

**ANARCHIST MOUNTAIN COMMUNITY SOCIETY &
REGIONAL DISTRICT OKANAGEN-SIMILKAMEEN**

**FORTISBC 2017 COST OF SERVICE ANALYSIS &
RATE DESIGN APPLICATION**

**EXPERT SUBMISSION ON
RESIDENTIAL RATE DESIGN**

by

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EXECUTIVE SUMMARY

In 2011, the British Columbia Utilities Commission (**BCUC**) approved the Application of FortisBC (**FBC**) to implement a Residential Inclining Balance (**RIB**) Rate – the two-tiered Residential Conservation Rate (**RCR**) -- to replace the existing Flat Rate. In its 2017 Application, FBC recommends a return to a Flat Rate but with a five-year phase-in. FBC maintains that this “is a sound and responsible policy to balance the interests of all residential customers, including high use and low use customers”.

This Submission examines FBC’s proposal to phase-out the RCR and concludes that sound rate-making principles require an immediate termination of the RCR and an immediate return to a Flat Rate, supplemented with optional Time-of-Use rates. Only then will all customers be paying fair and non-discriminatory rates that promote efficient and environmentally friendly consumption.

This Submission shows that, in 2011, three major errors were made in designing and implementing the RCR. Consequently, the RCR, since its inception, has been promoting energy inefficient, rather than efficient, consumption and has been encouraging customers to switch from zero emission hydroelectricity to fossil fuels; thereby increasing greenhouse gas emissions and air pollution.

As a direct result of these design errors

- high-use electricity customers (those consuming more than 15,000 kWh per year) have been overcharged for their electricity consumption by \$30-\$40 million and caused to undertake uneconomic investments and to sacrifice comfort and welfare.
- Low-use electricity customers, in turn, have had their bills subsidized by high-use electricity customers by \$30-\$40 million.

There is no justification for overcharging high-use electricity customers. There is no indication that high use electricity customers are any more inefficient users of electricity than low-use electricity customers. In many instances, high use electricity customers are simply those that use electricity, rather than fossil fuels, for space and water heating and/or need to use air conditioning in the summer months.

FBC argues that

“the manner in which the rate elements were determined in 2011 has little, if any relevance to whether the Company’s proposal to remove the RCR as the default residential rate should be approved in the circumstances before the Commission now.”¹

To the contrary, the original design errors in 2011 are relevant to FBC’s phase-in proposal and the ongoing harm to customers. FBC claims that there are no adverse impacts of continuing with a modified RCR until 2023. However, the analysis in this Submission shows that continuing with the RCR, as proposed by FBC, will:

¹ Response to AMCS/RDOS IR#2, 3.1

- promote inefficient electricity consumption;
- encourage further switching from hydroelectricity to the burning of fossil fuels, adversely affecting the environment;
- unduly price discriminate against high-use electricity customers; particularly against those that use electricity rather than fossil fuels for space and water heating; and
- overcharge high use electricity customers by, at least, a further \$14 million to cross-subsidize low use customers by the same amount.

FBC's proposed five year phase-out of the RCR will continue to overcharge high-use customers and cross-subsidize low use customers, shielding the majority of customers from the true cost of supplying them with electricity. High use electricity customers have been overcharged \$30-\$40 million since 2012 and should not be required to cross-subsidize low-use customers until 2023 by a further \$14 million.

1.0 INTRODUCTION

In 2011, the BCUC approved the Application of FBC to implement a two-tiered RCR to replace the existing Flat Rate. In its 2017 Application, FBC proposes a return to a Flat Rate, but with a five-year phase-in.

FBC's Application offers very little explanation as to why the RCR should be abandoned. FBC's major criticism of the RCR is that it is not cost-based, but FBC does not explain why that is a problem. Many of FBC's remaining comments about the RCR are positive; maintaining that it has been a successful "conservation" initiative and that it "is not unjust, unreasonable, unduly discriminatory or unduly preferential." FBC has provided no analysis of the performance of the RCR against design principles and policy objectives, making it difficult to determine the validity of their comments.

The only analysis contained in FBC's Application pertains to the "adverse bill impacts" that might be experienced by low use electricity customers if the switch to the Flat Rate occurs on January 1, 2019. FBC claims that there are no adverse impacts of continuing with a modified RCR until 2023 but provides no analysis to support their argument. This Submission undertakes the analysis that FBC has declined to undertake, so the BCUC can make a fully informed Decision.

This submission is organized into the following sections

- Section 2 examines the economic theory behind the use of Residential Inclining Block (RIB) Rates to promote energy efficient behaviour and describes three requisite design features.
- Section 3 reviews the history of Residential Inclining Balance (RIB) Rates in BC, starting with the 2008 BC Hydro RIB Rate Application.
- Section 4 assesses the performance of FBC's two-tier RCR against its objectives.

- Section 5 demonstrates how replacing the RCR with a Flat Rate and optional Time-Of-Use Rates will lead to fair and efficient rates for all customers.
- Section 6 examines FBC's claims about the objectives and impacts of the RCR.

The major conclusion of this Submission is that sound ratemaking and basic fairness require the return to the Flat Rate on January 1, 2019.

2.0 THE CONCEPTUAL BASIS FOR TIERED RATES TO PROMOTE ENERGY EFFICIENCY

2.1 The Correct Price Signal for Promoting Efficient Electricity Consumption

Monopolies, because they have the market power to set their own prices, will want to maximize revenues by charging prices above cost to those customers least able to reduce their consumption. This constitutes monopolistic price discrimination. In addition to raising fairness issues, such price discrimination promotes inefficient consumption behaviour. Those being overcharged will underuse the product or service, resulting in a misallocation of resources. Monopolies are therefore regulated with their prices set by the regulatory agencies. The regulatory agencies are generally mandated to prevent such price discrimination and to ensure that the monopoly's prices approximate those that would occur in a competitive market place.

The BCUC describes its mandate as follows

The Commission's mission is to ensure that ratepayers receive safe, reliable, and nondiscriminatory energy services at fair rates from the utilities it regulates, and that shareholders of those utilities are afforded a reasonable opportunity to earn a fair return on their invested capital.²

The BCUC has recently elaborated on its approach to regulation as follows

Regulation exists to protect consumers against the abuse of monopoly power but, in the Commission Panel's view, the superior protection for consumers is the competitive marketplace. ... This is consistent with the first principle outlined in this Section, to only regulate where required. Competitive forces are generally accepted as providing societal benefits and consumer protection more efficiently and effectively than economic regulation. ...

Regulation is costly, time-consuming, and limited by informational asymmetries. It is only in natural monopoly situations where consumer protection is needed that these limitations are outweighed by the benefits of regulation.

² BCUC *Annual Report 2016/2014*, page 1.

Based on the above, the Commission Panel finds as a fundamental principle that regulation is only appropriate where required and is driven by the inability of competitive forces to operate with greater efficiency and effectiveness than a sole service provider.³ Economists agree that efficient consumption occurs when price equals marginal cost – the price that results in a competitive market place. The regulated Flat Rate of an electric utility may be above, below or equal to marginal cost depending on its capital investments and sources of supply. A RIB Rate will only encourage greater efficiency than the Flat Rate in the specific circumstance where the Flat Rate is below the marginal cost of supply. If the Flat Rate is equal to or above marginal cost, then the Flat Rate will provide the correct price signal for promoting economically efficient consumption.

2.2 How a RIB Rate can Promote More Efficient Electricity Consumption

As mentioned above, a RIB Rate will only promote more efficient electricity consumption if the Flat Rate is below the marginal cost of supply. The objective of a RIB Rate is to encourage customers to act as if their electricity rate were equal to the marginal cost of new electricity generation, without raising the average rate that each customer pays. The reason that everybody cannot simply be charged a higher Flat Rate equal to the marginal cost is because doing so would increase the revenues received by the utility above the level required to earn a fair rate of return.

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,

The amount of energy consumed is affected, to a degree, by the level of energy efficiency but it is primarily a function of the size of the dwelling, number of occupants and the energy-using activities of the residents. 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. The correct implementation of a RIB Rate requires setting different thresholds for different customers to reflect the differences in the ways that electricity is used.

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.

³ BCUC Report, *FortisBC Energy7Inc. ~ Inquiry into the Offering of Products and Services in Alternative Energy Solutions and Other New Initiatives*, December 2012, page 14.

Following the introduction of the RIB Rate, both customers experience a rate increase from 8 cents per kWh (the Flat Rate) to 8.4 cents per kWh (a 5% increase). At the margin, however, both customers now pay 12 cents per kWh (the marginal cost of supply) and so base their consumption behaviour on this higher rate. If both customers reduce their consumption by 10% in response to the higher Tier 2 Rate, they both end up experiencing no overall rate increase; paying the same average rate as before (i.e. the Flat Rate).

Table 2.1: Two-Tier System with Percentage or Multiple Thresholds

House	kWh	Threshold	Tier1 \$0.08 /kWh	Tier2 \$0.12 /kWh	Avg Rate \$/kWh	Change In Demand	Avg Rate \$/kWh
A	30000	27000	27000	3000	.084	-10%	.080
B	9000	8100	8100	900	.084	-10%	.080

Table 2.2 shows what happens if a single fixed threshold of 9000 kWh is used. In this case, Customer A's rate increases from 8 cents per kWh to 10.8 cents per kWh (a 35% increase), while Customer B's rate remains the same. Customer A reduces demand by 10% but this only reduces the average rate to 10.7 cents per kWh. In order to reduce the average rate back to the flat rate of 8 cents per kWh, Customer A has to reduce consumption by 70% -- essentially, using zero electricity for space and water heating.

Table 2.2: Two-Tier System with Single Fixed Threshold

House	kWh	Threshold	Tier1 \$0.08 /kWh	Tier2 \$0.12 /kWh	Avg Rate \$/kWh	Change In Demand	Avg Rate \$/kWh
A	30000	9000	9000	21000	.108	-10%	.107
B	9000	9000	9000	0	.080	0%	.080

The repercussions of using a single fixed threshold for a non-homogeneous set of customers are clear. Customer B does not receive a signal to be efficient at the marginal cost of electricity and so continues to under-conserve. Customer A conserves but, nonetheless, experiences a huge (34%) rate increase. And because Customer A is unable to reduce his bill to the pre two tier level, there is an increase in revenue to the utility creating a situation where Customer B will end up being cross-subsidized, paying an average rate below the Flat Rate.

California has addressed this issue by designing a tiered rate system with multiple thresholds. According to PG&E's website:

"While rates are the same across PG&E's service area, the amount of electricity required to move up the tiers over a month is different for each customer depending on their location, whether summer or winter, and whether home heating is electric or natural gas PG&E has 10 climate zones across its service area ... People in hotter climate zones have higher baselines than those in cooler climates, meaning they must use more electricity to move into a new tier and a higher rate, than people in cooler climate zones. As a result of this tiered

system and baseline/climate zone design, **people across PG&E's service area pay similar overall average rates for electricity.** Not having the same baseline across PG&E's service area also prevents a customer in a hotter climate such as Kern County from subsidizing or lowering the bills of those customers in cooler climates such as San Francisco County."⁴ (emphasis added)

2.3 Three Types of Customer Action in Response to Higher Electricity Prices

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.

Behavioural change, in this context, is "doing without" to reduce the level of energy consumption. Turning the thermostat down below comfort level is an example. Fuel switching occurs whenever there is a major change in the relative prices of competing fuels. All things being equal, higher electricity prices will make it more profitable to invest in non-electric equipment and appliances where they are available.

A successful RIB Rate is one that incents economically efficient investments in improving household energy efficiency. For hydro-based systems like those of BC Hydro and FBC, it is important not to encourage fuel switching since the lowest cost alternative energy source, particularly for space heating, is often a fossil fuel, such as natural gas, propane, heating oil or wood. Sacrificial behaviour is usually a temporary response and is easily reversible. Sustained sacrificial behaviour can mean severe hardship for affected customers. It is normally only encouraged by governments to deal with short-term shortages of supply.

2.4 Supplementing the Correct Price Signals

An essential step in promoting optimal energy efficiency is getting the price signals correct. But markets are not perfect and there are barriers in the marketplace that prevent customers from fully responding to those price signals. These market barriers include:

- lack of information or awareness;
- high upfront capital costs; and

⁴ https://www.pge.com/en_US/residential/rate-plans/how-rates-work/learn-how-rates-are-set/learn-how-rates-are-set.page

- split incentives (rental owner not paying the utility bills).

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.

Customer efficiency not only depends on getting the price signals correct but also on the BCUC ensuring that FBC's DSM programs are correctly designed and implemented.

3.0 THE EVOLUTION OF B.C.'S TWO-TIER RATE SYSTEM

3.1 BC Hydro 2008 RIB Rate Application

In its 2008 RIB Rate Application, BC Hydro stated that the objective of switching from a Flat Rate to a RIB Rate was to incent more economically efficient electricity consumption choices:

“The desire to incorporate an incentive for conservation into its rates has prompted BC Hydro to apply for approval of a rate structure that sends a price signal to customers that better reflects the higher long-run cost of new electricity supply. In the current and foreseeable future, where the long-run cost of new electricity supply is substantially higher than the embedded cost of BC Hydro's existing assets, such a rate structure sends price signals that will encourage economically efficient electricity consumption choices and, thus, electricity conservation”⁵

BC Hydro proposed four “efficiency tests” for the RIB Rate design:

1. No rate decreases;
2. Maximize the number of customers that see the Step-2 Rate;
3. Maximize the differential between the Step-1 Rate and the Step-2 Rate; and
4. Increase the Step-2 Rate to no more than the full incremental cost of new supply.

On these four “tests”, BC Hydro stated:

“BC Hydro considers that the “no rate decrease” test to be a pass/fail test and that limiting the Step-2 Rate to an amount no greater than the cost of new supply to be a limiting principle”.⁶

⁵ BC Hydro 2008 RIB Application, February 2008, p I-9

⁶ BCUC Reasons For Decision, BC Hydro RIB Application, September 24, 2008, p 84

The BCUC agreed with BC Hydro's fourth test, stating:

"The Commission Panel is of the view that a suitable cap for the Step-2 rate is BC Hydro's current estimate of the cost of new supply at the plant gate."⁷

However, the BCUC rejected the first test and set the Tier 1 rate below the current flat rate, thereby ensuring that those customers with little or no consumption in Tier 2 would experience rate decreases. In its Decision, the BCUC stated:

"The Commission Panel does not consider that the reduction ... will send erroneous price signals to BC Hydro's low usage customers or otherwise encourage consumption".⁸

The BCUC also concluded that there was no need to set low "lifeline rates" for low-income customers because:

"the vast majority of BC Hydro's low-income customers will be better off under a simple two-step inclining block structure that is revenue neutral for the residential customer class than under the current flat rate structure".⁹

The BCUC established a single threshold for all customers of 1350 kWh per two-month billing period (90% of the median consumption of BC Hydro's customers). The BCUC examined alternatives to a single threshold for all residential customers, including:

- Individual thresholds for customers based on some fixed percentage of their historical usage;
- Multiple thresholds for different sub-classes of residential customers defined by their characteristics such as location, heating type, number of occupants and dwelling type (similar to the California approach); and
- Seasonal rate structures whereby the threshold or the rates vary by season.

The BCUC rejected all of these alternatives due to their administrative complexity; stating:

"The Commission Panel is persuaded by the rationale for simplicity put forward by BC Hydro and, accordingly, accepts a simple two - step inclining block rate structure as an appropriate initial design for a residential conservation rate".¹⁰

With respect, the BCUC allowed two key design errors in implementing BC Hydro's RIB Rate

1. the Tier 1 rate was set below the Flat Rate, and

⁷ *Ibid*, p 108

⁸ *Ibid*, p 109

⁹ *Ibid*, p 32-33

¹⁰ *Ibid*, p 79

2. a single fixed threshold was set for all customers.

The combined effect was that high use customers would experience rate and bill increases relative to the flat rate while low use customers would see decreases in rates and bills. Low use customers would be incented to be less energy efficient rather than more energy efficient.

3.2 BC Hydro 2010 RIB Rate Re-Pricing Application

In 2010, BC Hydro filed an application concerning the manner in which general rate increases were to be applied to the Step 1 and Step 2 rates. In its 2008 Decision, the BCUC had set the Step 1 rate at 5.98 cents/kWh and the Step 2 rate at 8.27 cents/kWh; its estimate of the marginal cost of supply.

Based on its 2009 Clean Power Call, BC Hydro now estimated that its marginal cost of electricity supply could be as high as 13.2 cents/kWh by April 1, 2011. The BCUC concluded:

“the correct price signal for customers to understand what is happening to the cost of energy they will consume in the future is the LRMC and that the Step-2 rate should move to the LRMC as quickly as feasible”.¹¹

The BCUC’s Decision resulted in a widening of the differential between the Tier 1 and Tier 2 Rates from 32% to 50%. Due to the continuing use of a single fixed threshold for all customers, there was a corresponding increase in the differential between the average rates paid by high use electricity customers and those paid by low use customers.

3.3 BC Hydro Evaluation of the RIB Rate – 2009 to 2012

BC Hydro’s 2014 RIB Rate Evaluation Report covered the period from 2009 to 2012. This Report showed that the RIB Rate was not performing well against its original objectives. The major conclusions were:

- 35% of BC Hydro’s customers “never” saw the Step 2 price in 2012 while 25% of customers “always” did and 40% of customers “sometimes” did.
- a total of 50% of residential customers appear to be aware of the RIB.
- awareness of the RIB does not appear to have significant influence on customer investments in energy-efficient equipment or participation in Power Smart programs.
- the total amount of the household electricity bill serves as the greatest incentive to manage electricity consumption among residential customers, followed by electricity prices.

¹¹ BCUC Reasons For Decision, BC Hydro 2010 RIB Rate Re-Pricing Application, Executive Summary

As described in Section 2 of this Submission, the objective of the RIB Rate is for customers to engage in energy efficient behaviour on the basis of the Step 2 rate (ie the marginal cost of supply) rather than on their total electricity bill. For that to happen, the customer must have a significant portion of their consumption in Step 2 and be aware of the Step 2 rate.

The 35% of customers that never saw their consumption in Step 2 would not have “conserved” in response to higher marginal prices. The same would have been true for the 50% of customers who did not even know that the RIB rate existed. All that can be concluded with certainty is that 25% of customers may have changed their behaviour to reflect the marginal cost of electricity. And, even in their case, BC Hydro found little evidence of their investing in energy-efficient equipment; suggesting that their primary response may have been to “do without” or to switch to non-electric sources of energy.

3.4 FBC 2011 RIB Rate Application

The BCUC, in its Reasons for Decision for the 2011 FBC RIB Rate Application, articulated quite clearly the rationale for tiered rates:

“In a competitive market, rising prices affect consumers’ behaviour by sending a price signal to induce consumers to reduce consumption. Thus, rising prices discourage the uneconomic use of scarce resources. In a perfectly competitive market, the price of any increment of a resource will be driven to the full economic cost of that increment, and will therefore be an “economic efficient” price which achieves optimal resource utilization. In the absence of market pricing, as is the case in the regulated sector, the challenge for utilities and regulators is to establish an economic efficient price, or rate, that encourages energy conservation while ensuring that the utility’s revenue requirement is met. While an arbitrary increase in a rate may well encourage less consumption, it may not be an economically efficient reduction in consumption. In any event, given revenue requirement constraints, a flat rate cannot simply be increased. An inclining block structure, which charges a lower rate for amounts consumed below a threshold and a higher rate above that threshold, can potentially be structured to be both economically efficient and meet the utility’s revenue requirements. However, a RIB rate structure that is incorrectly priced can have disadvantages and unintended consequences, the principal among them being that customers overuse underpriced resources and underuse overpriced resources. The choices made are suboptimal and the consequence is lower productivity and/or lower conservation. A rate structure based on sound rate-making principles can ensure that what consumers pay will reflect the true economic value of the energy they buy, and that energy resources find their best possible uses.” (emphasis added)¹² ...

“An important characteristic of a RIB rate structure is that it allows the utility to introduce price signals that reflect the increased marginal cost of electricity. Setting the Block 2 rate equal to the LRMC and allowing the Block 1 rate to be set residually ensures that any consumption, in excess of the threshold, is billed

¹² BCUC Decision, FBC RIB Rate, January 13, 2012, p 21

at the LRMC. The Panel considers this to be a key element of a RIB rate that can be used to induce conservation and be economically efficient”.¹³

However, three key design errors resulted in FBC’s RIB Rate structure being “incorrectly priced” and consequently having many “disadvantages and unintended consequences”.

As with BC Hydro’s RIB Rate, the BCUC allowed a single fixed threshold for all customers. FBC provided a list of other potential RIB rate structures, including RIB rates that:

- feature multiple thresholds and rate blocks;
- include a time component such as hourly or seasonal blocks;
- contain a demographic parameter such as income or heating fuel choice;
- feature a geographic parameter; and
- feature an individual customer consumption baseline.

However, FBC recommended against adopting any of them, arguing that

“consistency with the four component rate structure adopted by BC Hydro is a desirable component of its RIB rate and that the Commission should not consider any rate variant that does not comply.”¹⁴

The BCUC Panel agreed, stating it:

“is supportive of its (FBC’s) goal to maintain provincial consistency. The single threshold with two blocks is simpler to implement and understand - for both the utility and its customers – when compared to structures with multiple thresholds.”¹⁵

The BCUC decided that there would be one fixed threshold for all customers, which it set at 1600 kWh for a two-month billing period. This decision ensured that many low use electricity customers would have little or no consumption in Block 2 and thus would financially benefit from moving from a flat rate to a RIB rate. How many would benefit, and to what extent, would depend on the levels set for the Tier 1 and Tier 2 Rates.

FBC recommended setting these rates so: “95% of customers will see a RIB related increase of less than or equal to 10%”. The BCUC agreed.

¹³ *Ibid*, p 22

¹⁴ 2011 FBC RIB Rate Application, Final Submission, p. 2

¹⁵ BCUC Decision, FBC RIB Rate, January 13, 2012, p 23

As recognized by the BCUC Panel:

“once the three key determinants - the Customer Charge, threshold and customer impact criterion - have been selected, there is only one combination of Block 1 and Block 2 rates that can satisfy the revenue requirement constraint”.¹⁶

FBC observed that:

“An increase in the Block 2 rate of only 1.4 percent would push it beyond the LRMC.” (BCUC Decision, FBC RIB Rate, January 13, 2012, p 38)

While the BCUC Panel confirmed that “the long-run marginal cost of new supply continues to be the appropriate referent for the Block-2 energy rate”, they stated they were “not prepared to direct that the Block-2 rate be capped at the LRMC”.¹⁷

By setting the Tier 1 and Tier 2 rates based on FBC’s 95%/10% principle, the Tier 1 Rate was set below the Flat Rate. And by approving a “pricing principle” that would see the Tier 2 Rate increasing faster over time than the Tier 1 Rate, the Tier 2 Rate did not reflect the marginal cost of new supply.

These design features did not promote economically efficient consumption behaviour, but instead financially benefitted the majority of customers at the expense of the minority.

3.5 FBC 2013 Residential Conservation Rate Information Report

On October 31, 2013, FBC filed a Residential Conservation Rate Information Report for the period July 1, 2012 to June 30, 2013. FBC reported on pages 1, 13, and 15, that:

- 71% of customers received bills lower than would have been received under an equivalent flat rate;
- 38% of customers received bills more than 10% lower than if billed on the flat rate;
- 8.4% of customers had bills more than 10% higher than if billed on the flat rate; and
- 71% of customers were “not aware” of the RCR.

In estimating the conservation impacts, the Report stated:

“For electric space heat customers, and to a lesser extent for customers with no gas availability, the higher block 2 rate impacts a greater portion of their bills and kWh usage. Because electric heat customers see a larger bill impact, they also have a bigger reduction in their energy use. And because there has not been sufficient time for much change in heating source, it is likely that these customers

¹⁶ BCUC Decision, FBC RIB Rate, January 13, 2012, p 36

¹⁷ *Ibid*, p 40)

are reducing their usage through lowering their thermostats. This behavioral change may not continue over the long term for all customers, and the higher bills may eventually lead to a shift away from electric heat. While it may be desirable for the RCR rate to promote the efficient use of energy, in the short term it may be coming at the expense of customers' comfort levels in their homes"¹⁸

Other conclusions in the Report were:

- A portion of customers have the benefit of a relative bill reduction without having made any effort towards conservation behaviour;
- A portion of customers have experienced significant bill increases due to their use of electric heat;
- The RCR is poorly understood;
- Conservation results, while present, are uncertain and less than forecast; and
- The current level of the Block 2 price is above FortisBC's current marginal price of electricity which in the opinion of the Company runs counter to the economically efficient setting of rates.

FBC observed that:

"While an inclining block rate may be well suited to other jurisdictions, experience has shown that in FortisBC's service area, which is largely rural and has a relatively low penetration of alternative heating options such as natural gas, it is not without issues. Given the Company's current load and resource mix there is little to suggest that the RCR in its current form provides an economic benefit to FortisBC's customers through a reduction in overall costs.... In the opinion of the Company a move away from a flat rate structure is not an obvious or necessary conclusion given FortisBC's circumstances".¹⁹

It is clear from this Report that the RCR was not meeting the original objective of promoting economically efficient electricity consumption. More than 70% of customers experienced lower rates and lower bills than under the Flat Rate and were unaware of the RCR. In their case, the RCR was encouraging them to consume more electricity than under the flat rate. At the same time, the minority of customers whose rates and bills had gone up were being encouraged to underuse electricity because the Tier 2 rate was above the marginal cost of new supply.

However, the BCUC, in its letter to FBC of January 30, 2014, re: FBC RCR Evaluation Report, came to a different conclusion:

"Upon review of the Report, the Commission is satisfied that preliminary results of the Residential Conservation Rate (RCR) indicate electricity conservation and general customer impact is consistent with forecasts contained in FortisBC's

¹⁸ FBC 2013 RCR Information Report, Appendix C, Conservation Results Methodology, p 23-24

¹⁹ FBC 2013 RCR Information Report, p 32

RCR Application. As such, preliminary evidence demonstrates that the RCR is achieving its intended results”.

3.6 FBC 2014 Residential Conservation Rate Information Report

On November 28, 2014, the FBC filed its second Information Report on the RCR, covering the period from July 1, 2012 to June 30, 2014. Most of the Report’s findings were the same as those contained in the 2013 Information Report.

The Report did elaborate further on the impact of the RCR on high use electricity customers, stating:

“The key point here is that electric heat customers have higher annual consumption, on average, and as such would be expected to have relatively high adverse billing impacts if billed under the RCR. Furthermore, the bill impact has increased relative to the bill impacts contained within the Application due to the increasing spread between Tier 1 and Tier 2 rates”.²⁰

“The analysis shows that, as a group, customers that use a heat pump as a primary heat source are impacted to a greater degree than customers in general”.²¹

“Some level of subsidization was expected and has already been deemed to be acceptable by the Commission with the approval of the rate structure. The Company does not presume that high consumption is the result of wasteful or inefficient use of electricity by its customers and acknowledges that in some cases (such as with some heat pump customers) may be the result of a conscious decision to install an option perceived to make less of an environmental impact”²²

The Report also stated:

“The current Tier 2 rate of 13.54 cents/kWh exceeds any value for LRMC that has been discussed in any FBC filing during or since the original RCR Application.”²³

As with the first Information Report, FBC’s evaluation showed that the RCR was not meeting the original objective of promoting economically efficient electricity consumption choices. Indeed, FBC’s Report showed that the RCR was performing worse against the objective of promoting conservation and energy efficiency than had been reported in the first Evaluation since the Tier 2 rate was rising further and further above the marginal cost of electricity supply.

Nevertheless, FBC in its Reply Submission of February 20, 2015, p 5, stated: “There is nothing contained in the Report that requires changes to the basic structure of the rate at this time”.

²⁰ FBC 2014 RCR Information Report, p 16

²¹ *Ibid*, p 18)

²² *Ibid*, p 7

²³ *Ibid*, p 23

The BCUC in its letter to FBC of March 26, 2015, re FBC RCR Evaluation Report, stated:

“The Commission reviewed the Evaluation Report and intervener comments and finds there is no evidence that the rate is not achieving conservation as intended and therefore there is no reason to make changes to the rate at this time”.

3.7 2017 RIB Rate Report

On July 6, 2015, Mr. Bill Bennett, Minister of Energy & Mines, wrote to the BCUC requesting information on the bill impacts of the RIB rates: in particular:

- Do RIB rates cause a cross-subsidy between customers with and without access to natural gas service?
- What evidence is available about high bill impacts on low income customers?
- What evidence is available about factors that lead to high-energy use?

