000 kWh about once per winter (twice in 2013/14; not at all in 2015/16). It also shows bimonthly consumption of between 3,000 and 5,000 kWh for most other billing periods. The testimonial states that "Our home is already energy efficient," with insulation and energy-efficient windows and doors.

14.1 In the case of Resident #3, please describe the relevant features of the home that explain consumption of between 3,000 and 5,000 kWh per two-month billing period in spring, summer and fall.

AMCS-RDOS Response

There are a number of reasons why customers' electricity consumption may be above the RCR Threshold level, in addition to being energy inefficient and/or using electricity for space and water heating. These include:

- living in single detached homes (as opposed to apartments, condominiums or row houses);
- having a large family;
- using electricity for water pumps and outbuildings;
- using air conditioning;
- home charging an electric vehicle;
- having a hot tub; and
- having an electrically heated swimming pool.

In addition, there will still be demand for electricity for space and water heating during non-winter months but at a lower level.

14.2 Has Mr. Marty, or AMCS-RDOS, reviewed the testimonials to determine if the customer in question would actually be financially better off under a flat rate than the RCR?

AMCS-RDOS Response

No. The purpose of obtaining the testimonials was not to determine who is currently better off financially under the RCR relative to the flat rate. FBC has presented information on that. T

The purpose of the testimonials was to understand how residents have been responding to the RCR in terms of behavioural changes. FBC has not presented information on this in its Evaluation Reports nor in its current Application.

In FBC's response to AMCS-RDOS IR#2, Q 4.2, FBC stated:

> "It is reasonable to assume that customers have responded to the price signal included in the RCR at least to some extent through each of the three response types (i.e. improving energy efficiency, "doing without" behavioural change and switching to a non-electric source of energy). FBC cannot however provide any quantitative assessment of the degree to which each response has contributed to the reduction in energy use attributable to the implementation of the RCR".

The testimonials reveal many customers

- have reduced their consumption by taking non-energy efficiency enhancing measures to the detriment of their own personal welfare and to the environment (by switching from electricity to fossil fuels), and

- deemed to be better off "financially" under the RCR than the flat rate are actually worse off from a total welfare point of view

In sum, the testimonials show the negative impact on high use electricity customers is much greater than what would be determined by solely looking at bill impacts.

By focusing solely on bill impacts and ignoring the many negative welfare impacts, FBC's Evaluation Reports and its current Application have underestimated the adverse impacts of the RCR on customers. It follows that FBC's Application overstates the "adverse" impacts on customers of an immediate return to a flat rate.

The testimonials also reveal that those who rent accommodation that uses electricity for space and water are extremely limited in their ability to reduce their demand through energy efficiency measures and their landlords have no incentive to do so since they are not paying the hydro bills. For renters, the RCR is essentially a tax on their electricity consumption that they have to pay in addition to their rent. Low-income residents are often renters and these residents would benefit from an immediate return to the flat rate.

15.0 Topic: Federal Government
Reference: Exhibit C3-7, AMCS-RDOS Evidence, pdf p.9

"To address these barriers, the Federal Government regulates efficiency standards for appliances and lighting and the Provincial Government includes energy efficiency requirements in the building code. Both Governments and Utilities run information and awareness programs. FBC also provides financial assistance under some of their Demand-Side Management (**DSM**) programs."

15.1 Does Mr. Marty assert that the Federal Government opposes RIB rate structures as a tool in promoting energy efficiency and conservation?

AMCS-RDOS Response

No. The above passage was intended to point out that there are a range of measures introduced by governments and utilities to promote energy efficiency. Whether an FBC customer decides to purchase a more energy-efficient appliance or insulate his/her home is only determined partially by FBC's residential rate structure.

15.2 Does Mr. Marty acknowledge that FBC operates an extensive portfolio of energy efficiency and conservation measures that promote and assist customers (residential and otherwise) to reduce their energy usage?

AMCS-RDOS Response

Yes. In addition, it is Mr. Marty's view that, given FBC is a hydro-based utility, properly designed Demand-Side Management programs would be more effective at promoting energy efficiency improvements than a RIB Rate because they can be targeted specifically at promoting energy efficiency without also encouraging customers to switch to fossil fuels.

16.0 Topic: RDOS
Reference: Exhibit C3-7, AMCS-RDOS Evidence

16.1 What percentage of FBC's customers are members of AMCS? What percentage of FBC's customers are residents of the RDOS?

AMCS-RDOS Response

Neither AMCS or RDOS have calculated those percentages.

16.2 How many of the customers of FBC who are residents of RDOS would be worse off financially under a flat rate than the existing RCR?

AMCS-RDOS Response

Neither AMCS or RDOS have calculated that number.

16.3 Does the RDOS consider that it has a responsibility to represent the interests of its residents who would be worse off financially under a flat rate than under the RCR, as well as those whose bills would decrease?

AMCS-RDOS Response

RDOS represents the interests of all of its constituents, and would like to see a residential rate design that treats all of its constituents fairly.

16.4 Does the RDOS support Mr. Marty's call to replace the RCR with a flat rate, despite the bill increase that this would cause for many of its citizens?

AMCS-RDOS Response

RDOS requests that a flat rate be implemented in place of the RCR effective 1 January 2019.

16.5 Does the RDOS support Mr. Marty's demand for immediate imposition of a flat rate with no five-year phase out period, despite the rate shock that lower-usage customers would experience? If so, please provide the RDOS's justification for this position.

AMCS-RDOS Response

See the responses to 7.2 and 16.4

16.6 Has the RDOS undertaken any analysis in regard to this application other than that provided by Mr. Marty? If so, please describe the efforts it has made to ensure that the positions taken on its behalf respect the interests of all of its citizens. If not, why not?

AMCS-RDOS Response

RDOS has not undertaken separate analysis apart from Mr. Marty's.

RDOS elected officials form positions on the basis of constituent feedback and formalize those positions by bylaw or resolution. Resolutions of support for the AMCS-RDOS position have been previously supplied.

RDOS represents the interests of all of its constituents, and would like to see a residential rate design that treats all of its constituents fairly.