On August 17, 2015, the BCUC issued a request to FBC and BC Hydro to respond to the Minister’s questions, stating on page 2:

“Minister Bennett has also set certain issues as out of scope for this review process. Specifically, Minister Bennett states that any analysis of higher greenhouse gas emissions, electricity conservation, revenue neutrality resulting from the residential inclining block rates and any analysis of alternative rate structures are best left to existing regulatory processes other than this review process”.

In response to the Minister’s first question, FBC presented EES Consulting’s COSA Report on the potential cross-subsidy between customers with and without access to natural gas service. This Report calculated that FBC’s customers in the *without-access* group had a Revenue/Cost ratio of approximately 108.5%, while customers in the *with-access* group had an R/C ratio of approximately 94%. The Report concluded:

“This clearly shows that the costs to serve the No-Gas customer group is much lower than for customers with access to natural gas. This is because they have higher average use per customer and they are less likely to peak at the time of the system peak. At the same time, the revenue for customers in the No-Gas group is higher on a per unit basis because a greater share of their consumption falls within the upper rate Tier. Given both the difference in costs and in revenues, customers with access to natural gas are paying less than their share of costs. Customers without access to natural gas are paying more than their share of costs”.²⁴

²⁴ FBC RIB Rate Submission, September 30, 2016, Appendix A, EES COSA Report

Concerning the Minister's second question, FBC determined that 65.2 percent of FBC's low-income customers were better off under the RIB rate than the flat rate while 9.7 percent of its low-income customers were more than 10 percent worse off.

Concerning the Minister's third question, FBC's Submission found, on page 19, that high use homes (30,000 kWh per year) differed significantly from low use homes (10,000 kWh per year) in the following ways:

- "more likely to be a single family detached dwelling rather than a duplex, townhouse, apartment or mobile home;
- more likely to be 2,500 ft² or larger;
- more likely to have electric baseboards or an electric forced air furnace rather than a natural gas forced air furnace as the primary heating method;
- less likely to have central air conditioning but more likely to use a portable air conditioner;
- more likely to have a large capacity (60 imperial gallon) electric hot water tank and less likely to have a 33 gallon tank; and
- more likely to have a second refrigerator"

FBC's Report also stated:

"The fact that the Tier 2 rate is 36% higher than the LRMC suggests that the Tier 2 rate exceeds the level that leads to economically efficient purchase decisions on the part of customers".²⁵

In its March 28, 2017 Report to the Government of British Columbia, the BCUC made the following conclusions in the Executive Summary:

"Replacing the previous flat rate structure, the RIB rates were introduced to incent consumers to conserve energy and promote energy efficiency, and there is evidence that this is indeed happening"

"It has been suggested that the RIB rates may cause a cross-subsidy, whereby people living in areas without access to natural gas, and who are therefore more likely to heat their homes and hot water with electricity, subsidize people living in areas which do have access to natural gas. The Commission has considered this question from multiple perspectives, and determined that there is no evidence to support this theory".

"There is a "break-even point" (approximately 2,300 kWh per billing period for BC Hydro and 2,500 kWh per billing period for FortisBC) above which the RIB rate bill is higher than the equivalent flat-rate bill, and below which the RIB rate bill will be lower. But this does not constitute a subsidy, and neither is it unjust,

²⁵ FBC RIB Rate Submission, September 30, 2016, p 7

unreasonable, unduly discriminatory or unduly preferential, the tests the Commission must use when setting rates”.

With regard to the BCUC’s first statement, there was no evidence actually presented during the proceedings to support the conclusion that the RIB Rate was promoting energy efficiency. In fact, FBC’s evidence that the Tier 2 Rate was 36% above marginal cost directly refuted the BCUC’s conclusion.

With regard to the BCUC’s second statement, the EES Consulting Report definitely constituted evidence in support of the “theory” that customers without access to natural gas were cross-subsidizing those with access. There was some uncertainty about the amount of the cross-subsidization, as estimated by the R/C ratios, but that did not justify the BCUC’s unconditional statement that “there is no evidence to support” the existence of such a cross-subsidy.

Moreover, the real area of cross-subsidy is between high use electricity customers and low use electricity customers; particularly between customers using electricity for space and water heating and those using non-electric sources such as natural gas, wood, heating oil, propane etc. Many customers without access to natural gas use wood for heating and thus can avoid having a significant portion of their electricity consumption in Tier 2. So, they can be recipients of the cross-subsidization.

In addition, there are those customers with “access” to natural gas who still use electricity for heating because of the high upfront costs of converting their heating systems to natural gas. These customers can be subsidizers under the RIB rates, as structured. The RIB Rate Report failed to point out any of the above considerations in its report to the Minister, resulting in the Minister’s response on April 10, 2017 that stated:

“Having read the report, I am satisfied that RIB rates do not represent a cross-subsidy between customers”.²⁶

As shown in Section 4 of this Submission, this conclusion by the Minister was erroneous.

With regard to the BCUC’s third statement, the BCUC’s conclusion that the RIB rate was “not unjust, unreasonable, unduly discriminatory or unduly preferential” was largely based on the argument that:

“The RIB rates are conservation rates; that is, their purpose is to conserve energy or promote energy efficiency by providing a higher incentive, in the form of a higher rate for electricity purchased in the second tier, for higher-use customers to reduce consumption. Since it is not the purpose of the RIB rates to benefit any customers at the expense of other customers, this supports the Commission’s view” (that there is no undue discrimination in the RIB rate).²⁷

This statement may be true for a correctly designed RIB Rate but it is not true for FBC’s RCR, as structured. As shown in this Submission, the way the Threshold and the Tier 1 and Tier 2 Rates were set in 2011 resulted in the majority of FBC’s customers benefitting

²⁶ FBC 2017 COSA & Rate Design Application, Appendix J

²⁷ BCUC Report to the Government of BC on the Impact of BC Hydro and FortisBC’s RIB Rates, March 26, 2017, P 6

at the expense of the minority. At the same time, the objective of promoting energy efficiency was essentially abandoned when the decision was made to drop the requirement that the Tier 2 rate not exceed marginal cost.

4.0 THE PERFORMANCE OF THE RCR AGAINST OBJECTIVES AND DESIGN PRINCIPLES

4.1 THE RCR in Promoting Economically Inefficient Customer Behaviour

As stated in Section 2 of this Submission, the objective of RIB Rates is to encourage all customers to act as if their electricity rate is equal to the marginal cost of new electricity generation without actually raising the average rate that each customer pays.

As shown in Table 4.1, 20% of customers have, on average, more than 36% of their electricity consumption in Tier 2. This means that they are likely basing their consumption behaviour on the Tier 2 Rate of 15.62 cents/kWh. According to FBC, the marginal cost of new supply is 9.9 cents/kWh. So, the Tier 2 rate is 58% above marginal cost. These customers are therefore conserving more than is economically efficient.

Table 4-1: Electricity Consumption in Tier 2 and Average Rates

Annual kWh	Percent of Customers	Percent of Use In Tier 2	Average Rate Cents/kWh
Above 35000	2	> 73	14.5
30000-35000	1	68 - 73	14.0
25000-30000	2	62 - 68	13.7
20000-25000	5	52 - 62	13.3
15000-20000	10	36 - 52	12.6
10000-15000	22	4 - 36	11.5
5000-10000	37	0 - 4	10.4
0-5000	21	0	10.1

Tier 1 Rate = 10.12 cents/kWh
Tier 2 Rate = 15.62 cents/kWh
Marginal Cost = 9.9 cents/kWh
Flat Rate = 11.75 – 12.02 cents/kWh

Many of the 22% of customers that are consuming between 10,000 and 15,000 kWh have a significant percentage of their electricity consumption in Tier 2 and are therefore likely basing their consumption behaviour on the Tier 2 Rate of 15.62 cents/kWh. Thus, even though these customers are paying average rates close to the Flat Rate, they, too, are over-conserving in the same way as those whose consumption is greater than 15,000 kWh.

The remaining 58% of customers have virtually no consumption in Tier 2 and are therefore making their electricity consumption decisions based on the average rate rather than on the Tier 2 Rate. These customers had their average rate reduced when the RCR went into place and even now, six years later, are paying a rate that is only 7% higher than the 2012 Flat Rate (9.447 cents /kWh). So, they clearly haven't been

incented to conserve at all and, relative to the current Flat Rate, are being encourage to under-conserve.

The RCR has sent the wrong price signal to at least 40% of FBC's customers, causing them to over-conserve. At the same time, it has encouraged the 60% majority of customers to consume more electricity than they would under a Flat Rate.

4.2 The RCR Causes High-use Customers to Sacrifice their Personal Welfare

Electricity demand reduction can include:

- improving energy efficiency (e.g. replacing an electric hot water heater with a more energy-efficient model);
- “doing without” behavioural change (e.g. turning down the thermostat in an electrically heated home below comfort level); or
- switching to a non-electric source of energy (e.g. heating the home with natural gas or wood instead of electricity).

In its 2014 Evaluation Report, BC Hydro found that:

“awareness of the RIB does not appear to have significant influence on customer investments in energy-efficient equipment or participation in Power Smart programs”²⁸

FBC's 2013 Information Report, found that:

“While it may be desirable for the RCR rate to promote the efficient use of energy, in the short term it may be coming at the expense of customers' comfort levels in their homes”.²⁹

It is not possible for customers with half or three-quarters of their consumption in Tier 2 to eliminate the adverse bill impacts of the RCR through energy efficiency improvements alone, particularly since they may not be energy inefficient in the first place. More drastic action has been required, as shown by the nearly 200 “testimonials” provided by AMCS/RDOS customers contained in Appendix C of this Submission. A few excerpts from these testimonials are provided below.

“Because of the outrageous heating bills in the winter, we have decided to completely shut OFF our furnace heat for the past 2 winters and only run portable heaters wherever we sit and that's under the blanket. Our beds have heating blankets for warmth. We walk around in jackets and sometimes even mitts when sitting. (Resident #104)

“We moved here just over 1 yr ago, Sept. 2016. I have never had such outrageous Fortis bills like this. We kept the heat at 12* C (54* F) when we were at work, and

²⁸ BC Hydro Evaluation of the RIB Rate, June 2014, Executive Summary, p vii

²⁹ FBC 2013 RCR Information Report, Appendix C, Conservation Results Methodology, p 23-24

upped it to 15* for a couple of hours in the evening & morning. This is not hot by any means! No dishwasher, no dryer (hanging clothes on the line) no hot tub, no baths, no excessive lights/tv/computer usage. Our bill was an outrageous \$1200! I have never had anything like it! We have had to "tarp" off doorways/hallways to conserve heat, & live only in the back bedroom/bathroom with an energy efficient infra-red space heater, since we can't afford to heat the whole house. No one can visit; it's too cold in the rest of the house. We have to make sure pipes in the rest of the house don't freeze". (Resident #12)

"As soon as I reach 1601 kWh (the Tier 2 threshold) I start paying an extra five cents a kWh hour which is unaffordable for me but also so unfair.... My furnace is very rarely ever turned to over 60 degrees while I am at home and turned to 56 when I leave. I did not have Christmas lights last year and it will be the same this year. All winter long I live in one room of my house and I never have visitors or company because my house is just too cold. Watching TV I lay on the chesterfield wrapped in an electric blanket with my hat and scarf on just to keep warm. To walk into your house and see your breath is just an unacceptable way to have to live during the winter. I am willing to pay for the power that I use but it must be one rate that everyone else is paying". (Resident #17)

These, and the other testimonials provided in Appendix C, reveal an important truth. The negative impact on high use electricity customers is much greater than what would be determined by solely looking at bill impacts. There are many high use electricity customers who have reduced the impact of the RCR on their bills, not by efficiency measures, but by sacrificing comfort and/or desired electricity-using activities. By focusing solely on bill impacts and ignoring the many negative "psychic" impacts, FBC's evaluation reports have seriously understated the adverse impacts of the RCR on high use customers.

4.3 The RCR Encourages Customers to Switch from Clean Hydro to Emission-generating Fossil Fuels

The EES Study contained in FBC's 2013 RCR Information Report concluded that: "higher bills may eventually lead to a shift away from electric heat".³⁰

The AMCS/RDOS resident testimonials support this conclusion.

"In 2005, I began construction of a new home. We were convinced that if we installed a ground source (geothermal) heating system, we would be making our home environmentally friendly, and save money in the long run. It did not work out that way... instead we were penalized heavily for our effort to help the environment." Since the implementation of the two-tiered billing by Fortis, I have calculated that it has cost my wife and I more than \$10,000 just in extra costs for our electricity. This does not include the huge investment which we made in our installation of the ground source system, which included the drilling of three holes on our property. Two years ago we realized that we couldn't afford the penalty, and starting running our gas fireplace almost around the clock in the winter. We

³⁰ FBC 2013 RCR Information Report, Appendix C, Conservation Results Methodology, p 23-24

managed to reduce our bi-monthly bill with Fortis to the \$800 range in the winter. So much for cutting back on greenhouse gas emissions!” (Resident #130)

“In the coldest part of winter, our Fortis bills were well over \$600 per month, and we never set our thermostat above 18 degrees C during the day and 16 degrees at night. We also closed off the registers to any rooms that we could. We all wore layers and layers of clothing to try to keep warm and not have to turn up our heat. When a bill came that was over \$1700 for two months we finally put in a wood stove. The saving in electricity more than covered the cost of the wood stove and the increase in our homeowners insurance in the last two years. That being said, there are still times when it would be nice to use our furnace, but we just cannot justify the cost of doing so”. (Resident #115)

“Over the years of high cost of electricity during the winter months, we have learned how to overcome this expense. We now use wood to heat our home, our fire place is going 24/7 from November to March and our electrical system is manual; turned on only twice a day to allow the hot water to flow through the floor...then turned off completely! By doing this we have brought our bill back to where it should be”. (Resident #194)

“We have a 22 year old energy efficient dwelling with an energy efficient rating of 82.7 out of a possible 83. When we built this house we installed our infrastructure to support electric heat as it was then a reasonable option. We were not alone in coming to the same conclusion. We have heated with an air source heat pump since 1995. Since then we have spent in excess of \$25,000.00 in upgrades. My wife had a stroke on Dec. 20th 2016 and still has serious mobility issues and is constantly cold because of this. We can no longer suffer the low temperatures we have tolerated since 2 tier pricing went into effect in July of 2012. We are 75 & 79. We do not have a lot of time left and we will be cold soon enough in the ground. We have now gone fossil. (Our lower bills will buy us 3.36 tons of pellets (enough for two seasons) and a daytime temperature of 22 C [a temperature we can only dream of when using electric heat]. It's extra work, but the results are more than worth the effort. We apologize to our neighbors for adding to air pollution in this area”. (Resident #167)

In 2001, we inherited my Family home built in 1907. After much deliberation for a heating source for our restored-refurbished home, we decided to purchase and install the heat pump and the appropriate heating runs; along with the gas furnace for a back up- in case of a power outage. We could use our heat pump until -2 to -5; not that efficient but the cost was still OK. Come forward to Fortis and the 2 tier system. In October 2015, we turned off our Heat Pump - to use our gas furnace. We cannot use our Heat Pump as a source for winter heating. We are cognizant of our environment - but we cannot help, given the cost - as we can't afford to use electricity with the 2 tiers. (Resident #152)

According to FBC's RIB Rate Report, the homes most likely to be among the higher electricity users are single detached homes that use electricity for both space and water heating. This is not surprising since space and water heating account for about 78% of household energy consumption. It follows that homes that use non-electric sources of energy for both space and water heating are likely to be among the lower electricity users. Natural gas, where it is available, is the most cost-effective energy source for

space and water heating. Where natural gas is not available, mainly in rural areas, wood is the most cost-effective alternative to electricity, followed by propane and heating oil.

While there is no correlation between energy efficiency and high electricity use, there is an inverse correlation between high emission intensity and high electricity use. The RCR is charging higher electricity rates to households that are zero or low carbon emission emitters and lower electricity rates to households that are higher carbon emission emitters. This is creating a clear incentive to FBC's customers to increase their carbon footprint by switching from hydro electricity to fossil fuels.

FBC also markets and supplies natural gas to BC residents. FBC is encouraging customers to avoid high electricity prices by switching to natural gas, with advertisements that state:

“Heating your home and water consumes a whopping 78% of the total energy used in your home. But with natural gas space heating ... you'll see standout savings when you compare natural gas to other types of fuels or energy choices.”³¹

These advertisements for the Southern Interior show that the cost of heating your home with electricity is now more than four times higher than the cost of heating the same home with natural gas.

On May 7, 2018, the Government of BC introduced legislation to establish a 2030 target of 40-percent reduction in GHG emissions (from 2007 levels), and a 2040 target of 60-percent reduction in GHG emissions (from 2007 levels). With regard to local air pollution, the Central Okanagan Clean Air Strategy aims to “reduce and/or eliminate smoke emissions from home fireplaces and woodstoves”. By promoting the switching from hydroelectricity to fossil fuels, the RCR is acting contrary to both of these government policy objectives.

The negative environmental impacts resulting from BC's two-tier rate system have been noted by Green Party Leader, Andrew Weaver, who issued the following statement on November 1, 2017 on his website (shown in full in Appendix B):

“Electricity (produced from renewable sources) is the cleanest form of heating. We should be encouraging (not discouraging) its use. The idea that multi-tier pricing enhances conservation and efficiency, while theoretically correct, has obvious detrimental consequences. It inadvertently incentivizes fossil fuel use for heating and hot water I look forward to seeing the elimination of the two-tier system.”

FBC states:

“it would be very difficult to ascertain whether there has been an increase or decrease in environmental benefits due to the implementation of the RCR.”³²

³¹ FBC Website: Natural Gas; Homes; Switch to Natural Gas; Southern Interior; Approximate Annual Fuel Cost – Space Heating

³² Response to AMCS/RDOS IR#2, 3.6

However, many of the residents who submitted letters of comment to the RIB Rate Report process reported switching from electricity to wood or natural gas. And, FBC has yet to explain how encouraging customers to switch from zero-emitting hydroelectricity to emission generating fossil fuels would have anything but a negative impact on the environment.

4.4 The RCR Price Discriminates against High-use Electricity Customers

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.

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. However, the RCR bears little resemblance to a correctly designed tiered rate system. As FBC states in its Application:

“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”³³

Section 2 explains how a correctly designed two-tier rate would result in both the high use and low use households paying similar average rates. Table 4.2 shows how the incorrectly designed RCR results in Customer A paying rates that are 40% higher than Household B.

Table 4.2: Different Average Rates Paid By Different Households

House	kWh	Threshold kWh	Tier1 \$0.101/kWh	Tier2 \$0.156/kWh	Avg Rate
A (high use)	30000	9600	9600	20400	\$0.139
B (low use)	9000	9000	9000	0	\$0.101

The RCR price discriminates against those customers who engage in activities that result in household electricity consumption greater than the FBC customer average. This includes:

- electric heat customers -- particularly those living in cold climate zones and those that are retired or working at home and need to keep their houses heated all day;
- residents living in single detached homes (as opposed to apartments, condominiums or row houses)
- large families;

³³ FBC 2017 COSA & Rate Design Application, p 71

- rural customers with water pumps and outbuildings;
- customers living in hot climate zones using air conditioning; and
- owners of electric vehicles who engage in home charging.

If a resident fits into several of the above categories – as many rural residents do – the more adverse are the impacts of the discrimination. If you are an electric heat customer, the impacts are more adverse the colder the climate zone and the colder the winter. If you have air conditioning, the impacts are more adverse the hotter the climate zone and the hotter and smokier the summer.

FBC has stated that high use electricity customers are paying more than their cost of service and that low use customers are paying less.

“FBC would expect, all else being equal, a customer with high use would be paying more than its cost of service and a customer with low use would be paying less than its cost of service. Further, because the COSA results do not indicate a cost difference by rate block, customers with larger than average consumption would have greater quantities subject to the upper block price and would likely be paying more than their cost of service.”³⁴

In the 2017 RIB Rate Report, the BCUC maintained that the RCR was not unduly discriminatory:

“The RIB rates are conservation rates; that is, their purpose is to conserve energy or promote energy efficiency by providing a higher incentive, in the form of a higher rate for electricity purchased in the second tier, for higher-use customers to reduce consumption. Since it is not the purpose of the RIB rates to benefit any customers at the expense of other customers, this supports the Commission’s view” (that there is no undue discrimination in the RIB rate).³⁵

This was an erroneous conclusion, however, based on faulty assumptions about the RIB rates. As shown in Section 4.1, due to numerous design errors, the RCR is not promoting energy efficiency. Moreover, while it may not have been its stated purpose, the RCR, as shown in the next section, is benefitting lower consumption electricity users at the expense of higher consumption electricity users.

4.5 The RCR Subsidizes Low-use Electricity Customers at the Expense of High-use Electricity Customers

The introduction of the RCR has resulted in high-use electricity customers paying average rates above the Flat Rate. Since there is no cost justification for the differential, the extra charge above the Flat Rate constitutes price discrimination and represents an inappropriate surcharge. Since the switch from the Flat Rate to the RCR is revenue neutral for FBC, every dollar that a high use customer is overcharged must be balanced by a low use customer paying a dollar less than what would have been paid under the

³⁴ Response to AMCS/RDOS IR#1, 10.2

³⁵ BCUC Report to the Government of BC on the Impact of BC Hydro and FortisBC’s RIB Rates, March 26, 2017, P 6

cost-based Flat Rate. In this way, high use customers are cross-subsidizing low-use customers.

Table 4.3 shows, for each electricity consumption category, how much the average customer is currently paying over and below the Flat Rate. This year customers with consumption higher than 15,000 kWh per year are being overcharged by at least \$6.6 million. Customers whose consumption is in the 30,000 kWh – 35,000 kWh range are being overcharged, on average, almost \$700 per year.

This Table also shows how high use customer overpayments are distributed amongst the low use electricity customers. Since about 18,000 customers are subsidizing the rates of around 70,000 customers, the average subsidy received per low use customer is significantly lower – around \$100 per year -- than the average overpayment of high use customers

Table 4.3: Customer Payments Over and Below the Flat Rate Resulting From RCR (2018)

Annual Consumption	Number Of Customers	Average Per Customer Payment Above Flat Rate	Total Payments Above Flat Rate
Above 35000	1572	\$1716	\$2.7 Million
30000 - 35000	850	\$ 688	\$0.6 Million
25000 - 30000	1900	\$ 495	\$0.9 Million
20000 - 25000	4240	\$ 303	\$1.3 Million
15000 - 20000	9293	\$ 116	\$1.1 Million
10000 - 15000	19853	- \$ 55	- \$1.1 Million
5000 - 10000	32817	- \$128	- \$4,2 Million
0 - 5000	19136	- \$ 82	- \$1.6 Million

In Response to an AMCS/RDOS IR, FBC declined to assess the payments over and below the flat rate for previous years, stating:

“Redoing the model for the previous years utilizing the appropriate load and rates for each year would require several days of work and would yield results that are consistent with the “Current RCR” table but at slightly lower per kWh rates”.³⁶

FBC has also stated that the \$6.6 million is an underestimate of the amount of the payments above the Flat Rate that will be made by high-use customers:

“The figures in the table are based on a sample of 2016 consumption at 2018 rates, and do not account for 100 percent of current customers. FBC does not have the data available to provide a comparable number for 2018, but assumes that considering all load and customers would result in a higher value than produced by the sample information”.³⁷

³⁶ Response to AMCS/RDOS IR#1, 3.1

³⁷ Response to AMCS/RDOS IR#2, 9.6

Moreover, in FBC’s RIB Rate Report submission that looked at the cross-subsidization between customers with and without access to natural gas, it was stated:

“The costs to serve the No-Gas customer group is much lower than for customers with access to natural gas. This is because they have higher average use per customer and they are less likely to peak at the time of the system peak. At the same time, the revenue for customers in the No-Gas group is higher on a per unit basis because a greater share of their consumption falls within the upper rate Tier.”³⁸

This means that the costs to serve the high use customer group should also be much lower than for customers in the low use customer group. This cost to serve differential should be added to the revenue differential to obtain a full estimate of the amount of the overcharges and cross-subsidization.

Taking into account the above considerations, a conservative estimate would be that high use electricity customers (i.e. those consuming more than 15,000 kWh per year) have been overcharged, and have cross-subsidized low use customers, by \$30-40 million since the introduction of the RCR in 2012.

Table 4.4 shows that if the RCR is phased out over the next four years, rather than being terminated on January 1, 2019, high use electricity customers will be overcharged, and forced to cross-subsidize low electricity customers, by at least a further \$14 million.

Table 4.4: Cumulative Payments Over and Below the Flat Rate Resulting From RCR (2019-2022)

Annual Consumption	Number Of Residents	Cumulative Average Per Customer Payment Above Flat Rate	Cumulative Total Payments Above Flat Rate
Above 35000	1572	\$3606	\$5.7 Million
30000 - 35000	850	\$1445	\$1.2 Million
25000 - 30000	1900	\$1038	\$2.0 Million
20000 - 25000	4240	\$ 634	\$2.7 Million
15000 - 20000	9293	\$ 241	\$2.2 Million
10000 - 15000	19853	- \$ 120	- \$ 2.4 Million
5000 - 10000	32817	- \$270	- \$ 8.9 Million
0 - 5000	19146	- \$172	- \$ 3.3 Million

4.6 The RCR Exacerbates Fuel Poverty

According to the Collins English Dictionary, fuel poverty is defined as “The state of being unable to afford to heat one’s home adequately”. The RCR is exacerbating fuel poverty in FBC’s service area.

³⁸ FBC RIB Rate Submission, September 30, 2016, Appendix A, EES COSA Report

FBC and the BCUC have maintained that the RCR is beneficial for low-income residents. In its 2008 BC Hydro RIB Rate Decision, the BCUC concluded that there was no need to set low “lifeline rates” for low-income customers because:

“The vast majority of BC Hydro’s low-income customers will be better off under a simple two-step inclining block structure that is revenue neutral for the residential customer class than under the current flat rate structure”.³⁹

The vast majority of low-income customers are better off under the RIB rate because the vast majority of customers are better off. FBC determined that 65.2% of FBC’s low-income customers were better off under the RIB rate than the Flat Rate while 9.7 % of its low-income customers were more than 10 percent worse off. This is similar to their finding that 68.5% of total customers were billed less under the RCR than under the Flat Rate while 8.4% of total customers received total billing greater than 10% higher under the RCR.

In its RIB Rate Report, FBC stated that it “cannot confirm that income is correlated with consumption”. This is not surprising. In the case of total household electricity consumption, it’s not necessary to have a hot tub, heated swimming pool and multiple refrigerators to be a “high-use” customer. All that it takes is to use electricity for space and water heating. Similarly, a high-income customer with a big house and heated swimming pool could be a “low-use” electricity customer providing the house and pool are heated with natural gas.

This means that, in terms of income, the RIB rate results in low, medium and high income, high-use electricity customers cross-subsidizing the rates of low, medium and high income, low-use electricity customers. In effect, low-income high-use electricity customers can end up subsidizing the electricity rates of high-income low-use customers.

More significantly, it is the low-income, high-use electricity customer who is in most need of assistance and the RCR has made matters worse for these customers. Electricity is a far more expensive way to heat your house than natural gas. Table 4.5 compares the cost of home and space heating by natural gas versus electricity for a typical single family home (2300 square feet) in the Southern Interior. It shows that it is now 4.5 times more costly to heat your home with electricity than with natural gas. And it is also 2.5 times more costly to heat water with electricity than with natural gas.

Table 4.5: Cost of Home and Space Heating by Natural Gas compared to Electricity

End-Use	Natural Gas Home	All Electric Home	All Electric Vs Natural Gas
Space Heating	\$562	\$2544	4.5 X higher
Water Heating	\$199	\$ 501	2.5 X higher
Total	\$761	\$3045	4.0 X higher

³⁹ BCUC Reasons For Decision, BC Hydro RIB Application, September 24, 2008, p 32-33

The following testimonials show how lower income customers have been adversely affected by the RCR. Note that lower income residents are often also renters and so are often incapable of undertaking energy efficiency improvements to even partially offset the overcharges being imposed on them by the RCR.

“My 85 year old neighbour last year, who has since passed away, faced a \$1,800 two month electric bill due to this billing tier system. His poor lip quivered as he told me this and did not know how he was going to handle this financial stress on his CPP and OAS. This is the saddest damn thing I have seen. This man had electrical baseboard heating and of course he was on a 24 hour oxygen tank dealing with this horrible situation. To close off he chose assisted suicide to end his life and honest to god this contributed I am sure”. (Resident #35)

“I live rurally and rent. I moved here from Toronto 4 years ago to be closer to my elderly parents. It took me 2 years to find a house to rent in the community. Even with a wood burning stove in the front section of the house, I am dependent on an electrical furnace for the kitchen, dining and bedroom in winter. Last year my winter month heating bills where \$1,500 in total from November to April. The arrival of a baby in December and the late spring made the heating crucial. My job, landscaping, had a seasonal delay for a month and circumstances were difficult financially on every front. The two tiered system made it close to impossible. I'm not sure how to encourage landlords to make their rental units more energy efficient. I have implemented all avenues of energy conservation a renter can. It truly comes down to a choice between running my car or paying the Fortis bill. Living rurally with no transportation or transportation system makes working impossible. I hope these circumstances have illustrated how higher electricity bills can affect your standard of living as well as employment opportunities.” (Resident #34)

“We serve marginalized members of our community by operating a food bank and offering, when funds permit, financial support for rental and utility bills. We have noted that increasing electricity rates have negatively impacted some of our clients, with even normal household hydro use being difficult to finance. However, as winter approaches, we are aware that the added costs of attempting to maintain an adequate level of warmth in their homes will be onerous. (Resident #135)

“Because my husband is a contract worker who was working very little in the spring and early summer, we were unable to pay either our electricity bill or our mortgage and have since defaulted on our mortgage. (I was unable to work most of 2017 because I had a fall in February of last year and fractured my arm plus had cataract surgery in March.) Fortis cut our power off in August, and we had to bring in water by hand and use our old generator, until it died, to help for use of the toilet, faucets and other water. We had to borrow a generator from a nearby hotel. I didn't have a shower for 5 days. We were without water or power for 8 days before a generous family member paid our bill. Then, Fortis, once we contacted them to say the bill had been paid, reconnected us; however not without charging us a further \$2,380 as "insurance", a deposit as it says in our most current bill, in case this happens again. We have been told that they hold onto the deposit for a year before we will be reimbursed. If it weren't for a

generous family member, be rest-assured that we would still not have power at our residence this winter because we couldn't afford the payments. My husband is 70 and I am 60. I can't tell you how negatively this has affected us". (Resident #2)

"I have incredibly high bills in the winter months in my 2 bedroom attic apartment in a heritage house. In March 2016, I had to apply for a grant from CMHA Housing First initiative for a utility relief grant for my \$900 dollar power bill. I just finally managed to pay my winter 2016/2017 bill off and get up to date, but now I have had to turn my baseboards on. My bills the past few years are higher than my mom's central air, 3 floor, 4 bedroom house w basement plus heating the outdoor workshop. Affording to live in winter is impossible when my electric charges skyrocket and I already spend 65% of my income on rent." (Resident #129)

"As a single mother to two wonderful teenage boys, I would love to reflect on how this system has forced me and my children to make difficult choices regarding our expenses since the implementation of this unfair system. Currently, I work three jobs just to make ends meet. After a meeting with my kids and scrutinizing our extra curricular plans, currently we have none, it has been agreed that as I drive my kids to work, they in turn will commit 15 percent of their paycheck towards our Fortis bill. My boys are 14 and 16. They should be spending money on video games, chocolates, chips etc. It's October 2017 and I just recently paid off last year's winter bill, the highest being over \$1300 for 60 days. What I don't understand is my consumption is way down, as I don't have a choice, yet my bill keeps rising and rising. I'm petrified about this winter. It's October 28th and I still haven't turned on my heat... We are cold! This is not the freedom my dear grandfather fought for. But instead it's a morbidly insane money camp for which I'm a slave. I have no other options. My hands are tied and my voice silenced'. (Resident #150)

"I hate Fortis now. Since i was forced to use their service, I have had nothing but heartache from them. My move-in bill was over \$1200 for a month and half. Every 3 months I get a phone call from them stating they are cutting my power off. The manager phoned me and told me for my best interest I should move my family out, so they can shut my power off. But when I can pay it and move back in, there will be an additional charge to hook me back up. I've had to go without paying my rent and also food to pay the large amount they want. My son is diabetic ...The stress of not being able to provide them with a certain amount of money was always a threat. They told me to go beg borrow or steal for it or no power. I now suffer from Anxiety and have to take medications for it. I'm scared they will shut my power off without any regards. Either we eat, pay rent or pay power bill. There is no in between. Somebody help save us". (Resident #161)

"Our Fortis bill since the two tier billing systems implementation always lands significantly in the 2nd tier during winter months and also summer (air conditioning). Although we've tried to save power by installing LED lighting and even line drying laundry when possible we still find our electricity bills to be unaffordable. We are a single income family and often are forced to neglect our Fortis bill just to pay rent. Usually we receive up to two disconnection notices a year because of the overdue bill. When this happens we are forced to borrow

money from my wife's parents or my parents which we have never been able to repay. Without them I don't know what we would have done and I can only imagine how difficult this situation must be for people in similar circumstances without any options". (Resident #132)

FBC states that "the Company does not see the issue of income as relevant to rate design under the present statutory regime"; although in their Application they argued:

"Since FBC has no data that indicates that low-income customers have consumption that varies from customers in general, it follows that similar (adverse) bill impacts will occur within the low income groups as well (if the default rate is changed to the flat rate over the course of a single year).⁴⁰

Continuing to subsidize the electricity rates of all low use customers to benefit those with low incomes is a poor way to deal with fuel poverty. It is better to assist low income customers through DSM programs offering financial assistance and through tax rebates. In any event, it is the low income residents who use electricity for space and water heating that desperately need help, not the low income customers that heat their homes with cheap natural gas. However, the RCR, by imposing onerous, unjustified, surcharges on customers that use electricity for space and water heating – surcharges that increase, the colder the winter – is making the situation much worse for them.

5.0 RESIDENTIAL RATE OPTIONS

5.1 The RCR cannot be Fixed

To fix the RCR so that it meets its original objectives of promoting economically efficient behaviour, it would be necessary to:

- segment FBC's customers into homogeneous groupings each with their own Block 2 thresholds;
- set the Block 1 rate equal to the Flat Rate; and
- set the Block 2 rate equal to the marginal cost of new electricity supply.

However, as FBC has pointed out, that would result in a declining balance rate since FBC's Flat Rate (12.021 cents/kWh) is far above the marginal cost of new supply (9.9 cents/kWh). As pointed out in Section 2, a RIB Rate will only encourage greater efficiency than the Flat Rate in the specific circumstance where the Flat Rate is below the marginal cost of supply. So, FBC's Two-Tier Rate System cannot be fixed because the necessary conditions for an inclining balance rate to be effective do not exist.

5.2 The Flat Rate will send the Right Price Signals to Encourage Efficient Consumption

As shown in Section 4, the RCR is sending the wrong price signals for encouraging efficient electricity consumption. The majority of FBC's customers are being encouraged

⁴⁰ FBC 2017 COSA & Rate Design Application, p 70

to over-consume electricity; while a minority of customers is being made to under-consume.

Since the Flat Rate is above the marginal cost of supply, the former becomes the right price for encouraging energy efficient behaviour. Under a Flat Rate system, all customers pay the same rate so all customers will be encouraged to be efficient. The Flat Rate has been shown in past rate proceedings to meet all of the other design criteria.

5.3 Time-of-Use Rates can Improve Generation Efficiency without Impairing Household Efficiency provided they are Non-mandatory

Time-of-Use (TOU) Rates should not be viewed as an alternative to RIB Rates because they do not aim to incent customers to be energy efficient. The objective of TOU Rates is to encourage customers to shift their consumption from peak to off-peak hours in order to improve generation and distribution efficiency.

Not all customers can shift a significant portion of their electricity consumption from peak to off-peak hours. It is relatively easy to run the dishwasher at night or run the clothes washer and dryer on the weekend but it is not feasible to run the furnace or air conditioner during different hours. TOU Rates do not reward the shifting of consumption per se. Rather, they reward having a major percentage of consumption in off-peak periods. Customers using electricity for space and water heating might shift some consumption to off-peak periods but if the majority of consumption is still during peak periods, they would experience an increase in rates despite taking actions that reduced the cost of generating and distributing electricity.

In a mandatory TOU Rate System, customers using electricity for space and water heating could end up paying rates that are significantly above the equivalent flat rate, leading to both personal hardships and economically inefficient behaviour. As well, electric heat customers with wood stoves or fireplaces would be incented to increase their burning of fossil fuels during the day, restricting their use of electricity for heating at night time.

Like the RCR, mandatory TOU Rates could end up promoting inefficient customer behaviour, encouraging the greater use of fossil fuels and imposing discriminatory rates on customers using electricity for space and water heating. To prevent this from happening, it is essential that the TOU rate system be optional with customers having the right to stay with a default Flat Rate.

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.

6.0 FBC’S APPLICATION AND ITS PROPOSED RESIDENTIAL RATE DESIGN

6.1 FBC’S Misapplication of the Economic Concepts underlying Inclining Balance Rates

FBC states:

“A basic premise in the introduction of an inclining block rate is that energy should become increasingly expensive as the level of consumption rises. Given that the overall revenue to be collected from the residential class is fixed, there is an inevitable shift in the revenue burden from low to high consumption customers.”⁴¹

This statement is incorrect. As explained in Section 2 of this Submission, the rationale for inclining balance rates is to cause all customers (regardless of their level of consumption) to make consumption decisions on the basis of the marginal cost of supply rather than on the average system cost. The only customers that would incur higher than average rates are those customers that fail to reduce their demand to their threshold level.

Table 6.1 shows the outcome, under a correctly designed two tier system, where the high use Customer reduces demand by 10% while the low use Customer’s demand remains the same.

Table 6.1: Correctly Designed Two Tier System – Customers A and B Having Different Demand Responses

House	kWh	Threshold	Tier1 \$0.08 /kWh	Tier2 \$0.12 /kWh	Avg Rate \$/kWh	Change In Demand	Avg Rate \$/kWh
A (high use)	30000	27000	27000	3000	.084	-10%	.080
B (low use)	9000	8100	8100	900	.084	none	.084

Flat Rate = \$0.08/kWh

Marginal Cost = \$0.12/kWh

In this example, the low use Customer ends up paying a rate that is 5% higher than the Flat Rate (8.4 cents per kWh compared to 8 cents per kWh). Of course, if the high use Customer had not conserved any electricity while the low use Customer had reduced consumption by 10%, the outcome would be reversed. Thus, FBC’s conclusion that, under inclining balance rates, “there is an inevitable shift in the revenue burden from low to high consumption customers” is wrong.

⁴¹ Response to AMCS/RDOS IR#2, 9.1

6.2 FBC'S Claim that the RCR was Redesigned to better meet the Government's Policy is not supported by the Facts

BC Hydro clearly stated that the objective of switching from a Flat Rate to a RIB Rate was to incent more economically efficient electricity consumption choices:

"The desire to incorporate an incentive for conservation into its rates has prompted BC Hydro to apply for approval of a rate structure that sends a price signal to customers that better reflects the higher long-run cost of new electricity supply. In the current and foreseeable future, where the long-run cost of new electricity supply is substantially higher than the embedded cost of BC Hydro's existing assets, such a rate structure sends price signals that will encourage economically efficient electricity consumption choices and, thus, electricity conservation".⁴²

In its Application, FBC refers to a theoretical inclining block structure to imply that the RCR is promoting efficiency:

"Generally speaking, inclining block rate structures may provide better price signals for energy conservation"⁴³

"In theory, an inclining block rate structure should provide appropriate price signals"⁴⁴

FBC also makes generalized and unsupported statements that suggest that RCR has been promoting energy efficiency:

"FBC believes that it is a reasonable assumption that much of the "low hanging fruit" has been picked over the last five years"⁴⁵

In its current application, FBC acknowledges:

"The Tier 2 rate is 58 percent above the long run marginal cost".⁴⁶

"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".⁴⁷

"In order to provide appropriate price signals for economically efficient consumption, the cost of power supply needs to be reflected in the rates".⁴⁸

Since the RCR is promoting economically inefficient consumption rather than efficient consumption, FBC argues that the objectives of FBC's RIB Rates are different than those of BC Hydro's RIB Rates:

⁴² BC Hydro 2008 RIB Application, February 2008, p I-9

⁴³ Response to BCUC IR#1, 3.3

⁴⁴ Response to BCUC IR#1, 4.3

⁴⁵ Response to BCUC IR#1, 48.2

⁴⁶ Response to AMCS/RDOS IR#2, 1.5

⁴⁷ FBC 2017 COSA & Rate Design Application, p 71

⁴⁸ Response to AMCS/RDOS IR#2, 1.1

“The rationale and objectives stated by BC Hydro in its RIB Rate Application reflect its particular circumstances and were not cited as the original intention of the RIB rate for FBC. FBC was under no direction to set the Tier 2 rate equal to the marginal cost of supply and did not propose to do so. The primary intent of FBC’s RIB rate is to incent customers to use less electricity”.⁴⁹

This argument, however, is not consistent with the following statements made by the BCUC in its 2011 FBC RIB Rate Decision:

“While an arbitrary increase in a rate may well encourage less consumption, it may not be an **economically efficient reduction in consumption**. ... An inclining block structure, which charges a lower rate for amounts consumed below a threshold and a higher rate above that threshold, can potentially be structured to be both **economically efficient** and meet the utility’s revenue requirements. However, a RIB rate structure that is incorrectly priced can have disadvantages and unintended consequences, the principal among them being that customers overuse underpriced resources and underuse overpriced resources.”⁵⁰ (emphasis added)

“the long-run marginal cost of new supply continues to be the appropriate referent for the Block-2 energy rate”,⁵¹

Moreover, the BC Government continued to believe that FBC’s RIB Rate was pursuing the same objective of encouraging efficient consumption as BC Hydro’s RIB Rate, as evidenced by the excerpt below of an email (shown in full in Appendix B), sent on August 25, 2016, from the BC Ministry of Energy & Mines to an RDOS resident, with a copy to the BCUC, stating:

“BC Hydro’s RIB rates and FortisBC’s RCR rates are designed to create an incentive for **conserving electricity by reflecting the higher cost new electricity generation** without raising rates overall. These rates are not designed as incentive to fuel switch”. (emphasis added)

According to FBC:

“the RCR was initially set to achieve lower residential class energy use, particularly for those customers with consumption levels over the Tier 2 threshold”⁵²

“The conservation objective was straightforward and was achieved by implementing a rate that encouraged customers to conserve by increasing electricity rates as consumption rose”.⁵³

⁴⁹ Response to AMCS/RDOS IR#2, 1.3

⁵⁰ BCUC Decision, FBC RIB Rate, January 13, 2012, p 21

⁵¹ BCUC Decision, FBC RIB Rate, January 13, 2012, p 40

⁵² Response to AMCS/RDOS IR#2, 2.1

⁵³ Response to AMCS/RDOS IR#2, 3.3

FBC claims it designed the RCR to meet government energy policy objectives:

“FBC believes it would be better to characterize the current RIB rate pricing as based on the Commission’s judgement and the required threshold for achieving government energy policy objectives rather than an arbitrary increase (in rates).”⁵⁴

“the RCR was established under the Province’s initiatives to promote energy conservation and efficiency through the CEA (Clean Energy Act) and portions of the UCA (Utilities Commission Act)”⁵⁵

However, reducing electricity consumption is not a policy objective in and of itself. It is a means to an end, with the end being either economic efficiency, environmental protection or dealing with shortages of supply. FBC admits that the RCR is not designed to achieve the first two of these policy objectives:

“FBC has not claimed any economic or environmental benefits from the implementation of the RCR, or its current structure”.⁵⁶

Nor is it designed to respond to an impending supply shortage:

“in the short term FBC does not have the need for new resources and has sufficient capacity to meet load growth for several years”.⁵⁷

“The recent government focus on increased electrification efforts can be partly explained by BC’s potential generation capacity surplus in future and the need for increased demand”⁵⁸

The only objective that the RCR is meeting is the one of financially benefitting the majority of customers at the expense of the minority. As Mr. Corey Sinclair, FBC’s manager of regulatory affairs, was quoted as saying in the Osoyoos Times (May 22, 2013):

“The majority of our customers have benefitted with lower rates and that was the original intent and the intent of the BCUC when it approved our application”

But while this may have been FBC’s objective, it is not a stated objective of the Government of BC.

6.3 FBC’S EVALUATION OF THE RCR’S SUCCESS AT PROMOTING EFFICIENCY AND CONSERVATION IS MISLEADING

The extent to which a “conservation” rate or an efficiency and conservation program encourages investments by customers in long-living energy-efficient measures is the litmus test of effectiveness and should be the focus of any evaluation report. In its

⁵⁴ Response to AMCS/RDOS IR#2, 2.3

⁵⁵ Response to AMCS/RDOS IR#2, 7.1

⁵⁶ Response to AMCS/RDOS IR#2, 3.6

⁵⁷ Response to BCUC IR#1, 79.1.4

⁵⁸ Response to AMCS/RDOS IR#2, 1.6

Evaluation Reports, however, FBC assessed the effectiveness of the RCR based on the extent to which forecast savings have been realized. In its Application, FBC implies that the RCR has been a successful “conservation” rate on the basis that:

“the measured conservation impact was only slightly below the medium case (forecast) results”

“The conservation achieved to date is now embedded in the forecast residential load. Additional conservation is likely subject to diminishing returns”

“This conclusion is also consistent with the assumption made during the original 2011 RIB process where the total rate-related conservation impact was assumed to be fully realized over 5 years, or by 2017”⁵⁹

What FBC omits to say in its Application is that they have defined “conservation” so broadly that, in addition to investments in efficiency improvements, it also includes customers turning down the thermostat and freezing in their homes plus customers switching to fossil fuels.

As mentioned earlier, electricity demand reduction can include:

- improving energy efficiency (e.g. replacing an electric hot water heater with a more energy-efficient model);
- “doing without” behavioural change (e.g. turning down the thermostat below comfort level, eliminating electricity-using behaviour); or
- switching to a non-electric source of energy (e.g. heating the home with natural gas, propane, heating oil or wood instead of electricity).

FBC states that:

“the RCR was not designed to target any particular conservation behaviour over another but rather to generally incent customers to reduce consumption by whatever measure was applicable to their circumstances.”⁶⁰

“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. 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”.⁶¹

These statements show that not only was the FBC’s RIB Rate designed to encourage customers to both sacrifice personal comfort and welfare and to switch to emission-generating fossil fuels but that FBC has taken credit for the resulting demand reductions in evaluating the performance of the RCR against its “conservation objective”. Such reporting is misleading. As FBC acknowledges:

⁵⁹ FBC 2017 COSA & Rate Design Application, p 72

⁶⁰ Response to AMCS/RDOS IR#2, 4.1

⁶¹ Response to AMCS/RDOS IR#2, 4.2

“FBC also notes that burning wood for heating purposes instead of using electricity does not necessarily indicate “conservation efforts” (it indicates a shift from one energy source to another which may or may not be coupled with conservation efforts) and is not aligned with government policy for increased electrification.”⁶²

Making customers “ration” their electricity use, by foregoing comfort and welfare, is only aligned with government policy during times of crisis.

6.4 FBC’s Claim that the RCR is a Valid Conservation Rate is Incorrect

According to FBC:

“The conservation objective was straightforward and was achieved by implementing a rate that encouraged customers to conserve by increasing electricity rates as consumption rose”.⁶³

However, charging higher rates to higher use customers (i.e. those consuming more than 15,000 kWh per year), with no cost justification for the rate differential, is the wrong way to promote efficiency and conservation. In fact, doing so promotes overconsumption by some customers, under-consumption by others and produces rates that are unjust, unreasonable and unduly discriminatory.

Under a revenue neutral system, charging higher rates to high-use customers means charging lower rates to low-use customers. The RCR resulted in the majority of customers experiencing lower rates than they would under the Flat Rate (see Section 4.1). FBC has implied that both high and low use customers have been incented to conserve:

“FBC does not believe that only high consumption customers have reacted to the RCR”.⁶⁴

In response to an AMCS/RDOS IR#2 request to “provide evidentiary support for that belief”, FBC stated:

“the Company is aware anecdotally that there are low consumption customers that have benefitted from the implementation of the RCR that have undertaken conservation initiatives because they would have anyway, they see benefit in reducing their bill generally, or under the misconception that they are negatively impacted by the RCR”⁶⁵

In assessing the impact of conservation initiatives and programs, it is inappropriate to claim credit for actions that would have happened anyway. FBC has no credible basis to imply that low consumption customers have conserved as a result of the RCR. The RCR is incenting about 60% of customers (those below 10,000 kWh per year) to under-conserve (i.e. increase their consumption). Most of the remaining 40% of customers are

⁶² Response to KSCA IR#1, 8.6.1

⁶³ Response to AMCS/RDOS IR#2, 3.3

⁶⁴ Response to AMCS/RDOS IR#2, 12.2

⁶⁵ Response to AMCS/RDOS IR#2, 6.3

being incented to over-conserve. Hardly any customers are being encouraged to conserve at the economically optimal level, which is the objective of any valid conservation measure.

FBC argues that:

“Customers cannot “over-conserve”. As evidenced by third party studies, the utility customers (particularly residential customers) have a low price elasticity of demand. This means that changes in prices do not lead to significant changes in the demand for electricity.”⁶⁶

FBC’s response raises two important points.

1. First, FBC is incorrect on the economic concept of over-conserving. In response to an AMCS/RDOS Information Request concerning FBC’s guiding principle for determining how much conservation is desirable under their conservation objective, FBC stated:

“FBC believes that conservation measures should be considered as long as they are cost effective.”⁶⁷

Cost effective, from an economic efficiency point of view, means that the return on the conservation investment through energy savings is sufficient to justify the investment under electricity rates that reflect the cost of supply. If the electricity rates are above the cost of supply, as is the case for high-use customers under the RCR, then the customer undertakes conservation investments that are not cost effective and consequently over-conserve. Since high-use customers are experiencing electricity rates, at the margin, that are 58% above the marginal cost of electricity and 30% above the Flat Rate, they are clearly over-conserving.

2. Second, FBC is correct that raising prices for residential electricity customers does not lead to significant reductions in demand. This means that the major outcome of charging higher prices to high-use customers is higher bills and increased revenue for FBC. To maintain revenue neutrality, FBC adjusts the rates to lower the bills paid by low-use customers.

While the RCR, as structured, is not a valid conservation rate, it is an effective cross-subsidization rate.

6.5 FBC’s Claim that the RCR is not Discriminatory and not resulting in Cross-subsidization is Untrue

FBC claims that the RCR is not discriminatory:

“FBC agrees that the RIB rate, as designed and applied to all customers in a similar fashion, is not unjust, unreasonable, unduly discriminatory or unduly preferential.”⁶⁸

⁶⁶ Response to AMCS/RDOS IR#2, 1.6

⁶⁷ Response to AMCS/RDOS IR#2, 3.4

“All customers are subject to the same pricing parameters, and all customers with the same level of consumption will be subject to the same rates and be billed the same amount. Pricing that changes with volume is not uncommon (both inclining block and declining block rates are common utility practice) and is not discriminatory”.⁶⁹

This claim, however, conflates the different objectives of declining and inclining balance rates.

- Charging a lower rate to customers with higher levels of consumption is not necessarily undue discrimination if the lower rates can be justified by lower per unit costs of providing the product. Such pricing exists throughout the economy (i.e. lower per unit prices for buying in bulk) and justifies declining balance rates.
- Charging a higher rate to customers with higher levels of consumption, however, is undue discrimination because there is no cost basis, and hence no economic rationale, for charging them the higher prices.

Further, as has been explained in this Submission, a properly designed inclining balance rate does not charge higher prices to higher consumption customers. California has an inclining balance rate and according to PG&E:

“As a result of this tiered system and baseline/climate zone design, people across PG&E’s service area pay similar overall average rates for electricity.”⁷⁰

Since 2012, high use electricity customers (those consuming more than 15,000 kWh per year) have been overcharged (i.e their average rates are above cost) as a direct result of the price discrimination taking place under the RCR. As shown in Section 4.4, the customers most adversely affected by this price discrimination are those that use electricity for space and water heating.

As stated in FBC’s 2014 Evaluation Report:

“The key point here is that electric heat customers have higher annual consumption, on average, and as such would be expected to have relatively high adverse billing impacts if billed under the RCR.”⁷¹

However, in responding to an AMCS/RDOS IR asking FBC whether it was just and reasonable for the RCR to cause customers who use electricity for space and water heating to pay higher electricity prices than those who use natural gas for space and water heating, FBC stated:

“The RCR does not cause customers who use electricity for space and water heating to pay higher electricity prices than those who use natural gas for space

⁶⁸ Response to BCSEA IR#1, 22.6

⁶⁹ Response to AMCS/RDOS IR#2, 10.2

⁷⁰ https://www.pge.com/en_US/residential/rate-plans/how-rates-work/learn-how-rates-are-set/learn-how-rates-are-set.page

⁷¹ FBC 2014 RCR Information Report, p 16

and water heating. The RCR pricing is based solely on the level of consumption irrespective of the end use to which the electricity is put”.⁷²

The level of electricity consumption is directly related to the end uses to which the electricity is directed. The Tier 2 threshold of 800 kWh per month enables customers who use electricity only for appliances and lighting (and maybe some air conditioning) to remain within Tier 1 and be charged 10.1 cents/kWh. That is only possible, however, if these customers use natural gas (or some other non-electric fuel) for space and water heating. If customers use electricity for space and water heating, virtually all of that additional electricity use will be included in the second Tier, meaning that they pay 15.6 cents/kWh (instead of 10.1 cents/kWh) for electricity consumed for that end use. The more electricity they consume for space and water heating, the higher will be their average electricity rate.

In response to an AMCS/RDOS IR, FBC compared the electricity consumption of two identical households; one that used natural gas for space and water heating and one that used electricity for that end use.⁷³ As can be seen from the Table 6.2, the customer that uses electricity for space and water heating pays an average electricity rate that is 38% higher than the average rate paid by the customer that uses natural gas for space and water heating. The customer using electric heat will be overcharged by \$563 plus taxes (compared to the Flat Rate), while the customer using natural gas for heat will be undercharged (ie subsidized) by \$167.

Table 6.2: Different Average Electricity Rates Paid By Natural Gas Household Versus All Electric Household

House	kWh	Threshold kWh	Tier1 \$0.101/kWh	Tier2 \$0.156/kWh	Avg Rate
Natural Gas Heating	8,782	9600	8,782	0	\$0.101
Electric Heating	30,291	9600	9000	20,691	\$0.139

Flat Rate = \$.120

Using electricity for space and water heating is not the only end-use that will take a customer’s consumption well into Tier 2 (as pointed out in Section 4.4). FBC implies that, by improving energy efficiency, high consumption customers can avoid paying higher bills and rates:

“It seems reasonable to FBC to conclude that where a low consumption customer and a high consumption customer have both undertaken reasonable conservation measures and are not viewed as using energy in an inefficient manner, imposing an inclining block rate on customers that results in higher bills for higher consumption that may be the result of occupancy levels or dwelling size could be considered inequitable”.⁷⁴

⁷² Response to AMCS/RDOS IR#2, 10.3

⁷³ Response to AMCS/RDOS IR#1, 4.1

⁷⁴ Response to BCUC IR#1, 48.4

In IR#2, 9.2, AMCS/RDOS asked FBC:

“A customer using electricity for space and water heating who consumes 30,000 kWh/yr or more would have to reduce their consumption by at least 50% to avoid a bill increase relative to the flat rate. Does FBC believe that such a reduction is achievable through reasonable conservation measures?”

FBC replied:

The assertion put forward in this question is incorrect. In the sample of 89,661 residential accounts, there are 496 with consumption between 29,000 and 31,000 kWh per year (averaging 29,913 kWh) In order for these customers to be, on average, no worse off under the RCR than the flat rate they would need to reduce annual consumption by 3,842 kWh, assuming that this consumption is billed at the Tier 2 rate ... This represents a reduction in consumption of approximately 13 percent on average.⁷⁵

However, FBC’s statement is incorrect. FBC states in its Application that:

“the level of consumption that will produce an equivalent bill on the flat rate is closer to 1,250 kWh per month”.⁷⁶

This means that consumption over 15,000 kWh/yr results in a bill increase relative to the flat rate and that a customer consuming 30,000 kWh per year needs to reduce consumption by 50% to reach this “break-even” point. If this customer reduces consumption only by 13%, as FBC states, he will still be consuming 26,158 kWh and paying an average rate of 13.6 cents/kWh; still well above the Flat Rate. Once again, FBC is mistaken about the impact of the RCR on high use customers due to a misunderstanding of how its current rate system actually works.

FBC agrees that:

“6.6 million is the total amount of revenue (that will be collected in 2018) from those customer groups that, on average, pay more with the RCR”⁷⁷ (based on 2016 consumption levels; 2018 levels “would result in a higher value”)

“the structure of the RCR prompts a redistribution of the revenue responsibility from one group of customers to another based on consumption”.⁷⁸

“the phase out of the RCR will continue the current effect of the RCR that sees higher use customers and lower use customers have offsetting aggregate bill impacts”⁷⁹

In response to AMCS/RDOS IR#2, 9.9, FBC states that it “does not agree with the term subsidized” in reference to the “redistribution of the revenue responsibility from one

⁷⁵ Response to AMCS/RDOS IR#2, 9.2

⁷⁶ FBC 2017 COSA & Rate Design Application, p 65

⁷⁷ Response to AMCS/RDOS IR#2, 9.6

⁷⁸ Response to AMCS/RDOS IR#2, 9.4

⁷⁹ Response to AMCS/RDOS IR#2, 9.8

group of customers to another based on consumption” despite the fact that FBC stated in response to AMCS/RDOS IR#1, 10.3 that:

“the general expectation would be that low use customers are in general and to some degree being subsidized by high use customers”⁸⁰

Cross-subsidization is the practice of charging higher prices to one group of consumers to subsidize lower prices for another group. This is what the RCR is doing as a result of its design errors.

PG&E on their website points out how having multiple thresholds (baselines) instead of the same fixed threshold (baseline) -- as is the case with FBC’s RCR -- prevents cross-subsidization:

“People in hotter climate zones have higher baselines than those in cooler climates, meaning they must use more electricity to move into a new tier and a higher rate than people in cooler climate zones. As a result of this tiered system and baseline/climate zone design, people across PG&E’s service area pay similar overall average rates for electricity. Not having the same baseline across PG&E’s service area also prevents a customer in a hotter climate such as Kern County from **subsidizing** or lowering the bills of those customers in cooler climates such as San Francisco County.”⁸¹

6.6 FBC’s “Rate Shock” Principle is Biased

FBC argues for a phase-in of the Flat Rate that protects the majority of customers from experiencing “rate shock”:

“FBC believes that any rate design proposal should be implemented in a way that avoids rate shock **to the majority of customers**” (emphasis added) (Response to BCUC IR#1, 47.3)

“it may or may not be appropriate to characterize a situation where a **small percentage of customers** have an annual bill increase of more than 10 percent as rate shock”⁸² (emphasis added)

FBC appears to consider a small percentage of customers as being 5% or less of total customers (about 4,300 customers) since, in 2011 it argued that the appropriate “rate shock” principle is that “95 percent of customers should not experience an annual bill increase greater than 10 percent.”

AMCS/RDOS IR#1, 6.1 asked FBC why it maintained that “there should be no constraint on the bill impacts on the remaining 5 percent of customers, many of whom are entirely dependent on electricity for space and water heating.

FBC’s response is as follows:

⁸⁰ Response to AMCS/RDOS IR#1, 10.3

⁸¹ https://www.pge.com/en_US/residential/rate-plans/how-rates-work/learn-how-rates-are-set/learn-how-rates-are-set.page

⁸² Response to BCUC IR#1, 47.3

“The bill impact criterion proposed as part of the 2011 Application, and approved by the Commission, was as stated above. While not stated as a further criterion in the 2011 Application, the bill impacts for other customers were included in the analysis of all the options presented. They were thus presented to all participants and formed part of the evidentiary record considered by the Commission at the time. In addition to the criterion discussed above, FBC presented two additional evaluation factors, maximum bill impact and percentage of customers with increases above 20 percent, for each option included in the 2011 Application.⁸³

FBC’s “additional evaluation factors” similarly discriminated against the minority. Tables 6.3 and 6.4 show the first-year impact resulting from the switch in 2012 from a flat rate to the two-tier RCR. The maximum percentage bill impact was 22.25% and the maximum total dollar bill impact was \$2218. In comparison, FBC is proposing in its current Application that, since the majority rather than minority of customers are facing higher bill impacts, the maximum total dollar bill impact should be \$42 and the maximum percentage bill impact should be 3.5%.

Table 6.3: Percentage Bill Impact: RCR vs Flat Rate (July 1, 2012 – June 30, 2013)

Percent of Total Customers	Bill Impact
38%	-10% to -15%
19%	- 5% to -10%
13%	0 to -5%
12%	0 to +5%
10%	+5% to +10%
6%	+10% to +15%
2%	+15% to +20%
0.4%	+20% to +25%

Table 6.4: Dollar Bill Impact: RCR vs Flat Rate (July 1, 2012 – June 30, 2013)

Consumption	Percent Of Customers	Annual Impact \$
120 - 9999	55%	- \$ 70
10000 - 19999	32%	\$ 6
20000 - 29999	9%	\$ 256
30000 - 39999	2.3%	\$ 528
40000 - 49999	0.7%	\$ 807
>50000	0.7%	> \$1000

Source: FBC 2013 RIB Rate Information Report

⁸³ Response to AMCS/RDOS IR#1, 6.1

FBC claims that its approach to mitigating “rate shocks”:

“is a sound and responsible policy to balance the interests of all residential customers, including high use and low use customers”.⁸⁴

Defining rate shock as a percentage increase biases the analysis in favour of low-use electricity customers. It implies that a 10% increase on an electricity bill of \$500 (i.e. \$50) is as equally shocking as a 10% increase on an electricity bill of \$5,000 (i.e. \$500). Since there is no correlation between personal income and amount of electricity consumed, it would be erroneous to assume that high-use electricity customers have high incomes and are therefore able to handle a ten times higher increase in total bill amount.

Moreover, FBC only examines year-over-year increases. Yet, a customer that is entirely reliant on electricity for space and water heating can experience a rate increase of more than 40% every winter (assuming that in the preceding months their consumption is within Tier 1).

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. Table 6.5 shows the “rate shocks” that they could still experience during FBC’s phase-in period. Such winter rate shocks might be considerably higher for a customer using baseboard heating in a similar or colder climate zone. Further, the colder the winter the greater the rate shock.

Table 6.5 Winter Rate Shock: Customer Consuming 7,500 kWh (two month billing)

FBC Phase-In	Winter Rate \$/kWh	Tier 1 Rate \$/kWh	Winter Rate Shock
Current RCR	0.144	0.101	+43%
Year 1	0.140	0.104	+35%
Year 2	0.136	0.108	+25%
Year 3	0.131	0.112	+17%
Year 4	0.126	0.116	+8.5%

FBC states:

“FBC has considered the concept of “rate shock” generally. What constitutes rate shock is not universally agreed upon, but a common metric to assess rate shock is an increase in rates greater than 10 percent over a short period of time”.⁸⁵

As Table 6.5 shows, high use customers can experience “increases in rates significantly greater than 10 percent over a short period of time” each year until Year 4. Even in Year 4, such customers can experience a rate shock that is more than double FBC’s proposed 3.5% rate shock cap. For those residents who live in the Okanagan Valley and use air conditioning during the hot summers, there will be similar summer rate shocks.

⁸⁴ Response to BCUC IR#1, 47.3

⁸⁵ Response to BCUC IR#1, 7.1

Finally, a non-biased rate shock principle would look at the impact on customers' total energy bills. FBC argues that:

"FBC believes that the appropriate point of reference for the rate shock guideline is the total annual bill"⁸⁶

FBC maintains that the focus should be solely on the electricity bill, but a proper analysis would examine the impact on the total energy bill.

Table 6.6 compares the total energy bill impact of a 10% increase in electricity rates. For the all-electric home, such an increase in rates would translate into a 10% increase in its total energy bill. For the natural gas home, a 10% increase in electricity rates would represent only a 4.8% increase in the total energy bill. And, it should be noted that, prior to the 10% increase in electricity rates, the all-electric home was already experiencing a total energy bill that was 133% higher than the natural gas home.

Table 6.6 Impact Of 10% Higher Electricity Rates on Total Energy Bill

End-Use	Annual Cost	10% Electricity Rate Increase	Increase In Electricity Bill	Percent Increase
NATURAL GAS HOME				
Space Heating	\$ 562	\$562	-----	-----
Water Heating	\$ 199	\$199	-----	-----
Other	\$ 850	\$935	\$85	+10%
Basic Charge	\$ 142	\$142	-----	
Total	\$1753	\$1838	\$85	+4.8%
ELECTRIC HOME				
Space Heating	\$2544	\$2798	\$254	+10%
Water Heating	\$ 501	\$ 551	\$ 50	+10%
Other	\$ 850	\$ 935	\$ 85	+10%
Total	\$3895	\$4284	\$389	+10%

Source: Based on FBC's Response to AMCS/RDOS IR 4.1

According to FBC:

"It is the case that approximately 63 percent of residential customers consume less than 10,800 kWh, and that on average, these customers would experience annual bill increases of 11.5 percent based on 2016 consumption. FBC considers an 11.5 percent bill increase to be significant".⁸⁷

⁸⁶ Response to BCUC IR#1, 42.1.2

⁸⁷ Response to BCUC IR#1, 45.1

But an 11.5% increase in electricity bills means only a 5.6% increase, or less, in total energy bills for many low-use electricity customers. In addition, a one-year increase of 5.6% hardly qualifies as a rate shock; certainly in comparison to the 35%+ winter rate shock that high-use electricity customers will encounter in Year 1 under FBC's phase-in proposal.

7.0 CONCLUSION

Sound rate-making and basic fairness requires an immediate termination of the RCR and a return to a Flat Rate, supplemented with optional Time-of-Use rates.

Table 7.1 shows the increase in FBC's Flat Rate over the last 10 years. From 2008 to 2012, all residential customers experienced a 34% rate increase.

Table 7.1: Change in FBC's Flat Rate, 2008-18

Year	Flat Rate	Percent Change From 2008
2008	7.1 cents/kWh	-----
2012	9.5 cents/kWh	+34%
2018	12.0 cents/kWh	+69%

Table 7.2 compares the rate increases experienced by a high-use electricity customer (30,000 kWh per year) and a low-use electricity customer (9,000 kWh per year) over the last 10 years.

Table 7.2: Change in customer rates, 2008-12

Year	High-Use Customer Avg Rate Cents/kWh	Percent Change From 2008	Percent Change From 2012	Low-Use Customer Avg Rate Cents/kWh	Percent Change From 2008	Percent Change From 2012
2008	7.1	-----	-----	7.1	-----	-----
2012	9.5	+34%	-----	9.5	+34%	-----
2018	13.9	+96%	+46%	10.1	+42%	+6%

Following the introduction of the RCR in 2012, the high-use customer's rate increased another 46%, bringing the total rate increase since 2008 to 96%. The low-use customer's rate, on the other hand, increased only another 6% from the 2012 level. The introduction of the RCR in 2012 had the effect of shifting subsequent rate increases almost in full onto the backs of high-use electricity customers; thereby creating the illusion among the majority of FBC's customers that FBC's rates were no longer rising.

Given this historic context, the rate increases that would be experienced by low-use customers upon an immediate return to a flat rate do not constitute "rate shock" because the increase is merely the result of terminating an inappropriate subsidization that has benefitted these customers since 2011.

FBC maintains that:

“the manner in which the rate elements were determined in 2011 has little, if any relevance to whether the Company’s proposal to remove the RCR as the default residential rate should be approved in the circumstances before the Commission now.”⁸⁸

To the contrary, however, the underlying rate elements are of central relevance to the analysis because FBC is not proposing the immediate termination of the RCR but a gradual phase-out. Since the RCR was improperly designed and implemented in 2011, the adverse annual bill impacts will continue during the phase-out period. At the customer level, FBC’s gradual phase-out means continuing to

- overcharge a typical high-use customer (consuming 30,000-35,000 kWh per year) by another \$1500 over four years, and
- have high-use customers (consuming more than 15,000 kWh per year) cross-subsidize low-use customers by a further \$14 million.

Returning to a system where every customer gets charged rates equal to the cost of supplying them inevitably means an increase in bills for low-use customers. However, the following facts must be considered when examining the overall fairness within the rate class:

- they received significant reductions in their rates and bills in 2012 without having to undertake any efficiency measures;
- they’ve been paying rates below cost for the last 6 ½ years due to the \$30-\$40 million in subsidies transferred to them from high use electricity customers;
- in many cases, electricity is a small portion of their total energy bills because they use non-electric sources of energy, such as natural gas, for space and water heating needs – so a 12% increase in their electricity rates might only mean a 6% increase in their total energy bill;
- since they are low-use electricity customers, the absolute dollar value of bill increases will be relatively low – for a customer consuming 5,000 kWh per year, an immediate return to the flat rate will mean a bill increase of only \$8 per month;
- they can reduce the impact of bill increases by increasing their energy efficiency, something they haven’t been incented to do since 2012; and
- since appliance use accounts for a significant portion of their total electricity use, they should be able to reduce the impact of bill increases by electing to be charged TOU rates. Indeed, the immediate return to a flat rate will provide an incentive to switch to a TOU rate system once it becomes available.

⁸⁸ Response to AMCS/RDOS IR#2, 3.1

In its Reasons for Decision in the 2011 FBC RIB Rate Proceedings, the BCUC made the following observation:

“In the absence of market pricing, as is the case in the regulated sector, the challenge for utilities and regulators is to establish an economic efficient price, or rate, that encourages energy conservation while ensuring that the utility’s revenue requirement is met. While an arbitrary increase in a rate may well encourage less consumption, it may not be an economically efficient reduction in consumption. In any event, given revenue requirement constraints, a flat rate cannot simply be increased. An inclining block structure, which charges a lower rate for amounts consumed below a threshold and a higher rate above that threshold, can potentially be structured to be both economically efficient and meet the utility’s revenue requirements. However, a RIB rate structure that is incorrectly priced can have disadvantages and unintended consequences, the principal among them being that customers overuse underpriced resources and underuse overpriced resources. The choices made are suboptimal and the consequence is lower productivity and/or lower conservation. A rate structure based on sound rate-making principles can ensure that what consumers pay will reflect the true economic value of the energy they buy, and that energy resources find their best possible uses”.⁸⁹

In sum, FBC’s RIB rate structure was incorrectly priced resulting in arbitrary rate increases for high use customers, which led to major disadvantages and unintended consequences, as documented in this Submission. Sound rate-making and basic fairness requires an immediate termination of the RCR and a return to a Flat Rate, supplemented with optional Time-of-Use rates. Only then will all consumers be paying fair and non-discriminatory rates that reflect the true economic value of the electricity they buy and there will be a fair and efficient allocation of our energy resources.

⁸⁹ BCUC Decision, FBC RIB Rate, January 13, 2012, p 21

APPENDIX A

CV OF NICHOLAS MARTY

EDUCATION

BA (Honours) Economics, University of British Columbia, 1974

MBA, University of British Columbia, 1975

EXPERIENCE

1977-1984 Economist, National Energy Board

1984-1986 Chief, Policy Analysis, Energy Policy Branch, Energy Mines & Resources Canada

1986-1989 Director, Corporate Development & Economic Analysis, Energy Policy Branch, Energy Mines & Resources Canada

1989-2000 Director, Demand Policy & Analysis, Office of Energy Efficiency, Natural Resources Canada (formerly Energy Mines & Resources Canada)

2001-2007 Senior Director, Domestic Environment Policy Development, Natural Resources Canada

SUMMARY OF RELEVANT EXPERTISE

From 1989 to 2007, as a senior manager in the Federal Government, Nicholas Marty was involved in the development, implementation and assessment of virtually every federal initiative aimed at enhancing energy efficiency and reducing the greenhouse gas emissions associated with energy use.

He was responsible for the following areas, among others

- drafting and implementation of the *Federal Energy Efficiency Act*,
- the development of statistical surveys on energy consumption,
- the development of an energy efficiency evaluation framework, and
- the preparation of progress reports to Parliament on the performance of departmental energy efficiency initiatives and programs .

He played a leading role in many federal-provincial and stakeholder fora to identify and assess potential initiatives to promote energy efficiency and renewable energy in order to reduce greenhouse gas emissions caused by the burning of fossil fuels. He also chaired the APEC Steering Group on Energy Efficiency Standards.

APPENDIX B

STATEMENTS ON THE POLICY OBJECTIVES OF TWO-TIER RATES

1. BC Ministry of Energy

From: MEM EAED Correspondence MEM:EX
[mailto:MEM.EAED.Correspondence@gov.bc.ca]
Sent: August 25, 2016 3:42 PM
To:
Cc: Commission Secretary BCUC:EX
Subject: Response to your email regarding two-tier rates - Ref: 97016

Dear

Honourable Bill Bennett, Minister of Energy and Mines, has forwarded your August 8, 2016 email regarding FortisBC's residential two-tier electrical rates in British Columbia to me for a response.

Thank you for your report—the amount of detail is impressive. I understand that you have concerns about FortisBC's residential electricity rates for homes in rural areas and without access to natural gas, and that you are recommending that the British Columbia Utilities Commission (BCUC) set multiple residential rates.

The BCUC, which operates under and administers the *Utilities Commission Act*, regulates British Columbia's natural gas and electricity utilities, including their rates. The BCUC has reviewed and approved FortisBC's Residential Conservation Rate (RCR) and BC Hydro's Residential Inclining Block (RIB) rates. A detailed explanation of the BCUC's reasons for approving the two-tier rate structure is available online at <http://www.bcuc.com/ApplicationView.aspx?ApplicationID=187>.

BC Hydro's RIB rates and FortisBC's RCR rates are designed to create an incentive for conserving electricity by reflecting the higher cost of new electricity generation without raising rates overall. These rates are not designed as incentive to fuel switch. BC Hydro has had its RIB in place for six years.

On July 6, 2015, Minister Bennett requested that the BCUC undertake a review of the RIB and RCR and provide a report on whether there are unreasonable bill impacts associated with inclining block rates, and the potential for demand-side management programs to mitigate bill impacts. You can find a copy of the letter and the BCUC process at <http://www.bcuc.com/ApplicationView.aspx?ApplicationID=506>.

I see that you copied the Commission Secretary on your August 8 e-mail, so the BCUC will have the benefit of your views as it prepares its report to the Minister. The Ministry will await the BCUC's report before considering any actions with respect to tiered residential electricity rates.

Thank you for writing.

Sincerely,

Les MacLaren

Assistant Deputy Minister

Electricity and Alternative Energy Division

Ministry of Energy and Mines

2. Andrew Weaver, MLA, Oak Bay-Gordon Head (on his website)

November 1, 2017

Unintended consequences of BC Hydro's two-tier billing

The issue of BC Hydro's two-tier billing is [beginning to make the news again](#) and I'm pleased that the new government has committed to looking into it.

Back in 2016, I received correspondence from a number of constituents expressing frustration over the two-tier billing system. I shared and continue to share their concerns. On May 27, 2016 I [wrote a letter](#) to Bill Bennett, the then Minister of Energy and Mines, asking for more information.

Electricity (produced from renewable sources) is the cleanest form of heating. We should be encouraging (not discouraging) its use. The idea that multi-tier pricing enhances conservation and efficiency, while theoretically correct, has obvious detrimental consequences. It inadvertently incentivizes fossil fuel use for heating and hot water. It also doesn't differentiate between large and small homes, the number of people in a particular dwelling or if you drive an electric vehicle. For many, it is simply impossible to stay within Tier 1 year around.

A far more attractive approach would be to introduce time-of-day billing. By charging different rates at different times of the day (which is easy to do since the introduction of smart meters), rate-payers could optimize their energy usage (and help stabilize the electricity load). For example, cheaper rates in the evening or the night (where demand is low) would encourage people to charge their electrical vehicles then (instead of during the day). Programmable dishwashers, dryers and other appliances could also access this cheaper energy.

I look forward to seeing the elimination of the two-tier system. If this is an issue that is important to you, I encourage you to contact the Minister of Energy, Mines and Petroleum Resources at: ***EMPR.Minister@gov.bc.ca***

APPENDIX C

TESTIMONIALS OF RESIDENTS OF ANARCHIST MOUNTAIN & REGIONAL DISTRICT OKANAGAN SIMILKAMEEN ON ADVERSE IMPACTS OF RCR

Most of these testimonials were sent to the RDOS in November and December of 2017 in response to a call for testimonials issued by the RDOS in October. Additional testimonials were provided, at later dates, to the Anarchist Mountain Community Society. Some testimonials have been edited for presentation purposes. There has been no editing of content. Due to the personal information divulged in some of the testimonials, identities have not been revealed.

RESIDENT #1

As Regional District Okanagan Similkameen (RDOS) Electoral Area “G” Director, I represent many isolated rural communities. In 2008 the graduated rates for electricity were introduced in an “attempt” to reduce energy consumption and pollutants.

This program encouraged many residents in rural Area “G” to convert from wood or gas heat to electricity in an attempt to save money and reduce pollutants. Other residents in rural Area “G” already used electricity as their sole source of heat and the option to convert to gas or wood seemed counter-productive, until the two tiered RIB bills started coming in and people realized that using only electricity was not a viable option anymore. In an effort to reduce extremely large electricity bills, many rural households are again burning wood for heat which contradicts our efforts to reduce greenhouse gasses as a Province.

I applauded the efforts of Bill Bennett in July 2015 to seek further clarification from BC Hydro and FortisBC on the two tier Residential Inclining Block (RIB). After 15 months we received analysis that was vague and biased. I am very concerned for Area “G” constituents and have encouraged them to provide testimonials to BC Utilities Commission.

Again, many Area “G “ residents, live in rural areas where there are no alternatives to electricity and who live in substandard housing that requires more energy to heat. They are finding it difficult to pay utilities bills and still meet their basic needs. We encourage our older adults to remain in their homes to age gracefully. Many are no longer able to afford to stay in their homes. The two tiered system is negatively impacting older adults and families. They are getting the high utility bills!

RESIDENT #2

In November of 2016, our Fortis bill was \$625.10 for one month on an equal payment plan; \$492.26 of that in Block 2. Because we have no access to natural gas and are only able to use electricity for space and water heating, we have no recourse but to have bills at this rate. We have no additional money for solar, wood boiler or wood stove, or propane.

Because my husband is a contract worker who was working very little in the spring and early summer, we were unable to pay either our electricity bill or our mortgage and have

since defaulted on our mortgage. (I was unable to work most of 2017 because I had a fall in February of last year and fractured my arm. I also had cataract surgery in March.) Fortis cut our power off in August, and we had to bring in water by hand and use our old generator, until it died, to help for use of the toilet, faucets and other water. We had to borrow a generator from a nearby hotel. I didn't have a shower for 5 days. We were without water or power for 8 days before a generous family member paid our bill.

Then, Fortis, once we contacted them to say the bill had been paid, reconnected us; however not without charging us a further \$2,380 as "insurance", a deposit as it says in our most current bill, in case this happens again. We have since called them, and have been told that they hold onto the deposit for a year before we will be reimbursed. If it weren't for our generous family member, be rest-assured that we would still not have power at our residence this winter because we couldn't afford the payments. My husband is 70 and I am 60. I can't tell you how negatively this has affected us.

RESIDENT #3

We built our house in 2013. It is a very energy efficient home with maximum insulation and the most energy efficient windows and doors that money can buy. We bought new energy efficient appliances and took advantage of the Fortis rebate for same. We installed LED bulbs. We have in-floor heating with an electric boiler and an electric water heater. We do not have access to natural gas.

We moved in March 2013 and because of the transfer between temporary building service and permanent metering as well as mistakes by Fortis billing, we did not get an accurate two month cycle until Feb. 2014 for the period of Dec 2013 - Jan. 2014. To our shock the bill was over \$1,200. As you can see from the consumption and cost summary below, it was not the last one at this level.

We had installed an energy efficient fireplace but due to environmental concerns were reluctant to use it other than to create ambience but throughout the summer of 2014 we started cutting and splitting wood for the following winter. We were able to reduce our electricity consumption for the following winters but at a cost to the environment and our health. I am 65 years old. Splitting wood is a lot of work that I did not anticipate nor do I believe I will be able to continue doing it long-term in my retirement. Moreover, reductions in electricity consumption have been more than offset by the ever increasing Block 2 rate. Under the current two-tier pricing system, the majority of my electricity consumption is in Block 2 – 69% on average. Our bill for Dec 2016 – Feb 2017 was over \$1500.

Our home is already energy efficient. There is very little else we can actually do to mitigate the impact of this pricing structure other than investing large sums to go off the grid. I have investigated the solar option with 2 companies and they do not recommend this option due to the fog and clouds in this region in the winter time. It is simply amazing to me, having moved from Alberta to a more clean energy province and supposedly cheaper energy province, that we are paying these ever increasing rates. Moreover, it is astounding to see so many rural people reverting back to wood as a form of fuel to heat their homes.

Fortis Bill & Consumption

Period	Total kWh	% in Block 2	Total Bill
11/2/13-2/13/14	10114	73	\$1208
2/13/14-4/15/14	8596	81	\$1198
4/15/14-6/16/14	4450	64	\$609
6/16/14-8/14/14	4139	61	\$546
8/14/14-10/15/14	3732	57	\$488
10/15/14-12/12/14	7255	78	\$989
12/12/14-2/16/15	9015	82	\$1278
2/16/15-4/20/15	4971	68	\$664
4/20/15-6/18/15	3431	53	\$445
6/18/15-8/17/15	2731	41	\$361
8/17/15-10/16/15	3367	52	\$466
10/16/15-12/16/15	5043	68	\$726
12/16/15-2/16/16	5801	72	\$863
2/16/16-4/18/16	4415	64	\$647
4/18/16-6/16/16	4974	68	\$737
6/16/16-8/16/16	5121	69	\$760
8/16/16-10/17/16	4368	63	\$640
10/17/16-12/16/16	5243	69	\$780
12/16/16-2/16/17	9579	83	\$1502
2/16/17-4/17/17	3952	60	\$589
4/17/17-6/16/17	3992	60	\$596
6/16/17-8/16/17	4200	62	\$630
8/16/17-10/16/17	4601	65	\$696
Total	123090	69	

RESIDENT #4

In 2016, for a 12 month period, December to December, we paid \$3167.94 for our electric bill. In 2017, for a 10 month period, December to November, we paid \$3778.10 for electricity. Our combined Government Pensions are \$1866.23 per month. At this point, for a 10 month period, we paid 2.2 months of our combined pensions for electricity alone.

We hardly use air conditioning in the summer time. We have no natural gas available, only electricity for heating, cooking and hot water. We do laundry every 3 to 4 weeks. In the winter, the heating is turned to 18-20 degrees. All windows are double glazed and every door has draft prevention on the frame. If there were any other source for power, we would quit Fortis in a split second.

RESIDENT #5

I first visited Osoyoos in the 1980's as a youngster and absolutely loved it there. My wife and I have been visiting for over a decade now since our eldest was born and almost annually have been coming with our 3 children. We had been looking to purchase for 4-5 years in the area. In 2016 we purchased a small cottage that is some 80 plus years old. The cottage is just 900 square feet on one level. We have just one bathroom. We had hoped it would be the perfect place to spend a lot of time with our family as they grow-

up. We expect we one day will rebuild there for retirement (we live in Vancouver). For the foreseeable future we believe the cottage gives the family something special in that it is not a luxury hotel, nor a fancy new house.

The former owner from Edmonton (who had the cottage in the family since the early 1960's) used to winterize the place. He was very honest and open about everything about the place but never mentioned hydro costs. We only dewinterized it in March of this year. After spending the summer there this year we did notice the hydro bill was getting higher.....due to us running fans. However, the shock is now setting in. We chose not to winterize in the hopes of spending 2 weeks at Xmas there and skiing the local mountains. But our 60 day hydro bill for November 10, 2017 was \$665. There has been nobody living there since late August 2017. We have 6 electric baseboard heaters running at 10 degrees celcius ...that is it. Hot water is turned off. I fully expect that as temperatures fall our next bill will exceed \$1,000 and perhaps even hit \$1,500. It is saddening to know that it will simply be too expensive to keep the place open beyond 4-5 months of the year, and thus being denied the ability to make use of it year round as planned. We truly feel for the local residents who simply can't shut their places down and winterize to avoid the exorbitant utility rates in the rural areas of the Okanagan.

RESIDENT #6

My wife and I live in a rural area of BC that does not enjoy the option of using natural gas for residential space and water heating, nor is it likely that this service will ever be provided in the near future. We moved to the area in early 2012 shortly before the current electricity rate structure was introduced.

We built a very energy efficient home with added features that include, extra insulation, good quality windows, high efficiency air-air heat pump with back-up electric forced air furnace, HRV, and significant LED lighting. We set our home thermostat relatively low for winter heating and relatively high for summer cooling. We support reasonable energy conservation policies and wise use of fossil fuels. Having said this, we find the current two tier rate structure fundamentally flawed insofar as it is very punishing and unduly unfair to those individual homeowners who wish (or have no natural gas option) to use clean hydroelectric power for space and water heating. The current rate structure is highly discriminatory. It encourages those impacted to burn more carbon intensive fuels in order to save cost. This action has a negative impact on health as there are many areas that are prone to high concentrations of smoke particulates during the winter heating season.

Over the 5 year period since we moved to BC, our household power consumption has decreased an average of 16% (in spite of an abnormally cold and extended 2016-17 winter heating season), and yet our energy cost has increased 17%. Our average cost per kWh has increased 39% over that period. This is far in excess of inflation.

As for time-of-use (TOU) pricing, we already run our dishwasher, etc. during off peak hours, however home heating must occur when you need it and not just during the night (off peak hours), when normally house temperatures are adjusted down. TOU is minimally useful for those who have already invested in otherwise efficient heating systems that can take little advantage of TOU. Creating individual "heat sinks" to

temporarily store heat is expensive and far less efficient than hydro power reservoirs that can be adjusted to meet predictable power consumption cycles.

RESIDENT #7

We live in a rural area with no access to natural gas. Our option would be to have a wood-burning fireplace, however we are reluctant to add further pollution to the environment. The largest percentage of our electricity use goes to heat the air in our home through an electric furnace during the winter months. We have a low monthly amount of \$97.03 for the period ending Sep 16 2016 to a high monthly amount of \$874.16 for the period ending January 16 2017. For that period ending January 16 2016, \$726.46 of the total bill fell into the higher two-tier rate, which is 87.25% of our total bill.

We are extremely careful about the power we use, demonstrated by the low amounts we consume in the summer months. However in the winter, despite turning the thermostat down to 15C when we are away and 19C when we are at home, a majority of our consumption will always fall into the second tier based on Fortis' and the BCUC's discriminatory two-tier rate structure. Our home is a newer build extremely energy efficient as are our appliances. There is nothing further we can do to reduce our consumption yet we are penalized and discriminated against by Fortis because we are not able to have access to natural gas, which is a cheaper alternative than electricity. We have been paying a monthly equal billing amount of \$298. A year ago it was in fact \$246 per month. On the last bill we received (period ending Oct 15 2017), Fortis wants to increase this to \$430 per month an increase from 1 year ago by 43%!

As a rural resident, we feel extremely marginalized, discriminated against and feel as though we continue to subsidize a rate structure that only benefits customers of Fortis that have access to natural gas, a cheaper and more efficient method of heating homes in the winter months. We are fighting a constant financial battle with Fortis that is impacting our household quite considerably.

RESIDENT #8

We are a retired couple who purchased and moved into our home in 2009. Our home is all electric. We were informed that all electric meant cost savings and less of a foot print on the environment. It was promoted by the Government and Fortis. Usage in 2011 was 39197 kWh; in 2013 it was 39416 kWh, in 2015 it was 42897 kWh, and in 2016 it was 35734 kWh.

Since moving in we have done the energy efficient home inspection by Fortis. Only minor recommendations were needed, which were done. We have also installed a new water heater, heat pump and electric furnace within the last 4 years. Our monthly budget has gone from \$220 dollars per month in 2009 (previous owner) to \$500 dollars per month in 2017 and we are using less energy. We have upgraded equipment and went to mostly LED and fluorescent lighting.

As indicated above, we are paying more than double since 2009 due to two tier electrical rates and using less energy. It seems this system is anti-customers that use only electric. Some things are wrong in the world and this is one of them. Let me pay for energy I use but not at a higher cost than others.

RESIDENT #9

My husband and I are among the people who are negatively affected by FortisBC's 2 level rate structure. This rate discriminates against us because we live in a rural area of Osoyoos [officially RDOS] and do not have access to natural gas to heat our home or use in a fireplace. We are both retired seniors and depend on small pensions for monthly income. Our home is a 20 year old, two-story, 1800 square foot house. Being a newer home it was built with the requirements which help to be energy efficient. We have a forced air electric furnace and a heat pump. We also have a propane fireplace which we use to help to heat our home although most of the heat for our home is from the heat pump. FortisBC states in one of their ads "to encourage energy conservation FortisBC was required to implement the residential conservation rate". This is a means of discriminating against their customers who are forced to use electricity as their primary means of heating their homes and using of appliances such as hot water tanks, stoves, fireplaces etc.

For Jan-Feb 2008; 59 days; 5342 kWh; our bill was \$402.00. For Jan-Feb 2013; 59 days; 5018 kWh; our bill was \$645.00. So for the same time of year and the same number of days, even with lower consumption [in keeping with FortisBC's "energy conservation"] our bill was 60% higher. For Nov-Dec 2007; 63 days; 4825 kWh, our bill was \$373.00. For Nov-Dec 2013; 54 days; 4783 kWh; our bill was \$616.00; an increase of 65% for the same two months of the year, even with lower consumption.

For Nov-Dec 2014; 63 days; 4658 kWh; our bill was up to \$623.12, higher than the previous year even with lower consumption and for a longer period. For Nov-Dec 2015; 52 days; 4914 kWh; our bill was \$709.77. For Nov Dec 2016; 61 days; 4884 kWh; less than the previous year and with more days in the billing cycle, our bill increased yet again to \$725.18.

These higher bills, mainly for heating our home, have put a severe strain on our monthly budget of set government pension cheques during the winter months. As to energy conservation - we have always tried to be environmentally friendly and our efforts include, but are not limited to the following.

- During the summer months we seldom use the air conditioning [although this would be billed at the lower rate].
- We dress warmly in the winter and keep our house at 18 C during the day and lower at night.
- We use the propane fireplace to help heat our home.
- We generally use the heat pump instead of the electric furnace to heat our home.
- We put false plugs in electric outlets to prevent the cold coming in during winter months.
- We do not have our hot water tank set excessively high.
- We take short showers using warm not hot water and do not take baths and luxuriate in a tub full of hot water.
- I generally wash dishes by hand instead of running the dishwasher, and as recommended in FortisBC newsletter, use cold water for rinsing dishes.

- Laundry is done in cold / cool water. I hang laundry outside and never use the dryer except in the coldest of winter months.
- I organize my baking / cooking so that when I turn on the oven it is generally for several items and not wasting electricity for just one item. We also use the toaster oven or microwave whenever possible to avoid turning on the oven.
- We do not have TVs / stereo / radios / computers running unless they are being used.
- We only have lights on in the rooms we are in and don't light up the whole house.
- We often will use a lamp in a room instead of using all of the ceiling lights to light a particular room.
- We have sensor lights for outside our home instead of having lights on all night.

We would ask the BCUC to end this discriminatory rate structure and do as stated on your website - to "ensure that customers receive non-discriminating energy services at fair rates."

RESIDENT #10

Our home was built in 2006. It is a state-of-the-art 2,800 sq. ft. building utilizing R2000 design, with an in-ground geothermal heating/cooling system. This home has triple pane/argon gas filled windows and doors, with geothermal & electrical hot water heating. We burn no fossil fuels in the building. Our goal was to design and build an energy efficient / low environmental impact home. We accomplished this; however, the electrical rates for the electricity we purchase is out-of-control. The design of FORTIS' rates is flawed, and even a model structure like ours cannot stay close to lower tier costs. While our consumption is 16% lower now than in 2010, our average electricity rate, of 14.5 cents/kWh, is 77% higher, as shown below.

Year	Bill	kWh	Rate
2010	\$2,956	35,381	8.2 cents/kWh
2011	\$3,150	34,161	8.2 cents/kWh
2012	\$3,585	33,951	10.9 cents/kWh
2013	\$3,974	32,525	12.3 cents/kWh
2014	\$3,804	29,968	12.8 cents/kWh
2015	\$3,837	28,774	13,2 cents/kWh
2016	\$4,182	29,710	14.1 cents/kWh
2017	\$4,536	30,960	14.5 cents/kWh

RESIDENT #11

Our home was built in 2005 with the idea of conserving energy and taking full advantage of its location on Osoyoos Lake. We oriented the home facing east and planted two large shade trees along the southern wall. A 3 meter wide roofed porch shades the East and South side of the house. There are only two small windows on the western wall and all windows in the house are energy efficient and coated with reflective material to increase energy efficiency. We installed a geothermal heat source for heating and cooling. Natural gas is not available on our street so electricity is our sole energy source. Before and after the introduction of the two tier system of billing I did a comparison of my energy use during the same two month period. Even though I reduced my energy consumption

after the two tier billing started, my bill for the identical two month period increased by as much as 19%. This method of billing penalizes those of us unable to switch to an alternate energy source and we end up subsidizing those who can switch. It is clearly designed to negatively impact those of us living in rural areas and benefit others. It is unfair.

RESIDENT #12

We moved here just over 1 yr ago, Sept. 2016. I have never had such outrageous Fortis bills like this. We kept the heat at 12* C (54* F) when we were at work, and upped it to 15* for a couple of hours in the evening & morning. This is not hot by any means! No dishwasher, no dryer (hanging clothes on the line) no hot tub, no baths, no excessive lights/tv/computer usage. Our bill was an outrageous \$1200! I have never had anything like it!

We have had to "tarp" off doorways/hallways to conserve heat, & live only in the back bedroom/bathroom with an energy efficient infra-red space heater, since we can't afford to heat the whole house. No one can visit; it's too cold in the rest of the house. We have to make sure pipes in the rest of the house don't freeze. This is shameful! Something needs to be done about the unfair 2 tier system. We need to go to a flat rate.

RESIDENT #13

Since the end of 2010 to the end of 2016 our electric bills have gone from \$866.00 for 2 months to \$1495 and it sounds like it's going up again. My wife and I own our home, but since I can no longer work because of medical reasons, our total income is around \$2200 a month for OAS and CPP. I am almost 73 and my wife is almost 70.

Here is a comparison of our bills, November to January, from 2010 to 2016.

Nov - Jan	Days	Bill	kWh
2010-11	61	\$866	9467
2011-12	59	\$863	8522
2012-13	61	\$1034	8376
2013-14	61	\$1021	7712
2014-15	60	\$1209	8707
2015-16	62	\$1278	8536
2016-17	61	\$1495	9654

We have no other choice where we live, and everything IS electrical. As you can see, the costs are about 1/4 of our monthly income during the winter.

RESIDENT #14

This two-tier system absolutely discriminates against people who have no other choice for their heat. We live in Tulameen, there is no natural gas here so we are forced to either run electricity, or propane which is very expensive as well. We installed an air source heat pump as our main heating source to conserve energy. This system cost us

much more than a regular natural gas furnace but find that no matter how hard we try to keep the usage to a dull roar we can't keep below the first tier.

We now use wood to heat our house when we are home. So yes, fossil fuels are the main source of heat in this area. Not so good for the environment but you can't fight companies like Fortis to be reasonable with their rates. This is what happens when there is no competition. The company runs rough shod over its customers and the government helps them along.

RESIDENT #15

My husband and I retired in 2008 and we decided that we wanted to come home to live. We purchased a single wide 1974 trailer with an addition and completely renovated before we moved in. Our only means of heat is power as there is no Natural Gas service available. In 2008, when we moved, power was affordable but starting in 2012 the two tiered system was put in place with increased power rates happening yearly. What has impacted us the most is the two tiered rate of 1600 KWH hours for the basic rate which for us is too low and unachievable.

We have tried everything to achieve the basic rate level. We have put plastic on all the windows. We have a wireless outdoor thermometer that registers outdoor and indoor temperature. We never let the indoor temperature go above 19 degrees and only have 1 register on in the night. This happens in the winter months as we do not want our pipes to freeze. My husband makes sure that we have weather stripping on the doors and caulking around the windows. A cover is put on the stove fan. There is nothing else we can do to conserve power. We are seniors with COPD and other health issues and the cold is hard to bear. We are on basic Canada and Old Age Pension so we really need assistance with this way of charging for power.

RESIDENT #16

In the letter of response from the BCUC to my letter dated May 17, 2013, it is stated that the Government of BC issued its Energy Plan which sets out the Province's commitment to reduce greenhouse gas emissions and maximize conservation efforts. It goes on to say that the Residential Conservation Rate (RCR) is intended to help achieve the policy action of the energy plan and to create conservation awareness among all users.

My comments to the above are: (a) if the government really wanted to reduce greenhouse gas emissions they would have put a RCR on natural gas which is a nonrenewable greenhouse gas producer / not electricity which is a renewable non-greenhouse gas emitter. (b) The rate for the second tier was arrived at by taking the average electrical consumption of all homes, not just those that heat with electricity. It should be very obvious to anyone that those of us who heat with electricity are going to use more than those that heat with gas. As a large percentage of homes in BC are heated with natural gas and not electricity, there is no awareness raised among those home owners. I have been saying in my correspondence with the BCUC and FortisBC that the two tier billing system is unfair and discriminatory because those that heat with electricity are subsidizing those that heat with gas. According to FortisBC this two tier rate is revenue neutral for them/ but it sure it not for customers that heat with electricity.

In a letter from the BCUC, dated March 20, 2014, it is in black and white that the BCUC is responsible for ensuring that customers receive safe, reliable and non-discriminatory energy services at fair rates from the utilities that it regulates. It seems that the BCUC is not living up to their mandate.

RESIDENT #17

I have lived in Cawston all my life and never have I experienced this level of discrimination and personal hardship that Fortis has placed on my life since they have implemented the two-tiered system. When billing for power usage. FortisBC sold this system of billing to the BC Utilities Commission and to the residents of BC that the high cost of power was because of the waste of users that in a two month period were using more than 1600 kwh and should therefore pay for that waste of power. That is not true as I am sure you will see by my letter and the many letters and social media complaints.

I live in an area that I cannot get Natural Gas and choose to not pollute the beautiful air in our valley with smoke from a wood burning stove. My only choice to heat my house is with electricity and to stay under 1600 kwh is impossible. As soon as I reach 1601 I start paying an extra five cents a kwh hour which is unaffordable for me but also so unfair. After summer and as soon as my furnace comes on from a setting of 56 degrees I check and monitor my electric consumption daily. My furnace is very rarely ever turned to over 60 degrees while I am at home and turned to 56 when I leave. I did not have Christmas lights last year and it will be the same this year.

All winter long I live in one room of my house and I never have visitors or company because my house is just too cold. Watching TV I lay on the chesterfield wrapped in an electric blanket with my hat and scarf on just to keep warm. To walk into your house and see your breath is just an unacceptable way to have to live during the winter. I am willing to pay for the power that I use but it must be one rate that everyone else is paying. The time of blaming and making people pay an increase rate and justify it with the statement and perception that we deserve this because we waste power must be stopped.

RESIDENT #18

Particularly troubling is the two-tiered system. This method of rate-setting is a means of hurting the poor while not touching the rich or well-off in the same way. Those who have means and nice or newer homes will not be hurt by this system. While the poor and seniors that are on limited income...who cannot afford better living facilities--- nor other than baseboard heat are affected greatly. Fortis must look seriously at some means of offering the unfortunate among us a more equitable rate.

RESIDENT #19

The two tiered rate structure clearly shifts the burden of maintaining Fortis revenue from mainly urban power consumers, who have access to alternative energy, to mainly rural customers who must, by necessity, heat with electricity.

Fortis reports that the majority of its customers now pay the same or even less on their power bills. Now, if the two tiered rate structure was meant to encourage conservation then what incentive do any of these happy customers have to conserve? The incentive is

only working for people like myself who heat with electricity and are doomed to always exceed the lower threshold. In my neighbourhood the higher power rates have resulted in a renaissance in wood heating. I cannot emphasize enough how polluted the air is outside when my neighbours fire up their outdoor wood heated boilers

Fortis claims its two tiered rate structure is fair as it applies to all customers equally. Is the BC Utilities Commission aware that many Fortis customers are “multi--metered” and thus the lower power threshold applies to each meter and to each power bill? Would that I could have two or more meters on my house and receive the discounted rate for each meter.

Fortis states that the two tiered pricing structure is “revenue neutral”. They also state that considerable amounts of power have been saved. This means that Fortis has made the same amount of money by selling less power. So where does this surplus power go? I speculate that the surplus power is available to be sold on the open market and thus Fortis profits from its “revenue neutral” pricing.

RESIDENT #20

We live near Willowbrook and have lived here since 2003. When Fortis started the two-tier system we lived in a larger house and our hydro bill after the 2-tier system went into effect was 30% to 50% higher in the wintertime. We now live in a house half the size and our hydro bill is approximately 25% higher for the year. From Sept. 2016 to Sept. 2018 we paid approx \$700 more than if it had been a 1-tier system. We would sure appreciate if the system could be changed.

RESIDENT #21

The Fortis BC Two Tiered Rate System negatively impacts my pocket book. I have lived in the rural district, south of Oliver, over fifty years and have always had forced air electric heat. Last winter's power bill was exorbitant ... the worst ever! This issue becomes hurtful when comparing power bills with town residents who have Natural Gas Service. Their power and gas bills together are less than half of my total power bill. Natural Gas is not available to us. There are no incentives or rewards for using electricity wisely. Two homes on our family farm are affected by this unreasonable system. I realize Fortis is a monopoly. It's possible that if the two tier rate system was eliminated, Fortis would simply increase the first rate. We cannot win.

This evening I chatted with a family member who lives in the hills, nine miles east of Oroville, Washington. He heats his home, a triple wide modular, with electricity. His power bill was just over \$600 for two months last winter; a contrast to my two month billing which was over \$1,000. Today, a friend told me how pleased she was with her returns on her Fortis Shares! Another slam!!!

RESIDENT #22

I have an all electric home including heat, hot water and cooking. It is possible to stay within the lower block 1 power billing rate during the summer but it is impossible in the winter. The 2 tier billing system favours people that burn fossil fuels (natural gas) for

heat, hot water, and cooking because they are able to pay the lower block 1 rate year round.

In the South Okanagan, when I built my house, natural gas was not available and is still not available in some areas. The 2 tier billing system has forced a lot of people to convert to natural gas also sold by Fortis. Perhaps the BC Utilities Commission should consider this a potential conflict of interest by Fortis? Environmentally natural gas is 50% cleaner than coal while electricity produced by hydro is 100% cleaner than coal!

RESIDENT #23

I use base board heaters and do not have a fireplace yet. During the summer I usually average around the \$150 mark and upwards to \$200 in the spring and fall. My winter bills are over \$500 and one topped \$700. I have a small 930 square foot house that was re-insulated to code in 2014.

RESIDENT #24

I am a retired senior who relies on electricity to heat my home and water. I use electricity frugally - my back bedroom is closed off during the winter and I do not use my clothes dryer at all. I have my home in a mobile home park where I pay over \$400 in pad fees every month. During the summer I use air conditioning and my bimonthly bill is usually around \$100. During the winter months it goes over \$500. My income is less than \$1700 per month, so the costs of my electricity take quite a chunk out of my cash flow. I do not have investment income. So I would be very grateful if the two tier system were eliminated.

RESIDENT #25

In the past +or- 6 years, more than plenty has been expressed by very many people about this issue, especially to our past B.C. Liberal government. Unfortunately, nothing was done about rectifying this matter of social injustice. Numerous letters were also sent to Fortis B.C., as well as to the B.C. Utilities Commission. They both said the rates were fair. According to many consumers, they cannot afford to pay their power bills and also have enough money left to pay for other necessities. (Therefore, poverty is creating increasing numbers of homeless people, e.g. the Carmi Hills tenters and a lot more.)

Our highest power bill for 2016, Dec. 08 to Feb. 08, 2017, the coldest 2 winter months, was \$1351.73. This was for our family residence. In our specific case, we have no other alternative sources with which to heat our home. Upgrading was pursued but this would have been very expensive and also physically impossible. This also applies to very many other home owners.

Over the past, plus or minus, 6 years, Fortis B.C. has had approximately 14 rate increases amounting to about 44%. Most family incomes do not increase proportionately to keep abreast with this present rate of inflation. The present two-tier rate system definitely needs revision to justly accommodate everyone. We urgently call upon our present government and all other authorities of concern to begin immediate action before the next winter sets in upon us.

RESIDENT #26

I live in a large, older house (that has been updated regarding insulation, although there is always more that could be done) in rural Oliver with no natural gas line along the road. The neighbourhood is applying to get a natural gas line installed, but this will be costly and some houses along the road might not be willing to pay the cost of installation and conversion of electrical to gas appliances. I also have a ski cabin at Mt. Baldy and of course there is no gas line to the mountain. I think that the policy of extra payment for electricity is unfair to those of us who do not have the option of gas. If gas were available and I did not convert I would not think this unfair as I would have the opportunity to hook up to a less costly source of power. However, the present policy is not right and appears to be a gouging of us by Fortis and, with no alternative, what option does one have other than to pay the high (and going higher) costs of electricity.

RESIDENT #27

We're a low income family with 3 kids under 11 and a fourth on the way. Laundry, bathing, inevitable use of devices, air conditioning in the summer and heat in the winter – ALL YEAR ROUND we are consistently in the second tier of billing. The last 3 years we have had a disconnection notice right before Christmas like clockwork, because we are not always able to "over pay" on our equal payments in the warm months to help subsidize the cold months. It makes little difference....as rates continue to climb, our family continues to suffer, much like many, many other families in this area. It is extremely disheartening that every year my husband and I have to discuss...."Are we doing Christmas....or keeping the power on?" Between lack of affordable housing in this area and Fortis nickle and diming; young families are getting desperate. Maybe if Fortis was a little more affordable we could manage the hefty rental prices just a little easier.

RESIDENT #28

We moved to a rural area in 2013 where we embarked on building a new home. Our home is a modest size, 1875 square feet, 4 bedrooms, 2 bathrooms. We researched the most energy efficient heating and cooling systems for our new home and justified spending the extra \$20,000 needed for the most energy efficient system available since we do not have access to natural gas. We installed the highest level of insulation; all of our lighting is LED technology; we installed highly efficient windows and doors; we bought all new appliances designed to the highest energy efficiency. We researched and installed the most efficient wood-burning fireplace we could find, although we would prefer not to burn wood because of the pollution it creates in the valley. We also installed 22 solar panels at a cost of \$28,000.

Building an energy efficient house was our number one priority. We wanted to conserve energy and yet our electricity bills are higher than we ever imagined or budgeted for. In fact, they are exceptionally higher than any other home we have owned. We feel that the criteria Fortis has set up with the two-tiered residential conservation rate system are unattainable.

RESIDENT #29

We have been cold every winter since 2012 when this discriminatory pricing policy was introduced by the Campbell Liberal Government and forced on the consumer through the BCUC. We have no access to natural gas and have avoided wood heat as we have a resident with asthma. Propane is not an option for us as we are not comfortable with this product and it is very expensive.

We all had a cold and long winter (2016 – 2017). We have an energy efficient house with an 82.7 efficiency rating out of a possible 83 for this vintage of home and have spent about \$25,000.00 to update our heating, window coverings, hot water system, lighting and appliances. We would go solar if any incentives were made available to help defray the enormous installation costs as this is the last possible energy investment we can make.

Despite all of this effort, we still cannot afford to heat this house. In the winter of 2016 / 2017 we kept the house at 16.3C for January and 15C for February. If we had dared to keep the temperature at 20C during the day and 18C at night we would have paid FortisBC an additional \$800.00 for the heating season. That would have been 61% of my pension for January. We are fed up with our heating charges on the second tier being used to subsidize other utility users electric costs while we freeze in the dark. We are paying more than the cost of production while gas customers enjoy lower electric bills at the expense of electric heat users. This, despite the fact that gas, is more efficient for space and water heating (see Fortis ads that confirm this fact). No other energy product in British Columbia is priced on a tier basis. All other pricing ensures that all pay the same and the emphasis is on the user to be efficient. So too should be electricity. We have complained to the BCUC, our MLA, Fortis BC and to anyone else who will listen. All have failed to see the unfairness of 2 Tier billing.

RESIDENT #30

As a resident in RDOS Area C, our home is 100% powered by electricity. We have no access to gas in our area on Sawmill Rd nor do we have any wood burning heat at our residence, so absolutely yes, the two tiered billing effects our pocket book.

RESIDENT #31

The two tier Fortis electricity rates have impacted our lives. We live in a fairly new energy efficient home and are conscious of trying to conserve energy. Our home is large, 2,278 sq ft, two adults living in the home, one level. This summer due to the wild fires and smoke it was necessary to have our air conditioning on 24/7 from end of June to end of September. It was necessary to keep our windows and doors closed to keep the smoke out.

We have always paid our Fortis bills by using the “equal payment” plan which works well. This year, however, at our “annual adjustment” which was in October, our payment for electricity increased from \$165.00 per month to \$310.00 per month, a huge increase. I would like to know why Fortis rates are considerably higher than BC Hydro rates. The Tier 1 & 2 rates have impacted our lives and not in a good way.

RESIDENT #32

We moved, on the 1st of June 2017, from a home in Kamloops that was twice the size of our modular. Yet our power bill under Fortis is more than double what we were paying under BC Hydro in Kamloops. We are not impressed.

RESIDENT #33

Our farm has no access to natural gas for heating. Examples for this letter are taken from our invoices of 2011, 2013, 2015 and 2017 using the period of January/February in each of these years. The percentage increase generated in each of these periods was arrived at by using the one tier system prior to 2012 as the base and subtracting that from the now established two tier billing.

- 2011 – January/February 7,589 Kwh @ \$0.0808 and \$0.0887/Kwh = **\$660**
- 2013 January/February 7,113 Kwh and using \$0.0808 and \$0.0887 for the first 1,600 Kwh and for the remaining 5,513 Kwh @ \$0.117 and \$0.1295 = **\$844**. The invoice, if all the 7,113 Kwh was at 0.0887, would be **\$630**. This is a 34% increase over single tier.
- 2015 January/February 4,381 Kwh and using \$0.0887 for the first 1,600 Kwh and for the remaining 2,781 Kwh @ \$0.1295 = **\$502**. The invoice, if all the 4,381 Kwh was at \$0.0887, would be **\$389**. This is a 29% increase over single tier.
- 2017 January/February 6,831 Kwh and using \$0.09845 for the first 1,600 Kwh and for the remaining 5,231 Kwh @ \$0.152 = **\$952**. The invoice, if all the 6,831 Kwh was at \$0.09845, would be **\$672**. This is a 42% increase over single tier.

Just to clarify what can be attained with 1,600 Kwh/two months or 26.6 Kwh per day:

This is equivalent to running 12 of 100 watt light bulbs for 22 hours

OR

this would heat a home of 1,500 square feet (52,500 BTU furnace) for 1.73 hours in a day

OR

This would heat 500 litres of water at 15oC to 60oC each day

The question remains:

HOW CAN ANY NORMAL HOUSEHOLD FUNCTION WITHOUT INCURING THIS PENALTY – ESPECIALLY WHEN THERE IS NO ALTERNATIVE TO ELECTRICITY IN THEIR AREA?

Our electricity consumption has not changed since we have taken every step we can to minimize usage. We just have to come up with the money somehow.

RESIDENT #34

I live rurally and rent. I moved here from Toronto 4 years ago to be closer to my elderly parents. It took me 2 years to find a house to rent in the community. I'm an ecologically minded woman who spent the time to study a minor in sustainability. It upsets me when I see energy wasted. I have no air conditioner or dish washer. In the summer I can keep my cycle bills to under 100 dollars but, even with a wood burning stove in the front section of the house, I am dependent on an electrical furnace for the kitchen, dining and bedroom in winter. Last year my winter month heating bills were \$1,500 in total from November to April. The arrival of a baby in December and the late spring made the heating crucial. My job, landscaping, had a seasonal delay for a month and circumstances were difficult financially on every front. The two tiered system made it close to impossible. I finally caught up in payments in September, only to start the cycle again.

My windows are wrapped and I purchased and had storm doors installed at my expense. I have changed every light bulb and power bar to be efficient but, the fact remains that I have no alternative to an inefficient means of heating for some of the year. As I am responsible for the heating bill, and not my landlord, he has little incentive to endure the costs of installation of gas. I'm not sure how to encourage landlords to make their rental units more energy efficient. I have been told that some rural areas can't have gas installed.

But in the end this is what I'm facing. I have no choice. I have implemented all avenues of energy conservation a renter can. If you have further ideas or suggestions I would love to hear them. It truly comes down to a choice between running my car or paying the Fortis bill. Living rurally with no transportation or transportation system makes working impossible. Now it's fall and working seasonally and locally is difficult. Maybe I will be lucky. If I am to work the closest hub is between 20 and 45 minutes away. I hope these circumstances have illustrated how higher electricity bills can affect your standard of living as well as employment opportunities as trickle down.

RESIDENT #35

My 85 year old neighbour last year, who has since passed away, faced an \$1,800 two month electric bill due to this billing tier system. His poor lip quivered as he told me this and did not know how he was going to handle this financial stress on his CPP and OAS. This is the saddest damn thing I have seen. By the way Fortis shares last year traded around \$40; today they are nicely up to \$47 a share... Is this goodwill gesture to get us to "curb our electrical usage" just a wee bit self motivated and a conflict? This man had electrical baseboard heating and of course he was on a 24 hour oxygen tank dealing with this horrible situation. To close off he chose assisted suicide to end his life and honest to god this contributed I am sure.

RESIDENT #36

I am a 59-year-old woman on disability, living in a not energy efficient subsidized substandard housing. Air conditioning in the hot months is a necessity because I live in

the South Okanagan. Even though I always had efficient power consumption habits, my power usage is far less now than it was prior to the two-tiered system. I have been forced to alter my lifestyle to the extent that it is compromising my physical and mental health.

Because of the two-tiered system, I only turned on heat a few days ago. I am forced to rely on wearing layered heavy sweaters. My hands are consistently cold, so I run them under hot water throughout the day to lessen the pain and then burrow myself under a pile of blankets.

The two-tiered system has a serious negative affect on my health and wellbeing. It unreasonably penalizes those, like me, with limited means and who only have access to electric heat without the ability to secure a different source of power. I am unable to alter my unit enough for it to make a meaningful difference in my Fortis bill. What has been terribly demoralizing is that on disability I receive \$375 for shelter yet just my monthly Equal Payment Plan Fortis bill is \$172.00, leaving only \$203 for all the rest of my shelter costs. It is inhumane to believe that is enough for a person to survive.

I feel unfairly burdened by this two-tiered system, It has contributed to my declining health as it makes it virtually impossible to meet my basic needs.

RESIDENT #37

When the smart meters were installed a few years ago, our bills increased by 20%. Adding insult to injury, the 2 tiered rate system increased our bills another 30%! I previously complained to Fortis about this unfair rate system with no reply. Rural people, such as ourselves, with no other utility alternative are in effect subsidizing those that do have a choice. Fortis is also the only company I can think of that penalizes people for using their product.

We heat with an electric forced air furnace. In attempting to reduce our power bills, we installed a wood stove, a propane fireplace, wear sweaters and slippers, turn off lights and unplug appliances, hang dry clothes when weather permits, rarely use the dryer, wash clothes in cold water, installed a timer on the thermostat, close vents in unused rooms, and only turn on the air conditioner when the temperatures are unbearably hot. I tracked our consumption over the years and it surprisingly has remained fairly constant whereas the monthly bills continue to rise.

RESIDENT #38

The two tier Fortis billing has really hit my family hard. Our bill doubles in the winter. Our only heat source is a wood stove yet it still costs more to run our home in winter than in summer with two air conditioners. With increasing of the cost yearly, it's starting to get unaffordable to live. We live in a single wide modular. We are a family of four with two under the age of three.

RESIDENT #39

Living in a rural area, we have no access to natural gas which would cut our energy costs substantially. As a retired couple living on a fixed income, we try very hard to

lower our power bills. We wash dishes by hand and only use the dishwasher when we have company. We also minimize the use of our dryer by air drying some laundry. We also minimize the use of hot water by washing full loads and taking short showers. When lights are not necessary, they are turned off. By using these methods we have really tried to reduce our power bills and request that the two-tiered system be eliminated for those people in the country who do not have alternative energy sources.

RESIDENT #40

Since we live in rural area we do not have an option to switch to gas and don't like the idea of using wood because of the pollution to the environment. We see Fortis as a monopoly that is taking advantage of its position. Our cost per kWh has risen 93% since 2006 which is well above inflation.

RESIDENT #41

As homeowners adversely affected by this totally unfair two-tier rate system, we feel not only is it our right but our duty to stand up against this ridiculous billing scheme! We understand that where natural gas is available, this system might make good business sense. For those of us that are not fortunate enough to have this luxury, it becomes an absolute burden. We are more than willing to pay our fair share but when electricity is the only viable option for heat, we think this practice should be eliminated immediately for these affected areas, as winter is coming. We would hope that the BC Utilities Commission and/or FortisBC come to their compassionate senses and remove this ludicrous cash grab, once and for all. When people have to choose between heat and groceries, something needs to change and soon!

RESIDENT #42

The Fortis bills for our rural property have doubled. We did try to take this up with Fortis when the rates changed but with no success. They suggested we put in gas to the tune of \$80,000 to bring it up to our house and change all the systems to gas. Sorry couldn't afford that. So we are stuck paying whatever they want to charge.

We have been very much affected by the Fortis two-tiered rate system. As a rural property and farm we don't have access to other cheaper power sources. In order to get simple clean water, we were required, for our safe drinking water, to put in an osmosis system which of course runs around the clock to provide us with safe water. This system of course increases our usage which the city folks don't require.

Another increase in power we require is the heating/cooling of buildings for our products and equipment which again city folks don't require for their properties. Our electrical usage is much higher for basic usage compared to those in the city. When this two tiered system came in our bills almost doubled because we use so much power just to drink water and go to work. In March 2012 we paid 301.45 for the month then by March 2013 (with the new tier system) we were paying double. We would use gas but don't have access to gas lines without a large cost to convert and bring up lines to the property.

I don't believe we should be penalized for using increased power above the city limits set by Fortis, as we require more for basic functions. I am sure the city folks would not be

happy if they had to pay for power in their working areas and pay for the power for clean water! To me this was just a way for Fortis to double the cost for the same power. As a rural property owner we require twice the power to run our properties as we don't have accessibility that the city folks do for basic power needs. As a rural property we require basic power to include water pumping system, water cleaning system, charging equipment in road maintenance, pumps for septic fields, increase heating systems/cooling systems, outdoor lighting system increased, water storage heaters and pumps, heated sheds for chemical storage and equipment. These are just some of the rural needs that increase power usage that the city does not need.

RESIDENT #43

We own a condo at Apex Mountain Ski Resort which is seasonal use only. As a result, we have extremely low electricity usage on an annual basis, but like most Canadians, much higher usage in the winter months. Our average usage over the past five years has been approximately 530 kWh per month. However, we still get charged at the high rate for some of the winter months because we occasionally exceed the 800 kWh thresholds. Twice, Fortis has applied what they refer to as a Residential Rate Conservation Credit, but this does not appear to bring our winter month bills below the 800 kWh thresholds. This rate adjustment has been minimal. This entire situation seems grossly unfair to us. If our average monthly usage on an annual basis is below the monthly 800 kWh threshold (which we think is far too low anyway) then we should never have to pay based on kWh over the 800 kWh amount per month.

RESIDENT #44

We are retired in our early 80's, wanting to live in our home as long as possible. We have deferred our house taxes to help fund our costs. After installing a heat pump, recommended to be cost efficient, we now find we use our gas furnace instead, because our electrical bills are so high. How is it that gas which has a finite life supply, is less costly than electricity which is a renewable resource. It seems wrong somehow. And our electricity consumption is still in Block 2.

RESIDENT #45

We have a cabin and are negatively affected by the two tiered rate system as we do not have access to natural gas as a cheaper alternative to electricity. In the winter, we use wood as a source of heat in our high efficiency wood stove when we are staying there but we are still facing bills of close to \$1,000 for a 2 month period. Our cabin is about 12 years old and we used proper insulation when we built. We are mostly at our cabin on weekends only and are not using much electricity when we are not there (enough to prevent the pipes from freezing) but we still face high bills. We would like to use gas but it is not available. It is not fair that people that don't have access to a cheaper energy source have to pay a 2 tiered system. This billing system needs to stop.

RESIDENT #46

I have kept a very complete record of our heat and hydro expenses since we moved into our new home on September 1991. Our home meets the R2000 Energy Efficiency Standard and because of escalating hydro bills, we had a heat pump and new furnace

installed on December 22, 2011. Our total kWhs have gone down but the monthly average hasn't; e.g.

2010 - 21,962 kWh - monthly average \$164.73

2017 – 18,010 kWh – monthly average \$214.26

We are retired and in our 80's.

RESIDENT #47

Our hydro bill for 61 days from November 23 to January 23, 2017 was in the amount of \$748.15. It is \$133.30 more than the bill for 63 days from November 23 to January 25, 2016.

We have an R2000 home, a heat pump and new furnace. We close off all unused rooms and of course wear sweaters! What more can we do? We do have a wood stove, than goodness, or the bill would be even higher.

We feel the two-tiered system is very unfair particularly in view of the fact that we do not have any choice – we have no recourse but electricity.

RESIDENT #48

When the two tiered rate changes started in 2012, I checked other residents around my neighbourhood inquiring about how it affected them. And for all 3 bedroom, 2 bath detached homes of at least 2,000 square feet, the increase was least 20% although Fortis claimed there would be minimal effect. What follows is an excerpt of a letter I sent to Fortis on March 18, 2014.

As I pay the current electric bill which is 25% higher than it was before the rate change, I see the customer service note included with a smiling face explaining "this new two tiered rate change was done to encourage the customer to save energy. This irritates me enough to generate this letter.

First of all, this "new two tiered rate change" is getting close to two years since it was last imposed in July of 2012. So as I understand it this rate change was imposed exclusively by a utility company to thoughtfully help the customer be more energy efficient. The "average Fortis customer" apparently uses 1250 kWhs of electricity. Apparently this rate change will have minimal effect on over 75% of the customers served by Fortis. Are all these customers served by Fortis living in detached three bedroom, two bath homes, at least 2500 sq.ft. in size, heated by electricity? Or are they living in smaller dwellings; one or two bedrooms, in apartments, heated by natural gas?

I saw my electric bill increase by 25% for the Dec. 12 to Feb. 13 billing period. I decided to contact neighbours to see if they were using closer to the 1250 kWhr / month amount that Fortis claims. Everyone had a percentage increase of at least 20%. Some were as high as 25% over the 2011 rate. Were these customers all frivolously wasting energy, heating their back yards with windows open? Or is it just a simple fact that the larger

dwelling of the average family home requires more energy to heat and maintain? What do you think?

One of the neighbours I surveyed used only 1950 kWhs for this period for his 3100 sq.ft home. This sounds more like the "average Fortis customer" usage. But when you find out that this neighbour was not even living in his home for this period, his temperature was turned down to 50 degrees farenheit, only two 60 Watt lights were running, NO oven was ever used for two months, NO washer/dryer, dishwasher etc., the living conditions for the "average Fortis customer" don't look so appealing do they?

And if the temperature was turned to 70 degrees for that two month period, is that being wasteful? Are those the living conditions the "average Fortis customer" must undergo?

RESIDENT #49

Where I live, there are few options. I do have wood heat as well as electric. I also work 12 hour days in town and am often away from my home for 14+ hrs per day in which my electric heating system does kick in. Living at altitude further limits energy saving choices. An example of this is the heat pumps which have become so popular for their energy saving features. They are not designed to work in such cold temps as we are subject to on top of a mountain. I offered to be the test house for this one company that produces heat pumps, but that didn't come to fruition. I couldn't gamble the \$6000, or whatever they cost, to have installed. So, I'm stuck with what I have.

When the 2 tier system first came out, I thought, what an unfair concept. I could not see the rationalization to start billing those who were already receiving high bills, an added tier. It felt like they were kicking those who were down. It has a punitive feel to it as well. I am very conscious of my electric usage and conserve as I am able. I keep the house at a cool temperature, unless my wood fire has it cozy warm. My electric heat doesn't have that ability regardless of how much I pay for it!

Then there is the number at which the second tier starts to be billed. How did they come up with that number? It is ridiculously low. My typical bill in the coldest winter months is billed approx 1/3 at the lower rate and 2/3s at the higher rate. Electricity is not a luxury, it is a necessity. Stop gouging us folk who live in rural areas. This system needs to be seriously looked at and either scrapped or drastically modified. The burden falls on us, and that is simply unfair.

RESIDENT #50

This rate system by Fortis was certainly a huge unwelcome surprise when we moved to our new-to-us home in October of 2016. Understandably, winters on the average are colder up here than in the lower mainland and we went from a gas furnace to electric with a heat pump. But the shock we had when we set up our Fortis electric account here was unbelievable.

Our home is very well insulated (R40+) and built in 2002 with very energy efficient windows and window coverings, etc., etc. Fortis told us that cold weather months would cost us upwards of \$500/month. After we got over the initial shock, we thought perhaps part of the reason was the last owners had a home based business. With this uncertainty, we went on an equal payment plan of \$245/month hoping it would balance

out on our anniversary date, but it did not. Our winter bills ranged from appr. \$365 to \$555! We keep the furnace set at only 21 degrees, daytime; 18 degrees at night. Even summer bills have always been over \$200 and we are not big on using A/C. We have always been energy wise, turning off unnecessary lights, etc., but here it doesn't seem to help much. This rate system has made things VERY tight financially for us, as we are both retired now and on fixed incomes.

So, to summarize, we have gone from a 2600 SF, 30 yr. old, 2 level home on the coast paying \$80/month for electricity; to a 1980 SF, 14 yr. old, 1 level home in OK Falls paying \$245/month for electricity. Something is VERY wrong with this picture!!!!

RESIDENT #51

Reason our consumption is in 2nd tier:

- We live on a rural property of 30 acres where electricity is our only option.
- We have goats & sheep for weed control & fire risk reduction purposes. Therefore, water is pumped for their drinking, yard lights for predator protection & tank heaters during winter to keep water from freezing. We DO NOT qualify for farm status as no income generated.
- Well water for household use is pumped also.
- require 2nd tier consumption for every month to operate this small ranch but much more in spring, fall & winter due to HIGH COST OF ELECTRIC HEATING.

Energy saving measures:

- draft proofed & insulated house
- clothes dryer not used for years (outdoor or basement drying).
- LED lighting
- no air conditioning

Negative impact:

- As seniors on fixed income, the two-tiered rate seriously affects our living standards & options in rural BC, especially in colder weather.

RESIDENT #52

The 2-tier system has impacted our household in a very negative way. We moved into our current location on August 21, 2007 and, from the get go, we did some major upgrades to the house in order to try and keep the heating costs down. We did the following:

1. Put in a new fireplace (cost of \$14,000)
2. Took out the existing electric baseboards and put in a heat-pump (cost of \$21,000)
3. Replaced a patio door that was not sealing probably (\$700)
4. Recently purchased all new black out drapes with thermal backing.

Doing all this was helping to bring down the kWhs but then came along the 2-tier system. And what was gained was lost. Our Fortis bills are higher than ever, even though we burn wood from fall to spring (from Sept to Apr). We also make sure lights are turned off when not needed and electrical appliances are unplugged or turned off when not needed, but nothing seems to help. I have kept a monthly spreadsheet on the

kilowatts that we have used for the past 10 years and even though the usage has gone down our costs are going up due to this 2-tier system. And the average winter cost per month (even with doing all the above) runs us from \$530 to \$631 per month (these amounts are taken from February 2017 & Jan 2016). ***This is like paying an extra mortgage payment.***

It should not cost that much to heat a home. Our home is only 2100 square feet, so it is not large. These charges are extremely hard to meet each month as we live in a rural area where we have no other choice but to use Fortis.

RESIDENT #53

Below is a summary of our electricity charges for the period October 2015 to October 2017. Over a year ago, I phoned Fortis about their rates hoping to get an idea what we could do to reduce our usage. No help was offered. Now we are looking at a 41% increase for the period noted. Not fair especially when they have a monopoly.

Fortis Electricity Charges October, 2015 to October 2017

Billing Period	2016-17	2015-16	Change
Aug-Oct	\$605	\$493	+\$112
Jun-Aug	\$850	\$618	+\$232
Apr-Jun	\$519	\$547	-\$28
Feb-Apr	\$550	\$253	+\$297
Dec-Feb	\$665	\$335	+\$330
Oct-Dec	\$435	\$323	+\$112
Total	\$3623	\$2569	+\$1054

RESIDENT #54

I think the two-tiered system is HIGHLY UNFAIR. If I went into a store to buy, say, a TV. If they said.....if you earn up to \$20,000 annually....the price of the TV is \$200.00 If you earn over \$20,000 annually.....the price of the same TV is \$260.00 Would that be fair? Obviously not.

The two-tiered system is basically the same thing, but in another way. If there is one person, he needs a smaller accommodation, needs less electricity, therefore uses less kilowatts, they pay less. If there is a family of four, they need a bigger house, need more electricity, therefore uses more kilowatts, but after 800 Kilowatts per month, pays a higher rate per kilowatt . . . the rate jumps from .10117 to .15617....approx. 55% morea kilowatt is a kilowatt ... you are both getting the same thing but at a different price

Just because you need more electricity, doesn't mean you are wasting electricity, which is what Fortis seems to think. The one person in a smaller place could be wasting electricity whereas the family of 4 could be conserving better.

My situation...my house has 2400 s.f. living space. Built in 1984. I have a two family home....when one person lived in one unit, and one person in the other unit, our bill average was \$260.00 a month. Then 1.5 years ago, it changed. Now two people live in one unit and two people live in the other unit. Our bill went up to \$420.00 a month.

It had nothing to do with waste...it had to do with need. More people equals more usage.

Also, about 5 years ago, I had an energy audit done. I completed all the recommendations. I do my best to conserve energy. Fortis doesn't believe me... IN THE WINTER, I WEAR TWO FLEECE ROBES, so I use less energy. Fortis is penalizing families with children. They need a bigger house and use more electricity. They have more expenses because of kids....they can't afford a higher rate for electricity but that is what they have to pay. So, they probably cut back on things like food to make ends meet. People in smaller houses could have a higher total income compared to people in larger houses. But the rate for people in the larger house is higher.....does that make sense?

EVERYONE SHOULD PAY THE SAME RATE. THE SAME CAR IS THE SAME CAR .. and is THE SAME PRICE. I have told Fortis this, but they DID NOT CARE repeat...DID NOT CARE

RESIDENT #55

I want to give you an example of the rapid rise in power costs over the last few years by using my own residence. First let me explain that my wife and I designed this house for energy efficiency at the time we built in 1994. I sited the house in June on the longest day to ensure the house faced true South. It is a 3000 sq ft ranch style house with a heated crawl space 5 ft deep. It has a 1600 sq ft west wing with an attached 500 sq ft garage and a 900 sq ft guest wing behind the garage. The house was fully insulated in the walls and in the attic with a thick layer of insulation. The house is heated and cooled by a 4-Ton York heat pump and subsidized in the west wing with a high efficiency wood burning stove in the living dining room area. We burn wood in the afternoon and evenings from November through to April. The house is also designed with 8 large windows (double-paned) and 3 glass patio door systems (also double paned) to capture winter sunlight on the South side to add heat to the house. There are also 4 foot eaves on the South side of the house to prevent sunlight from entering in the summer to assist in cooling the house. The winter sun is not affected by these eaves.

The following is a brief history on my February power bills from 2010 to 2017:

Billing Date	Number of Days	kWh	Bill
Feb 2010	63	5364	\$472
Feb 2011	62	4742	\$458
Feb 2012	60	4594	\$486
Feb 2013	62	5430	\$680
Feb 2014	62	6732	\$900
Feb 2015	64	5035	\$691
Feb 2016	62	4385	\$636
Feb 2017	62	8252	\$1282

I used to pride myself that I could heat, cool, and light my house for under \$1,200.00 per year up until around 2013. This year, based on 2016 bills I estimate it could cost me \$3,326.06 for power services. And I am still using a wood stove to supplement my heat.

We are prudent with our lighting and two years ago converted our house to LED lighting in doors. I have been using the 13 Watt bulbs for outdoor lighting for years now.

I agree that weather temperatures are the variable here but even taking that into consideration I believe our **utilities commission is out of touch** with the consumers. I believe **the next vacancy on that commission should be filled with a person who resides in an area most affected by their two-tiered approach to billing**. Under the current system there are many old aged persons who have to make choices between heating their homes and purchasing healthy food and their medication.

RESIDENT #56

I feel like I am being penalized for living at the top off a mountain in a rural area. I feel that the Two-tiered electricity rate system is ridiculous and is basically calling me an energy hog when I am not.
Just trying to keep warm.

RESIDENT #57

The only option for heat other than electricity is wood. As we are no longer able physically to deal with wood the electric furnace is our heat source and this year we paid an extra \$534.76 on the 2nd tier during the months we needed heat.

Our house is well built and we have installed an energy efficient furnace, hot water tank, freezer, fridge and stove as well as using the drier as little as possible. Our first year in the house, 1993, the total electricity usage from Sept. to Sept. was 25113 kWh while this year it was 20074 kWh which shows that there is only so much conservation of energy one can do when using electricity for heat.

If this two tiered system were truly an attempt to have people conserve energy they would have a larger Base 1 amount than 1600 kWh for those of us that use electricity for heat.

RESIDENT #58

As homeowners in with no alternative to electricity, we are experiencing very high electricity bills throughout the year due to Fortis BC's two-tiered rate system. With only one house occupant on weekdays, there is limited use of hot water, lights and electrical appliances. I currently work in the lower mainland and commute back home only on weekends, leaving one adult as the only full-time occupant of the house. As one adult occupying the home during the week and two on weekends, with no children, we are very conscientious about limiting power usage.

We have three meters; one for the house, one for our well pump house, and one for our barn. Fortis BC charges a "Basic Customer Charge" of \$32.09 per meter every two months so before any actual electricity charges, we are paying almost \$50 per month. As expected, our pump house and our barn use very little electricity so we do not exceed the 1600 kWh that is billed the lesser rate in Energy Block 1.

The house, however, is excessive at the majority of our usage billed at the Energy Block 2 rate of 154% of the Block 1 rate. This seems unreasonable since we do not have the

option to use gas appliances, heat or hot water. We have added insulation in our attic and energy efficient windows in an attempt to cut down on energy costs as well as using our wood burning stove to provide the majority of the heat in the winter, with only limited use of our heat pumps which are an efficient heating method.

If 100% of our usage was billed at the first tier rate, we'd be saving at least \$60 per month. Our average cost of utilities through FortisBC at \$400 per month is an excessively high percentage of our income and I feel that an exception should be made for households without alternatives to electricity. The two-tiered rate system should be banned as it discriminates against those of us with no other utility options. Although we are budgeting funds to pay Fortis, we are continually making sacrifices in other aspects of our lives to allow for the exorbitant cost of power.

RESIDENT #59

We have lived rural for a number of years and are astounded by the cost of the 2 tier Fortis system. We have electric baseboard heat with no cost effective options. We have 2 wood stoves which heat either side of the house and still managed to get a Fortis bill of over \$1600.00. In our last house in Oliver with an older electric furnace we had a one month bill of \$1100.00. There must be a way to make this system more fair & equitable. We can't understand why we pay more for power than in town.

RESIDENT #60

I believe that a full review of Fortis charging rates needs to be done. We go away for several months in the winter and one recent winter I shut off every breaker in our home with the exception of one to keep our fridge and deep freeze active (both relatively new energy efficient models). Our average costs were still in the neighborhood of \$300 per month until I called and confronted them. Their response was that they only did estimates every other month and had a labor disruption! They then reversed the charges!

I have heard of other neighbors in our community who mention monthly charges in the winter as high as \$600! Charge people for what they use, not based on some artificial two tiered system. This is the second time I have spoken out on this issue with no action being taken. Hold these people accountable!

RESIDENT #61

Fortis's two-tiered system has definitely affected me! My electric bill for September was already a whopping \$208.00 which I could hardly afford, then when my electric bill came in for October it was \$291.00! An increase of \$83!!

I do live in an older home that probably would be considered sub-standard and probably requires more energy to heat, but it is my home and has been for over 50 years. I have tried to keep the electric cost down. When it gets a bit chilly I put on a sweater rather than turn up the heat or throw on another blanket. I only wash clothes once every two weeks. I've gotten a new furnace, a new water tank and all baseboard heaters have been disconnected. I don't know what else I can do to keep the electric costs down.

I'm 86 years old and live alone. I have very little in the way of income and an extra \$83 is much more than I can afford.

RESIDENT #62

We are Skaha Estates residents with the primary heating source in our home being electricity. We also supplement our heating with a wood burning stove to keep rising electricity costs as low as possible. There are two of us in the home.

Fortis' two tier system, coupled with fairly regular rate increases, forces us to pay more for electricity year over year, even in years when our electricity use is less. As a retiree on a fixed income, our electricity costs have gone up approximately 40% since 2011 and represent the fastest rising expense in our budget.

Rather than go on with anecdotal information, I have included a summary of our electrical expenses from our Fortis bills since 2011/2012 for the Dec-Feb billing period to give you a picture of the impact of the two tier system on our household.

<u>Year</u>	<u>KwH used</u>	<u>Cost</u>
11/12 4512		\$428.00 *this year serves as the baseline for all calculations
12/13 4880 (+368 KwH used) (+\$122.76)		Tier 1 - \$137.63 Tier 2 - \$413.13 = \$550.76
8% increase in consumption from 11/12		28.6% increase in cost from 11/12
13/14 6212 (+1700 KwH used) (+\$310.71)		Tier 1 - \$140.85 Tier 2 - \$597.86 = \$738.71
40% increase in consumption from 11/2		72.5% increase in cost from 11/12
14/15 N/A - could not find the bill		
15/16 3865 (-647KwH used) (+70.50)		Tier 1 - \$156.50 Tier 2 - \$342.00 = \$498.50
14% less consumption from 11/12		16.5% increase in costs from 11/12
16/17 4580 (+68 KwH used) \$610.42 (+\$182.42)		Tier 1 - \$157.52 Tier 2 - \$452.90 = \$610.42
1.5% increase in consumption from 11/12		42% increase in cost from 11/12

There are three conclusions I draw about the Two Tier system after reviewing our bills:

1. The net effect of the Two Tier system is that customers are paying electricity costs that have gone up six times faster than the Consumer Price Index over the past 5 years - the Consumer Price index from 2012-2016 rose 6.9% in Canada and 6% in BC (Stats Canada). What our household pays for electricity has gone up approximately 40% over that same time. This represents a significant financial impact and hardship to our budget.

2. With a two tier system, consumers pay unfairly more than what they use on a percentage basis - I have no problem paying 8% more on my bill if I use 8% more electricity. However, having to pay 28% more for an 8% increase in use is gouging (ie: see 2012-2013). In the 16/17 year we consumed approximately 18% more electricity from the previous 15/16 period, yet our cost was 22% more.

3. Two Tier system discriminates - the Two Tier system was presented as an incentive for people to pay less for their power if they stayed within the cheaper Tier 1 block. For households such as ours that rely on electricity as their primary source of energy, this is virtually impossible and unfairly punishes those consumers who do not have access to other forms of energy.

RESIDENT #63

The current two-tiered system that increases electrical rates at a defined threshold has resulted in my family scraping together other means to supplement basic electrical necessities.

We have base-board heat and use a fireplace to warm ourselves. My wood suppliers were unable to provide us wood due to last summer's restrictions on accessing the back-country, so I am left to use only electricity. The second tier is quickly attained when a family relies solely on electrical power.

Costs for basic necessities for a Canadian household continue to increase at roughly 2-3% per year. Compounded over 10 years, the increase is clearly seen as exponential rather than linear. We maximized our insulation R-values throughout our house, use 90% LED lighting, and cut-back on the frequency of utility use, but the bottom line is that our diminished electrical usage doesn't seem to compensate in the least for the continual increases in power rates or the fact that we hit the second tier pretty darn quickly. Baby-boomer, retired, and trying to enjoy my "autumnal" years.

RESIDENT #64

We have an older home with all electric base board heating that you couldn't keep out of going into the second rate. Had to buy a gas heater.

RESIDENT #65

Our Fortis bill has nearly doubled since the two tier system started. We are on the monthly equalization system and are now approaching \$500 per month. While we can handle it, \$500 is 25 percent of my Telus pension. Granted we have a large house with three adults and two 9 year olds but that level of increase is robbery.

I used to have some spare cash at the end of the month but I now have to put it aside for Fortis. I track my expenses on a spreadsheet but have now added a Fortis column to ensure I have enough to pay the bill. We changed most of our light bulbs to LED and have a high efficiency heat pump. The two tier system has now become a cash cow for Fortis. I suspect they are expanding facilities regardless of need just to spend money and to justify further increases.

RESIDENT #66

We have a 3300 sq. ft home. It is well built & insulated with a heat pump & wood stove & electric furnace. We have no access to natural gas. We try to use as little power as possible. In winter we use 40 to 45 kwh daily on average. When we get colder, zero to minus ten, the furnace runs almost constantly to keep at room temperature.

Our bill this month, Oct-Nov, is \$386. In 2010, it was \$200, almost a 100% increase. In Dec-Jan 2017, it was \$710. In 2010, it was \$295; an increase of \$415, more than a 100% increase. This pattern every year is constant since two tier started. Who dreamt up this unfair plan? It seems like a money grab to me and others in this situation. It's like a sale for a pair of socks; \$1.00 for the 1st sock & \$2.00 for the second sock. Please do a rethink.

RESIDENT #67

We moved to BC 3 1/2 years ago from Alberta where we had a similar size home and out buildings to the one we own now. The shops that I use 4-5 days/week in Alberta were 25% larger than the ones here and we also heated the attached garage in Alberta that we do not do here.

When we started receiving our Fortis bills, I became extremely interested in the Fortis billing as it was very, very high in the winter months (at least twice what our power and gas bill was for a similar, smaller overall square footage that we had in rural central Alberta). When I found out about the 2 tiered billing I sent a letter to Fortis complaining about the high cost. I stated to them as I will state to you; there is no alternative to electricity where we live.

The 1600 kwh ceiling is based on a small home in town that has gas heat, gas hot water tank, and water supplied from a pipe vs a 220 volt well pump. My discussions with town people have indicated that even with gas and water supplied they have difficulty in meeting the 1600 kwh for several months of the year. In our coldest month here in sunny BC we used 7 (SEVEN) times the kwh ceiling. This occurred while burning a fireplace to supplement heat at \$250/chord.

In response to my letter, Fortis indicated that they realize that a minority of people are significantly, negatively impacted by the 2 tier system; ie people that do not have an option to use gas for heat and hot water and require power to supply their well water. They acknowledged that I am one of those negatively impacted people but there was nothing that they can do. They did send me links to 110 pages of information in regards to the 2 tier system, which I read. All this being said; the 2 tier Fortis billing system significantly impacts my utility cost and I have no recourse to the punitive billing system.

RESIDENT #68

We live in a rural area and have a forced air electric furnace and a heat pump. As we are outside a "water district", we require electric power to operate our well water and irrigation. Over the months our daily electrical consumption has remained about the same or slightly more than previous times. Our home is about 2700 sq. feet and we have never been able to stay below the first tier level consumption rate. In fact, we usually are nearly 50% above the tier one rate.

Gas is available near our property line, but as the house is about 95 meters away we would be required to pay full gas line installation costs to get gas supply to the house. Then, of course, is the cost of gas line plumbing and furnace changeover inside the house. Fortis controls both gas and electric supplies in the area so they have no inclination to offer customer incentives to change utilities.

My wife and I are pensioners, so the time to "break even" may be beyond our lifetime. I feel the BC Utilities Commission has unfairly trapped electrical consumers into paying higher bills by setting the tier one limit level too low. As a result, and if we are to believe the Fortis claim that the Two Tier Rate is revenue neutral, then I feel that electrical users are subsidizing gas users, and that is unfair.

RESIDENT #69

I am writing this in condemnation of the Fortis two-tier energy conservation rate. I'm a resident who doesn't have easy or inexpensive access to natural gas. My home is built on a concrete slab and heated with baseboard electric heat. It's a sprawling bungalow that isn't the greatest concept for heat flow through the house.

My two highest annual electric bills are for the November to January period and February to March billing. Last year I used 1,522 kWh at the regular rate for November-December, and 3,129 kWh for the second tier conservation rate, at a cost of \$724. For January February billing, I used 1,544 kWh in first tier and 3,910 kWh in the second tier, at a cost of \$868.

That was with supplemental wood heat in a fireplace insert and energy efficient wood stove that burned well over two cords of wood - but at least those rooms were comfortably warm. We also shut off all baseboard heat except two in one bathroom, the other has in-floor electric heat. All rooms not in use had the doors closed and temperatures minimized. Three infrared space heaters made up our principal heat source - one in the kitchen, one in the living room, along with a fireplace insert, and one in the back room, with a wood burning stove. This was for a 2,400 square foot home, 2x4 construction, but sound and well built, extra insulation in the attic.

It would cost in excess of \$2,000 to bring a gas line to the house, after which I'd have to pay a contractor to install lines and appliances inside, which I would also have to change over. It's not economical for me to do this, as I won't likely be living in the house in 10 or 15 years' time, besides which, I don't trust the markets not to shift to an increase in gas prices somewhere along the way. I support the return of a single rate billing system that fairly represents all electrical users.

RESIDENT #70

We live in the area and have experienced extremely high hydro bills due to the two tier system. We have a wood stove in our basement used for heat but for the past 2 years have chosen not to use it due to the fact that my husband has Parkinson's and I worry about him going down the stairs to access the stove. Also, with his balance issues I don't want him near the hot stove. We are in our 70"s and even though it is difficult for me, this year we are using the wood stove because we can not afford the high hydro bills. We are on a fixed income. We have no other choice but electric heat in our area.

An example of our rates for last year:

10/24/17 to 12/23/17 Block 1 \$157.52 Block 2 \$620.99
Total Hydro Bill \$861.09

12/23/17 to 2/23/17 Block 1 \$136.86 Block 2 \$815.79
Total Hydro Bill \$1,218.77

Our home is 2700 sq feet, 12 years old and well insulated. There are four adults in the household. The time period of these bills I did not keep the house as warm as we would have liked due to the cost. That in itself presented a hardship. We were very careful of our other electrical use. I must say using the wood stove already this year our house is finally as warm as we would like.

There may come a time when I can't take care of a wood stove and then we are back to paying the high rates. Also, as a note, hydro is very demanding of their payments within a certain time period or you will be disconnected. If we were billed at one rate it would be manageable.

RESIDENT #71

I live in a rural setting in a 1976 single-wide mobile home. It came from the factory with R-8 in the walls & R-12 in the ceiling & single pane storm windows. I have insulated the best I could, but that isn't much. I have a propane furnace but cannot afford to run it; propane is the most expensive of all energy sources, so I use space heaters.

The cost of running the electric stove, electric hot water, electric clothes dryer & all other electric appliances & lighting takes up all of the Block 1. That means my entire heating bill is on the higher priced Block 2. I am looking into getting an aerothermal heat pump to help on my heating costs, but on a small pension that may be cost prohibitive.

RESIDENT #72

Following are taken from Fortis bills dated from:

Jan 12, 2017 \$ 470.90
Mar 10 2017 \$1,718.46
May 11 2017 \$ 810.23
Jul 11 2017 \$ 236.79
Sept 11 2017 \$ 170.30
Nov 10 2017 \$ 189.11
Total \$3,596.49

There is no access to natural gas. During months when temperatures dip below -6 C, the heat pump no longer works and the furnace then heats by the use of 20k heating elements.

The Fortis Two-Tiered Rate System puts Shylock to shame. It is predicated upon summer use only and does not take into consideration that this is not a year-round temperate climate; and Fortis is taking advantage of that reality.

RESIDENT #73

Enclosed are the effects on our household from the 2 tier system. Be assured that we have taken every option to improve consumption and have had a home energy audit and implemented changes per the result. That includes our installing a new heat pump, which was not a part of the review.

We are now:

- using an auto thermostat which is set at 21 for the day and is reduced to 16 at 6 pm, at which time we go into our TV room and use the propane fireplace (at additional cost to us)
- we wash only in cold water and hang our clothes outside on a line
- we turn down the heat if we leave the house for any length of time
- my husband works out of town, so we have minimal use of laundry, cooking, and baking
- we do have one bathroom tiled floor which we keep at 22

With all of these changes we have seen our tier 2 level at least double the amount of our tier 1 level. We have no access to natural gas.

RESIDENT #74

Since November of 2012, our electrical bill increases dramatically each winter as our home heating power consumption increases and exceeds the first tier of electrical usage.

This is the case even after participating in previous home improvement initiatives to upgrade our 1990 house to an Energuide rating of 76, from the 50+ range.

Improvements included:

- more insulation in the ceiling from R-20 to R-60;
- removal of entire main floor subfloor and subsequent spray foam insulation of all box joists to air seal and insulate these areas;
- elimination of the old electric furnace and replacement with an in ground, deep well geothermal system (\$40K) and supplemental main floor heat via WARMBOARD hot water heating system powered by a small NEXTGEN electric hot water boiler;
- all lighting has been changed to LED;
- all appliances are new and highly ENERGUIDE rated; we do not have a chest freezer;

- all main floor windows are in steel/vinyl frames and have been replaced with CARDINAL 366 double pane, argon filled LOW E glass, which is the most energy efficient unit available; and
- all windows and front door have external roll shutters for night time use.

Since we do not have natural gas available in our area of Naramata and electricity (via Fortis) is our only power option, we have made every effort to make our electric heating system and our house as energy efficient as possible. Even with the effort and expense involved to minimize power usage, we are still penalized by 2nd tier electrical power costs in the winter months.

We strongly suspect that Fortis encourages increased household energy efficiency so that their annual cost increases for electricity will be less dramatic and less noticeable as the upward cost spiral of residential power increases. Second tier consumption charges are a “slap in the face” after all of the effort and cost we have gone through to reduce the power requirements of running a household. If any other affordable option were available, Fortis would be the last option/source that we would consider. Being a stock market listed company, shareholders get more consideration than the customers do.

In this high tech era, do we really need to supplement with wood heat in an effort to avoid a 2nd tier electrical surcharge? There is no incentive to consider having an electric car to contribute to the reduction of carbon emissions and cleaner air. The electricity cost would be 2nd tier all year long. Repeal the 2nd tier electrical consumption charge!

RESIDENT #75

We are impacted by high electric bills during the colder months. We live on and have no access to natural gas. So our heat and hot water all are electric powered. We are in Tier 2 power every month paying more than neighbours who have gas. This is not fair.

Further, given that Fortis generates most of their power from green renewable sources – why would they encourage a household to burn fossil fuels by offering natural gas at a lower rate than electric? Green, electric power, which is readily available via the grid, should be delivered at a lower cost.

RESIDENT #76

We live on a street on which gas is unavailable. Our house was built in 1970 and is almost 4000 Sq ft. Over the last several years we have put in new windows and also a wood burning fireplace in the basement, to help defray the rising electricity costs. The 2 tiered system punishes those of us who cannot access gas.

I don't see Fortis doing anything to help residents with installation of solar panels, as in this part of BC we could benefit if the incentives were there. We have an electric hot water tank, turned down fairly low. There are 4 in our household. The rate for 2nd tier electricity is more than double the first tier. It is impossible not to go over in the winter months. Last night, we got to -9. We don't put any heat on in our entrance, hallway, 2 of our 3 bedrooms, or the main bathroom, so we freeze our buns off heading to the loo.

Electricity is clean energy. Natural gas is a fossil fuel. Shouldn't we be getting rewarded for using electricity instead of being punished? The cost to put gas on our street is

prohibitive. Most are seniors on fixed incomes, like I am. Instead we close off our rooms and do our best. This is outrageously unfair and makes no sense whatsoever.

I am lead to conclude the following:

- The utility companies have stopped caring about its customers and are accountable only to their shareholders, sanctioned at the time by the Liberals and BCUC.
- The Liberals and the BCUC have not only neglected but actually punished those of us living in smaller, electric dependent towns because our votes don't matter very much in an election. This will in time force residents like us, who love our village, into larger communities.

Please do something about this. Winter has arrived early and I am wearing 2 layers of clothing, with thermostats in 2 rooms at 15 c.

RESIDENT #77

My wife and I are seniors and the Fortis Two-tiered Rate System will substantially impact our household budget. We feel this is unfair since we are a long way from the nearest natural gas line and are forced to use electricity for heating.

Our house is very large and very old and is expensive to heat. There is no way that we can keep our electrical usage under the base rate. Our records show that we exceed the base rate during most, if not all, of the 6 winter months. In very cold months we sometimes require 4,000 kwh or more per billing period. My calculations indicate that the Two Tier Rate system will cost us approximately \$700 per year over and above the base rate.

We try to conserve electricity where possible but we find we cannot avoid heavy usage. We feel it is unfair to be penalized for this additional use since it is impossible for us to avoid it.

RESIDENT #78

Having been advised for years to 'Live Better Electrically' by governments and electric companies and therefore having a very efficient electric forced air furnace, due to the 2 Tier Rate we have to watch very carefully not to exceed the lower rate. We had a gas heater installed but there are still periods of and areas of chilliness in the house. We are not pleased with this and any other rate increases.

RESIDENT #79

We have owned a beautiful home on Naramata Road. Unfortunately it is on a section of the road where natural gas is not available. We installed a new high efficiency furnace (blower) hooked up to an external heat pump in 2011, and installed high efficiency lighting where ever possible, and installed propane on demand heating for our hot water. Even so, with just two people in the house full time, we have found the Fortis bills to be just staggering, especially the last few winters where our power usage in tier 2 was consistently 4-5 times that of our tier 1 allowance and we faced monthly Fortis bills of \$400 - \$500.

This was a large part of our decision to sell the home and move into Penticton where we have natural gas service and a wood burning option. We currently are not living in the home, however we were shocked to see that last month *in our vacant home, where the only thing running is our ductless heating on a very low setting, our tier 2 usage last month (790KW) was as high as the tier 1 allowance (800KW)*. Clearly these tier settings are unreasonable and unfair to those who do not have the option to heat with natural gas.

RESIDENT #80

I am all in for trying to decrease electrical power consumption, but the two-tier billing system for areas without options for heating without electricity is simply unfair to the people who live in those areas. We live in such an area. Older houses in these areas typically do not have ducting installed to simply convert from energy-wasting baseboard heating to more efficient electrical furnaces or heat pumps.

We live in a house without ducting and in July, 2010 we had a ductless heat pump system installed due to the high power consumption during the winter from baseboard heating. The ductless heat pump is a wonderful option to decrease power consumption. Compared to the five years before the heat pump, we now use 21.5% less power on a yearly basis. The difference for the heating months is more impressive. We now use 4098 kWh less power between November and March. We paid \$500 **less** for electricity during the year after installing the heat pump compared to the year before. Of course this was prior to the two-tier billing system. We now pay \$500 **more** per year with the two tier system despite using less power with the heat pump.

It is irritating when people buy into making energy saving changes and then end up paying more to use them. Of course you will say, "just think what you would be paying if you hadn't installed the heat pump". That is the point of this letter. A lot of people cannot afford to install a heat pump and they will use more power and pay much higher electricity bills. Please end this rip-off and let people spend the money they waste on the second tier for other goods and services here in the Okanogan.

RESIDENT #81

Our home in was built with energy efficiency in mind including a geo thermal heating system for cooling and in floor heating in the later half of the 2000 decade. It was rated at 87 Energy Star in Dec.2012 As part of the process we received several substantial rebates encouraging use of geo thermal as an energy conservation approach.

With the introduction of the two tier system the cost of electrical power to operate the heat pump became prohibitive in the winter so we switched to natural gas backup as a cost saving measure. This is counter intuitive to a provincial government approach of encouraging energy and environmental benefits through subsidies only to penalize the home owner afterwards through a misguided electrical energy savings approach. The Energy Star rating itself speaks to the fact that the home is in the upper echelon of energy efficiency and yet the two tier approach counters previous policies and penalizes for attempts to optimize energy efficiency.

RESIDENT #82

We are affected. We have no choice. We have no alternative to Electricity. I don't have exact figures, but the fact that we do not have a choice, and cannot afford the alternative (either Solar or pay for Gas to be brought up our street) leaves us at the mercy of whatever increases Fortis decides to enforce!

RESIDENT #83

The two tiered rate structure has had dramatic increase on many Fortis users' payments. Although our family does try to minimize electric consumption, our household is a large family. The higher tier is a significantly higher rate than was charged under the former rate structure. Although the high tier was implemented to discourage excess use, it seems to penalize non-discretionary excess when a large family lives under one roof.

The 'Low Tier' is more achievable for homes with lower occupancy. It penalizes the higher consumption of a home that has multiple residents. Some on-line sites that show energy prices in the various provinces show the Low Tier price for BC (not blended with the High Tier). I suppose that is another P.R. benefit of the two tier system.

RESIDENT #84

My Dad is 96 and has been living in his home for the past 41 years. He lives in a 1500 square foot level entry home with baseboard heating. The heat is shut off in three rooms that are not used. I have been tracking his bills for the last three years. As can be expected, his December, February and April bills are the highest. Last February, Dad's bill was \$1064.09 for two months!

In 2015, Dad paid a total of \$2578.57 on electricity with Fortis. In 2016, his total was \$2731.52 and this year Dad has already paid \$2695.08 which DOES NOT include his December bill which will be a minimum of \$450.00. That will put Dad's total bill for 2017 at over \$3000. This is unacceptable for a single retired senior on a fixed income.

RESIDENT #85

My Fortis bill for Dec. 2016 thru Jan. 2017 was \$1,175.36, a \$425.12 increase from the previous year's billing cycle. I had installed a new furnace that summer in hopes of reducing my energy consumption. The opposite happened. Additionally, I rely mostly on a wood burning fire unit to heat my home, consuming three cords of wood over the winter. If I had a large family, with children, and regularly cooked using the stove, with everyone bathing or showering, etc., I would understand the increase (sort of), but I live alone, only shower every other day, never use the stove, turn off all lights when not in the room and seldom entertain.

I am a disabled senior living on a pension and I really don't know how I can afford another massive bill from Fortis this winter.

RESIDENT #86

I read you are gathering information about the impact of the FortisBC Two-Tiered Rate system but I thought you would also like to see how much more all FortisBC customers

pay for electricity compared to BC Hydro customers even before they hit the 2nd tier rate.

I have attached a copy of a Kamloops BC Hydro bill for 63 days at the old 2016 rate for a total bill of \$118.13. You will notice this BC Hydro customer did not reach the Step 2 or Tier2 rate. I have done the FortisBC calculations on this same bill for the same amount of power used at the old FortisBC rate to make the comparison fair. A FortisBC customer would have paid \$153.50 for the same amount of power. **This \$35.37 difference amounts to 29.94%**. This difference would be even more dramatic if and when the 2nd tier rate is reached.

If you are unfortunate enough to live in the electricity area covered by the City of Penticton you might want to be sitting down when you look at the difference. The calculation for the Penticton customers is on the left side of this same BC Hydro bill. The City of Penticton marks up the electricity bill compared to other customers of FortisBC by 12.58% if you pay before the due date. This means an extra \$19.31 is added onto the Fortis \$35.37 difference for a total difference of \$54.68. If the Kamloops BC Hydro customer lived in Penticton their \$118.13 bill would have been \$172.81 or **46.29% higher**.

The City of Penticton marks up the electricity bill compared to other customers of FortisBC by 24.49% if you pay after the due date. This means an extra \$37.59 is added onto the Fortis BC \$35.37 difference for a total difference of \$72.96. If the Kamloops BC Hydro customer lived in Penticton their \$118.13 bill would have been \$191.09 or **61.76% higher**.

I calculated the percentage the City of Penticton marks up the electricity bill compared to other customers of FortisBC by comparing the sample bill FortisBC has on their website to my costs on my first Penticton bill in a 2017 billing period. I assume this City of Penticton markup was the same before the last rate hike to make my BC Hydro bill comparison accurate.

RESIDENT #87

On April we moved to a small four year old Leed Certified energy efficient house with Geothermal heating/cooling, and a natural gas fireplace. Imagine our shock when we got our first April/May electrical bill and it was almost \$500!!! We were deep into the second tier price for consumption. Sure April was a little cool, but our thermostat was set at 64 degree F: it wasn't exactly warm! We immediately turned off our heating system for the summer, the bills and consumption went way down and we stayed in the first tier, much better.

However, it seems that the compressor and fans for the geothermal use so much electricity that it puts us into the second tier whilst living in a cool home, not what we expected for our energy efficient geothermal house! So now we use the geothermal sparingly, instead choosing to hover around the gas fireplace in the great room.....fossil fuel won the day?

So, instead of the electrical billing system not exactly supporting our efforts to be low impact, use the heat of the earth etc., we are seriously considering switching our entire heating system to natural gas because it is so much more reasonable than the electrical.

We are also considering adding solar. However, if we make lots of extra power and we are forced to sell it back to Fortis, will we get the second tier rate if we sell back more than 1600 kwh? If we sell to Fortis, will we be able to sell at the same rate as what we pay? Somehow I bet we won't.

THIS MAKES NO SENSE! We are considering going back to fossil fuel to save money because of the two tiered system for electrical billing. DUMB. I don't think that this is what the two tiered system was meant to encourage was it.....or was it a way to get more folks back into fossil fuel consumption? We have no choice, we have to use our heating system in the winter and the way the rates are designed it is impossible to economically use our geothermal system.

That's my input on how the two tiered system has affected my energy use, I've switched back to evil fossil fuel.....and my costs have gone dramatically up.

RESIDENT #88

YES – the Fortis BC two-tiered rate system has had a negative affect on our cost of living. We rely solely on electricity. Natural gas is not an option on the 'south side' of our block.

RESIDENT #89

The 2 tier rate system that Fortis has created for billing purposes has substantially increased our hydro bill. The 2 tier system, plus the regular increases in the rates Fortis has been granted, has dramatically increased what we are charged monthly on our equal payment plan.

We have a heat pump with an auxiliary electric furnace that activates when there is more heat required. We do not have access to gas so there is no possible alternate source of heating at this time other than wood or solar power which is very expensive to install. We keep our hydro usage to a minimum as much as possible. We have kept records of the kilowatt usage from 2010, and recently, monthly charges from 2016 to date. We believe we are being overcharged for hydro and that an investigation into the 2 tier rate system is definitely warranted.

RESIDENT #90

As a rural resident, our home is one of those most effected by the two tier rate system from Fortis. We are not on the natural gas grid and have no other source of heat or cooling than electricity. In most months nearly two thirds of our bill is affected by the surcharge which means that in December, January and February, we pay nearly \$1000 / month for our electricity. This also occurs in the summer months, as air conditioning pumps up our electricity demand. In January and February of last year the surcharge alone was about \$350.

We are fortunate that we can still afford this but the more alarming factor for me is the impact on climate change and greenhouse gas emissions. Last year I made a submission to the provincial government as part of the update to BC's Climate Change Action Plan. The major conclusion of my study was that if we want to eliminate the use of fossil fuels by 2100 (which is only 80 years away, and has been agreed by the federal

government) then we need to start now and the only other viable source of energy for our province is renewable electricity. So we should be encouraging the switch over from natural gas and oil products to clean electricity. In this instance a noble effort to encourage conservation (the two tiered pricing formula and the effort to reduce GHG emissions are on a direct collision path especially for those who have no choice at present. To encourage conservation Hydro and Fortis should be doing all they can to encourage, for example, geothermal and solar power production but not discouraging the use of electricity all together.

It is time that the utilities and the province got together and tried to lay out a long term plan which would include the demand for electricity for electric cars as well as gradual conversion of residential and commercial heating over to electricity.

RESIDENT #91

Fortis' "Energy Hog" program of 2 Tier pricing has meant additional charges for us of \$360, \$405, and \$565 for the winters of 2014/15, 2015/16, and 2016/17 respectively. This amounts to a little more than 20% of our annual electricity bill for each of the last 3 years. Note that we have never exceeded the 800KW maximum for tier 1 except during the winter months. These surcharges are incurred entirely because we depend on electricity to heat our home.

My wife and I rent a house in an area with no natural gas service. Because we do not own our home, we are not in a position to invest in any alternate heat source for the house. I believe, therefore, that this pricing system not only punishes us for things beyond our control – but insults us as well. We do a lot to limit our power consumption in every way we can, and we do so for more than just financial reasons: we do so because we care about our children's future, and we strive to reduce our own environmental footprint as much as possible. To be called "energy hogs" is a particularly offensive insult added to the injury of punitive surcharges.

RESIDENT #92

I reviewed my billings for the November to January periods for the past seven years. The two years prior to the implementation of the two tiered rates, our Fortis billings average \$555 for the two month period. The average billings for the two month period following the implementation of the two tiered rates averaged \$956 for each of the 5 years. This represents an average of a 72% increase. The increase would have been more dramatic had we not installed a new more efficient heat pump during these past 5 years.

I did write to the Utilities Commission, the Herald (editorial was published), and Fortis at the time to plead our case to no avail. My wife and I are retired and living on modest pensions so these increases do impact our budget significantly. We do not have access to natural gas as it wasn't available when the house was built and I did check before we installed the new Heat Pump and it would have cost an estimated \$10,000 to run a line to our property and then a new Furnace and Air Conditioner would have been required.

RESIDENT #93

My husband and I live in BC and are residential customers of FortisBC, with no access to natural gas. Our electricity bills have increased significantly since Fortis implemented

its 2 Tier billing pricing. For us, the issue is one of discriminatory fee structuring that charges an unfair extra cost to those who live in rural communities with access to only electrical energy.

In 2012, we invested in costly upgrades for our older home built in 1977, as recommended by the LiveSmart BC program promoted by FortisBC, with the expectation that in ten years of savings we would have recouped the cost of the investment. We installed a new furnace and heat pump, new attic insulation, and new low flow toilets, and we have implemented a variety of energy-saving measures such as:

- installing a split unit in our bedroom which serves as our primary AC and heating unit;
- washing in cold water;
- lowering the furnace thermostat;

only to find that despite achieving sometimes as much as a 40% reduction in our energy consumption, our bills continue to rise and we are still being charged a disproportionately high amount because we do not have access to gas.

We asked the BCUC to address this inequitable 2 Tier billing system so that all urban and rural residents of BC, electric and gas customers alike, are charged equitably for their usage. Regardless of whether some customers can afford to pay these rates, they are still discriminatory and unfair. Here is an example of our 2 highest billing/consumption periods (winter), comparing our bills before our heat pump installation and before the 2 Tier program was implemented, vs. current heat-pump and energy-saving measures in place, concurrent with the 2 Tier rate:

Nov. 18.10 - Jan. 18.11 (pre heat-pump and pre- 2 Tier pricing)
\$963.40
10,500 kwh -61 days

Compared with 3 examples, since the 2 Tier rate implementation:

Nov. 20.12- Jan. 18.13 (post heat-pump: roughly 40% reduction in energy consumption!)
\$821.72
6, 621 kwh – 59 days.

Nov. 21.14 – Jan. 22.15
\$1093.40
7874 kwh – 62 days

Nov. 23.15 - Jan. 25.16
\$1104.24
7400 kwh – 63 days

AND

Jan. 18 -Mar 16.11 (pre heat-pump and pre 2 Tier pricing)
\$866.62
8989 kwh – 51 days

Compared with 3 examples since 2 Tier rate implementation:

Jan.21- March 20.14 (post heat-pump)
\$871.04
6427 kwh – 58 days

Jan. 22- Mar. 23.15 – 2 tier
\$665.98
4799 kwh – 60 days

Jan. 25 – Mar 23.16
\$700.54
4748 kwh – 58 days

If you compare the bills, you can see that despite a very large decrease in energy consumption, our bills (especially the early winter ones) have increased significantly and remain disproportionately high.

We believe that this is because the majority of our electricity consumption is necessarily in Block 2 (no mitigation of natural gas to heat our home or water etc.), which suggests an error in the design of the BC Government's 'conservation' rate. We believe that the above figures of increased costs to us, despite a reduction in our energy usage AND despite a large investment of capital, illustrate a serious and unacceptable inequality in billing by FortisBC since 2012. We have been petitioning and sending letters to no avail since that time.

RESIDENT #94

I find the two tier system abhorrent in its present form. How can it be fair to penalize people with this higher bill system, who do not have the option of getting gas to their homes? They do not have the option to cut back when it is their only form of power and heat. We did not have gas in our home and made the switch, got gas and a wood burner to the property because we could. If you do not have that option what can you do?

In what is supposed to be a fair and equitable country like Canada I am amazed that this has been allowed to happen. This system was implemented in the name of the environment but how can it be morally right to persecute these people who live without the option of other power sources. Maybe one option would be for Fortis to pay for gas lines to be installed to these rural communities and take power up to these households at no cost to the homeowner and then implement the two tier system -- not going to happen.

RESIDENT #95

I live on a road that has no gas line. We try to be very frugal but only once have we ever stayed within the first tier of the Fortis rate structure. We have no air conditioning, we line dry most of our laundry and no, we don't have a grow-op! Most of the time we are way into the second tier and it is very difficult to pay the high bills. A few years ago we had an energy audit done of our home and it is actually pretty tight; however we still have very high heating bills in the winter. We have a central electric heater which is supplemented by a wood burning fireplace insert.

RESIDENT #96

We have a home which only has electricity for hot water and lighting and heating of the house. Yesterday we spent a considerable amount of time looking at Fortis billing statements. As per usual they are complicated and unconventional so in tallying amounts spent over a 12 month period, we used the Due Date on the bill for reference.

We no longer had the bills for 2013, so called Fortis and they supplied us with the sum of \$2971.44 as the amount spent on electricity in 2013. In November of that year we had a ductless heat pump put in with two interior heads; one on the main floor and one downstairs.

In 2014 our total billing was \$2635.52. So we thought we had managed a small saving for the \$8,000 plus we paid to have the ductless heat pump system installed, even though the 'Energy Conservation' system was in place.

In 2015 the bills are complicated by a series of credits and re-billings or whatever and the total cost was \$2254.32.

In 2016, the last complete set of bills for a year which we have, the total is \$4018.68!!!! We have not added anything to our house requiring electricity.

The bill dated March 1, 2016 covers the billing period January 26 to March 1. We left home on February 17 and came back on March 20 so there was little use of any power during that time. The bill was \$502.68. The next bill dated April 12, 2016 covers the billing period March 1 to March 29, 2016 and is \$193.48. So basically a nine week period cost a total of \$696.16 and we were absent for four weeks and five days.

There's no doubt it has become very expensive and, quite honestly, I think the billing practices of Fortis leave room for improvement and also don't make it easy for people to see what is being billed. I spend an inordinate amount of time trying to figure them out. I should mention that we have a wood burning stove which we must use in very cold weather as the ductless heat pump doesn't like really cold weather. Last winter we burned wood for two months.

RESIDENT #97

I believe this rate system started in July 2012. We noticed substantial increases in our electricity used and billed for, which is highly questionable. Since that time we have had a pressure/energy test completed on our house and I was told we had done everything we could do. In Sept 2015 we installed 22 solar panels, and I should mention that most of our heat is supplied by wood.

This has made very little impact on our bills, and in fact I received our highest bill ever of \$1600 for the Feb 2017 invoice and then \$1106. for April/2017. Last years Feb bill was \$1023, so the increase was almost \$600 despite all the measures we have taken to reduce energy.

I stopped using our clothes dryer for the last two years, and we have a new water energy efficient tank installed, LED lighting etc. etc. I could not believe the bill last February and April. When talking with our Fortis metre reader he said everyone living outside the

urban centres were complaining vehemently about their bills. I think the two tier system might be different for urban as opposed to country users.

RESIDENT #98

We have lived with the two tier rates now for awhile. In this time I have seen the fireplace sellers prosper, and of course the installers etc. A large number of fireplaces etc have been installed even in very affluent areas. When my wife and I built out home in 2013, we installed a ground source heat pump. The house ranked an air audit with a 93 outcome. In the late fall and winter we cannot come close to existing on the first rate. So to say that it is all about conservation and upgrading you home, that cannot be the case.

The reality is that if you don't have an alternate source of heat than electricity it doesn't matter if your home rates the very best. Those that have natural gas automatically fall into this category, so they capitalize on the first tier rates and smile at the cheap electricity. For all of those that do not live in an area that has natural gas and don't want dusty and dirty smoky fires, we are forced to live with very expensive electricity.

RESIDENT #99

I live on the second floor in a small one bedroom apartment. Last winter, I never had my heat set higher than 18. It was not really warm but I wore extra sweaters and had blankets around me at night. My bill for Dec. 2 to Feb. 2 was \$287. I am on pension, so this really sent me for a loop. The second tier billing added up to almost \$80. So, in my situation, I had to cut back on groceries and other items. It was not a very nice time for me.

RESIDENT #100

We live on where we have electricity service only, no gas. In other words, we do not have a choice and are unable to switch between these two principal energy sources in order to reduce our electrical consumption. We are not on a bi-monthly billing cycle but rather we are billed monthly so our electric charges are based on the low rate for up the 800 kWh/month and on the high rate for anything over that usage. It is our impression that the 800 kWh ceiling is unfairly low, and probably should be about twice that, at least for residences that do not have a choice to switch to gas.

In April 2012, shortly before BC Two-Tiered Rate System (BC 2Tier) went into effect we spent \$14,400 to install a heat pump system in our Sage Mesa Home, specifically to reduce our electrical consumption. The first year the unit was installed, we reduced our average monthly consumption by 1,030 kWh, a 35% reduction. However, due to introduction of BC2Tier our monthly invoices were reduced by only 16%. Unfortunately, despite our efforts to reduce consumption and a costly investment in a more efficient system, our monthly charges from Fortis have remained very high. (Currently we pay \$301 per month on an annualized basis even though we have the heat pump system installed.) It is true that without the new heat pump our costs would be even higher, but this overall situation is highly frustrating to us.

In addition to the above situation, Fortis was estimating our monthly consumption prior to the installation of Smart Meters. Often the estimated amount would be excessive and would increase the usage so that we were billed a greater amount at the BC 2Tier high

rate than we actually used. When the meters were physically read and the consumption adjusted to actual, it became obvious that we were being charged at the high rate on more kWh than we had used. I was in constant communication with a representative of Fortis and managed to obtain corrections for most of these incidences. However, I believe that many home owners likely were in a similar situation and did not obtain corrections or adjustments. I have complete records of consumption and charges going back to 2011, so I am basing these comments on actual data and records provided by Fortis.

RESIDENT #101

We moved, in 2004, to an area with no natural gas; so no alternative to electricity to heat our home. We are retired and live on fixed income and are struggling with the constant increase in the cost of all utilities, most notably electricity. When we moved into Husula, we opted for the equal monthly electric utility payment method offered by Fortis. Over the past two years our monthly electricity costs have increased from \$182 to \$361.

We feel the Two Tiered system penalizes retired people like us because we are home most of the time so cannot turn down the thermostat during the day while working people can. Also, because we are home during the day we use more electricity on appliances, lights, TV etc than those who work. As a result we reach the higher cost second tier much sooner each month. Our average cost per kwh is therefore significantly higher than others and as retirees we carry a higher electricity cost burden than most.

RESIDENT #102

We are a household of 3 adults who have lived at this residence for 4 years. Every Spring/Summer, we make efforts to use the outdoor clothesline and we have a smaller line inside during the winter. We recently installed a second wood burning fireplace in the hopes that this will keep us as low as possible in the second tier.

Even using these cost saving measures, three of our six annual electrical bills are in the second tier for payment. The growing cost of electricity is a hardship for us as my husband is on a limited income and our son is a full time student.

It is unfair for us to have a second tier system when: a) gas is not an option and b) we are working at reducing our use of electricity as much as possible.

RESIDENT #103

I moved here from Vernon 6 years ago and was shocked at the difference in my utility bills. I live in a small (1100 sq ft) house and our winter electric bills are almost \$400. The highest they ever went in Vernon (electric and gas) was \$225.

The Mommy page is full every winter of posts from desperate moms not being able to afford their electricity bills; moms not paying other bills or not having enough food for their families because their utility bills are so high; pictures of babies in sweaters and toques while playing inside. Just to keep the bills under \$400.

It's almost impossible to find small single family homes here and the ones that do come on the market are electric heat. It's unavoidable and it's a huge deterrent in moving to a bigger house, as I can't imagine what it costs to heat 1600 square feet.

Most of us in these homes cannot afford to add the necessary venting to install a furnace. Or people are renting and the landlords can't/ won't install them. People cannot keep up with the rising costs but have no other option.

RESIDENT #104

I am writing to express my total dissatisfaction with the 2 tier system of Fortis Rates that we've been forced to pay for the last 2 plus years. This will be my 3rd letter writing. I've written officially to BCUC, last year, when there was a survey study going around for customers on this system. Never hearing any response nor have any changes ever been made in the billing system. We only have electrical service here. We do not have natural gas service, nor can we get it over here. We rely on only electrical for all the household needs.

Because of the outrageous heating bills in the winter, we have decided to completely shut OFF our furnace heat for the past 2 winters and only run portable heaters wherever we sit and that's under the blanket. Our beds have heating blankets for warmth. We walk around in jackets and sometimes even mitts when sitting. We are NOT electrical abusers. We make sure lights are shut off when not in use even though we've converted to all LED bulbs!

I refuse to pay any more \$\$, especially when they think charging this way will deter people from abusing the hydro. Maybe some do abuse it, but we can barely afford to pay it on a flat rate, let alone on a 2 tier rate! This is unfair -- targeting people, who are at the mercy of the Big Power companies. I would rather Freeze, than to give to the greed of the system.

If writing this is going to make a difference, than it would be great, but it's been a few years already and people have written and complained and nothing has changed. It seems that we can't change the system so we have to do whatever it takes to make it work for ourselves and if that means freezing, then so be it. I hope they enjoy their warmth and paid vacations on the money that they are unfairly stealing from the customers. This is my last time in writing.

RESIDENT #105

I am writing to convey my dismay at the two tiered rate system currently in place for FortisBC customers. As homeowners, we took advantage of rebates to upgrade our 1995 era home's energy efficiency. We have installed new energy efficient windows throughout the house and have put in new storm doors on all outside entrances. We put in a heat pump to assist our electric forced air furnace and to eliminate the need for window air conditioners in summer. We have put on a new roof and venting. We have energy efficient appliances. We have a propane fireplace to augment the electric heat in the winter.

We live in an area that does not have access to natural gas. As a result, we pay the increased cost for electricity as we always end up over the base rate in the winter, even

though we have done everything we possibly can to make our home as energy efficient as possible. I think we are definitely being penalized for living outside of an area where natural gas is available and I'm frustrated by the increasing costs of heating my home. As we near retirement, I worry how we will be able to maintain our home on a fixed retirement income as the costs for electricity continue to rise.

RESIDENT #106

We bought our house a year ago in May 2016. We moved from a farm on the Sunshine Coast. The farm was a working farm with 3 chicken coops, a large barn/shop and a cabin besides the main house. We lived there for 7 years. The houses were over 45 years old and the coops just as old. My winter bill for the whole place was \$1800 for the coldest months Jan/Feb. Imagine my shock and horror when I got my bill here last year for electricity for 1 small house. My bill for the same months Jan/Feb was a whopping \$1352. !!!! And we had 1 gas fire place in the living room and base board heating for the rest. I can't imagine what it would have been if we didn't have that one gas fire place.

This house here in is 63 years old. It has very old windows and of course not the best insulation. If I had known the electricity was so much more here (there is the 2 tier system on the coast as well) I would not have bought this place. We are being gouged! We MUST be subsidizing the lower mainland! There should not be such a discrepancy between the two places. I ran 4 buildings for \$1800 and one here for \$1352!!! What is wrong with this picture? I really would like an explanation and there must be an investigation as to why it is soooo over the top here in the Okanagan.

Is there a special price for being rural too because we aren't in Penticton proper? I don't know but... not happy and not looking forward to this winter. Don't know how to afford it this year. We have gone to the bank to see about a loan to put in another gas fireplace and new windows. That was 2 months ago and still waiting for an answer. Now the snow is flying and it's cold. God help us!

RESIDENT #107

Where we live, we have a natural gas right-of-way across our property, but we only have Fortis electricity as a means to power our home. Even though our house was built in 1976, we do not feel it is 'sub-standard housing'. We do augment our heat in the colder months with wood heat for which we obtain firewood @ our expense & receive no reimbursement. We have added: insulation, new roof, new windows, new forced air furnace with a heat pump, air conditioner and switched all our lights to energy saving bulbs. Any new appliances purchased have been 'energy saving' and we do try to minimize our power to keep the costs down.

I realize the basic costs & 2 tier system cost have increased over the years, but I hope to show the kwh used & how the costs have increased at a great rate. I am including info from years prior to the two tier system being introduced in 2012, as feel this information is important to the cause as it would also take into consideration the different weather conditions/temperatures over the years.

I do not feel that the 'Two Tiered Rate System' has benefited the homeowner financially, and by Fortis offering rebates – they are only trying to 'soften the blow' placed on their customers, yet continually seek increases in rates.

The period of consumption is July-Sept. of each year, all taxes & rebates included.

Year:2004-Kwh.used 3516, cost \$237.33

Year:2005-kwh.used 3394, cost \$245.30

Year:2006-kwh.used 3165, cost \$245.84

Year:2007-kwh.used 3532, cost \$280.96

Year:2008-kwh.used 3631, cost \$296.98

Year:2009-kwh.used 3606, cost \$309.94

Year:2010-kwh.used 3237, cost \$304.17

Year:2011-kwh.used 2695, cost \$291.63

Year:2012-kwh.used 3157, cost \$366.10

Year:2013-kwh.used 3157, cost \$341.48

(h/pump\$50.rebate+estimate reading)

Year:2014-kwh.used 2482, cost \$310.15

Year:2015-kwh.used 2196, cost \$284.07

Year:2016-kwh.used 2876, cost \$401.81

Year:2017-kwh.used 3479, cost \$511.77

RESIDENT #108

The electric bill for me in the winter is outrageous. I am 95 years old - live alone and spend my time in a power chair. Last winter my bills were over \$700. My life style does not require a lot of cooking, laundry or any other consumption of hydro. I do not use a dryer at all as I can't reach it. I spend about half of my life in bed, as I can neither stand nor walk. My hydro bills took a huge jump once they brought in the new billing system. This has been very hard on me as I am a low income senior. I live where the winter is normally short and mild. I have no special medical equipment that requires power.

RESIDENT #109

My husband and I and our son moved last year from Penticton and were fortunate to find a rental home that met our needs in a time of almost no rental vacancies. Unfortunately, it is an older home and the main source of heat is electric baseboard. There is an older gas fireplace in the living room, but it does not project heat well to the rest of the home.

We were appalled last winter when our Fortis electricity bills averaged \$400 per month!! An \$800 payment every second month (which is how we are billed) is a HUGE chunk of money that put a strain on our finances and on meeting the rest of our needs those months. As tenants, we have no choice in the type of heat the home has or how it is insulated. We have done our best to conserve energy in every way we can; sealing off drafty windows, using the gas fireplace, using LED bulbs, turning things off when leaving a room and when not home, etc. Unfortunately, we are still going to be billed at the higher rate again this winter and paying exorbitant rates for our electricity despite anything we can do, through no fault of our own, just to keep the house at a reasonable temperature during the cold weather. I feel this system is patently unfair to people in our situation and would like to see it repealed or altered to allow for those of us who have no choice.

RESIDENT #110

I have lived on the lake for the past 18 years and am totally on electricity to operate my household. In the past few years my electric bills have been outrageous - especially in the winter. I am billed on a monthly basis and have had bills as high as \$1,000.00 in the winter - which is ridiculous! I do my laundry at 10 at night, run my dishwasher at night (usually once a week) and try to keep lights off to save power any way I can. As I live alone it is quite a strain on my finances every month.

RESIDENT #111

My Fortis expenses will be well over \$2,000 by the end of 2017. I have had my account equalized at \$144/month for a couple of years and before the 2-tier system of billing - that was adequate. I am going under now as there is no way that I could afford to pay the total charges of the 2-tiered billing of Jan/17 – May/17 which ranged from \$345 to \$826. Now winter is rolling around again and I still am paying for last winters Fortis bills.

I live in a strata complex which has electric baseboard heating. In winter I rarely use my clothes dryer. In the winter I don't attempt to heat my whole residence. I usually only have a small heater going in one room. I have had weather stripping put on my doors. I use the black/block out drapery panels to stop the cold at the windows. I am sure these strategies work but I can't tell from the bills I get. I warm my bedroom before going to bed. Then all the heat is turned off. Sometimes I feel as though I am living in a 3rd World country instead of my Canada.

I am hoping that Fortis will hold the line and not go forward with the expensive 2-tier billing system. Winter in Canada is cold. Give the little guy a break. My income is finite. I don't give myself a raise or write-off any of my expenses. I don't think in terms of \$100's or \$1,000's - \$20 is a huge chunk of money to me. I mostly have arranged my life and finances to be able to pay bills as they come in, but the 2-tiered winter bills are over the top for me.

Fortis, please encourage your executives to put their thinking caps on and work to improve the company's bottom line without raising electrical rates with the 2-tier billing system, which greatly impacts and causes hardship on households and pensioners in B.C.

RESIDENT #112

The two-tier system does nothing to save power, only take money from pensioners. We pay \$252 per month, every month, summer included and \$44 for gas every month for a total of \$296/month. We no longer buy prescription drugs; cannot afford. In the future have to give up telephone and eventually the heat, maybe if we have just (1) one light bulb we might make it.

We will be checking into wood heat again at our age, come spring. How can we possibly use that much electricity in the summer months when we live in a cave by not having lights, radio, TV or oven on? We take our laundry to Penticton; cannot afford to dry at home. Without drugs, we will be dead soon and the Electric Company can rip someone else to death off.

RESIDENT #113

I have a residential property and have had 2 sets of tenants refuse payment of electrical bills they had incurred and left me with unpaid bills etc. 10.12cents/kWh for the first tier of 1600kWh vs 15.62cents/ kWh for the tier 2 level is simply very unfair as the temperature can dip down in winter and be extremely warm in summer in Keremeos.

I have checked out solar alternatives but cannot qualify for any of the rebates or incentives from Fortis, and cannot see how I can recoup putting out ~\$25,000.00 for 30 panels but still have to pay basic charges of ~\$20 to \$30/month if no electricity is used by my property. Fortis also has increasing rates allowed by the Utility Commission each year to basic charges as well as add-on charges like taxes.

There is just no help from Fortis because it is the monopoly. It has been extremely frustrating because the Utility Commission does not consider how residents are impacted by Fortis' charges.

RESIDENT #114

Just this next month, my power bill has increased from \$176 to \$257. This has made it so that I had to lower what I pay out to debt payments and it will take longer for my family to get debt free. My income is not going up and probably will not for at least another two years. Plus my wife has a disability and has trouble working full-time or even part time.

RESIDENT #115

I find this system to be very unfair. We live in an area where natural gas is not available, and as a result our heat bills skyrocketed when the system came into effect. We have a somewhat larger home, but not huge by any standards.

In the coldest part of winter, our Fortis bills were well over \$600.00 per month, and we never set our thermostat above 18 degrees C during the day and 16 degrees at night. We also closed off the registers to any rooms that we could. We all wore layers and layers of clothing to try to keep warm and not have to turn up our heat. When a bill came that was over \$1700.00 for two months (Fortis had estimated our usage the previous billing cycle and had underestimated it) we finally put in a wood stove. The saving in electricity more than covered the cost of the wood stove and the increase in our homeowners insurance in the last two years.

That being said, there are still times when it would be nice to use our furnace, but we just cannot justify the cost of doing so. Even having taken the heat part of our bill out of the equation, our bills are still much higher than they should be, as we are very conscious of the power we use, but it is impossible to keep under the second tier.

RESIDENT #116

Since the 2 tier system has been implemented my hydro bills have almost doubled in costs. I have reduced my consumption to the best of my ability, stopped using a yard light, very seldom use the oven, cut down on the use of washer and dryer as much as

possible went to led lights throughout the house and still my hydro bills seem to increase no matter what i do,

I have gone from a 90 dollar a month bill to at times 200.00 per month. There seems to be no way to get a hold on these bills. There is nothing more i can do to reduce the hydro consumption in the house and am constantly in arrears. Hopefully there is a solution on the gouging of money by Fortis with the hydro costs.

RESIDENT #117

We moved to our strata home last Sept. The only Fortis bills I have are from Jan - April and in total they amount to \$935.66 for four months which equals \$233.91 per month. Our income is under \$2500 per month now that my husband has retired. We only use the dishwasher once a month. The heat was kept low with laundry being done twice a week. We don't have television but do have internet.

RESIDENT #118

As a pensioner on low income, anything that increases my cost of living impacts my husband and I. Why Fortis should think it is OK to increase costs on people with set pensions, and who are forced to use their service, is not understandable to me. There is no Fortis gas service in this block even though we requested estimates for that service twice, when the lines were being put in down the street from us. We were never given the estimates or the chance to make the change. So we were held hostage by Fortis and never given a chance to make changes. Our neighbours also requested an estimate at the same time and never got a response. So has this two tiered system impacted me? Yes

RESIDENT #119

Four years ago we moved from a 1,835 square foot home in Langley to a 1,030 sq. ft. home and our electric bill tripled and our gas went up 1 1/2 times what it was in Langley. So yes this system has affected our pocket book big time and because of it we have had to supplement our income!!!

RESIDENT #120

There are a couple of things that really bother me about the two tier rate system.

One is that there is no credit given for heating with electricity over fossil fuels. If anything, we should try to encourage people to use sustainable hydro rather than non-renewable fossil fuels.

The second is closer to home for my wife and me. We live on rural property in the area. If we want water, we pump it from a well. If we want a street light, we turn on an outside light. In 2010, we set up a 1,200 Sq. Ft three bedroom apt. above our garage/shop. This was all permitted and we claim it as income for tax purposes and have since day one. Being rural property, we have one power supply line onto our property, which feeds a 200 amp service. This service is then split and fed to two 100 amp services. One located in our home and the other located in the apt. We have **TWO homes** here, not

one. Why can't we at least get credit for this? **I believe we should be receiving 3,200 kwh at the lower rate every two months, not 1,600.**

When the two tiered system came into effect in 2012, I tracked the change for 6 months. Our average monthly payment when comparing the old system to the new, worked out at a rate increase of **\$35.88 per month.**

In 2015, we started watering our small field, of approximately 2 acres, to grow hay. Our rates have really taken off since then. I tallied our 2017 ytd hydro costs. Over the 10 months, we have consumed 8,000 kwh at the lower rate and 25,734 kwh at the higher rate. This works out to \$141.37 per month extra, due to the two tiered system.

The hay that we sell almost covers the increased summer month costs due to watering. **You need to remember, I am paying .15617 per kwh to water this, not good economics.**

I believe we all should pay the same rate no matter what. If you want an electric furnace, you should not be penalized. If you chose to water a field for good aesthetics and fire prevention, you should not be penalized. If you have two homes on the same power supply, you should get credit for two homes, not one.

RESIDENT #121

The lower tier on the 2 tier system appears to be a marketing ploy only. To pay for that reduced rate of the lower tier, the rates in the upper tier must be increased and therefore those higher rates disproportionately affect the "rural" customer. Also if the rate in the upper tier is increased by an amount greater than what is required to cover costs and profits in the first tier, we are all paying more than we should for our total Electricity.

There are only 2 of us in our home. We have changed about 95% of our lights to LED (we reduced the total household wattage for our lighting by over 600W). At any one time during the evening we are only burning about 14 to 21 watts per hour for about 4 hours on lighting (at this time of year). We use the oven on our stove maybe 6 to 10 hours a month. A large portion of our cooking is done with an Air Fryer. All our appliances are "Energy Efficient". We do have air conditioning and a gas furnace but we are not able to come close to staying within the 1st tier. (Also our TV is only on for 2 to 4 hours per day and the radio for about 10 hours/day). So why is there a tier system? If a person cannot reduce their power consumption, in any manner, to stay within that 1st tier why does it even exist? It doesn't make sense.

They don't require this type of marketing when there is a monopoly of the supplying power. If staying within the 1st tier was even possible for the average home then it might make sense but when it is not obtainable what is the point....each kwh of power should be equal in price.

RESIDENT #122

We have a 2 story house, about 2200-2300 square feet, heated by electricity with wood stove auxiliary. Occasionally we have had people staying with us (sometimes for extended periods of time) but mostly it is just the two of us. We are (always have been)

careful with our Hydro use and are simply appalled at the insane costs we are now bearing, in order to subsidize apartment and urban dwellers.

We paid thousands of dollars to install heat air exchangers in 2008. We have replaced all the aluminum-framed windows with energy efficient ones. We now use led lights wherever possible and use only cold water wash. No air conditioners here and the programmable thermostats don't work with the air exchangers but we don't keep the house at hothouse temperatures either.

RESIDENT #123

I am writing to voice my concern over the 2 tiered billing system that Fortis BC uses. My family and I live in a rural area. Our current family make up includes my husband, me, my elderly father in-law and a friend. Last year (Apr 2016- May 2017), my terminally ill mother also lived with us. We also have 2 (now adult) children who still fluctuate in and out of our home. Our source of heat is electricity.

We try desperately to conserve electricity. We wash in cold and hang dry; have energy efficient appliances; have draft sealed, insulated, turn off lights, etc, etc. With this many people drawing on the electricity, it is impossible to meet our basic heating needs (let alone other electrical needs) and stay under 1600 kilowatts/month.

This tiered system does not work for me and my household. In order to budget, I utilize the equal payment plan with Fortis. Back in 2009, 2010, 2011 – we could keep the EPP amount under \$200. My EPP amount is currently \$464! That's A MONTH. \$464 a month is unreasonable and unacceptable. Please help!

RESIDENT #124

We live in the rural area of Princeton. We have lived here for 42 years in the same place. When we first built our house we had electric base board heaters in each room, but natural gas was brought into our neighbourhood about 20 years ago, therefore we put in a gas furnace. We have found that Fortis' rate system is a punishing system for those of us who rely on electricity for nearly everything we do in the rural area.

First and foremost **we rely on our own well for water**, so from the moment we get up in the morning, the toilets are flushing, the shower is running. The washing machine, the sinks for dishes, the water for canning, the sprinklers outside in the summer, and washing the vehicles, etc, etc. uses water from the well. The well uses electricity constantly.

The 800 kwh per month that Fortis allows at the lower price really gets used up quite fast. Our consumption is somewhere around 1200 kwh per month in the house. In years past we had used as much as 1600 kwh per month in the winter for the house. We also have an electric hot water tank. Who can control when it wants to cut in? When I'm canning in the summer, I start feeling uneasy as canning uses a lot of electricity. Also baking—I try to warm up the oven only at the last minute---too afraid to use just one extra minute of 'juice'. The dryer is also at the forefront of our minds. We are very careful with the dryer and use it a lot less. Electric baseboard heaters in our 2 bathrooms do not even get turned on anymore. Therefore, one bathroom is chilly in the winter. Portable electric heater fans don't even stand a chance of being used now. To

plug in our vehicles—well, we all know that last winter was a very cold winter. We would plug the block heaters in for the vehicles, but only for a very short time. We have a shop with a separate meter, so we are able to plug our vehicles in to that building and ‘share’ the load, but we are still paying for the **extra monthly meter** on the shop.

We have had to learn to **use less electricity, and pay more dollars** out for what we are using. We estimate that we are paying **approximately \$300 to \$500 extra** per year, for our house and shop and we are **definitely using less electricity**.

RESIDENT #125

Our electricity rate went from \$150.00 a month last summer to over \$600.00 a month through the fall and winter months with little or no change to our habits. We use a high efficiency wood stove for all our heating needs and often use it for cooking and heating water for dishes etc.. Fortis refuses to acknowledge that this is an unreasonable hike and is quite normal? They blame the government saying that the tiered system is their idea and there is nothing they can do about it, very matter of factly and rude. They sent a crew to check my meter but would not enter the dwellings sighting company policy. I had an electrician check the system and he could find no issues.

We are retired and on fixed income and really can’t afford these shocking bills (no pun intended). I sincerely hope you can get to the bottom of this theft from citizens like me and my wife who have been tax payers in B.C. for over 45 years.

RESIDENT #126

We are senior citizens who have Old age and CPP pensions. We rely on electricity for heating our home in the winter. Our bills are atrocious through the winter. How are seniors supposed to keep up with the bills when our pensions are barely enough to live on? We don't have the option of gas heat and we do not have the luxury of having a work pension.

RESIDENT #127

1. As a renter, I have no control over the energy efficiency properties of the physical home, beyond use of plastic on windows.
2. Tenants have no leverage in Kelowna (such as a Standard of Housing bylaw) to encourage a landlord to rectify things like single-pane windows, sawdust insulation, degraded door/ window seals, furnace inefficiencies.
3. There is nothing to compel landlords to pursue energy rebates or free winterizing kits from electric companies at the request if tenants.

RESIDENT #128

I inspect houses. Most are electrically baseboard heated. I have understood that the amount of heat required to be comfortable in the houses and condos in the winter puts most people into the second tier every month. The system is flawed as the data was taken on houses that were well insulated in more densely populated areas I think one needs to study the houses both Single and multi family dwellings and mostly built in the seventies and early eighties to see that what I am saying is true. The stats taken here were flawed considering how poorly baseboard heaters heat and the lack of good

ventilation in houses that they are installed in. I even put my own monitoring device in one of my friend's condo to prove how poorly the system works. The power companies need to understand socially the impact they are having on people's lives when they create systems like (two tier) that affect the lower and middle class.

Regardless of stats we all suffer because of it. If this continues I would be in favor of a class action against power companies before we end up like Ontario where industry has moved out because of energy cost and we do all of the food storage in the US because of lower energy costs (refrigeration).

RESIDENT #129

I have incredibly high bills in the winter months in my 2 bedroom attic apartment in a heritage house. In March 2016, I had to apply for a grant from CMHA Housing First initiative for a utility relief grant for my \$900 dollar power bill. I just finally managed to pay my winter 2016/2017 bill off and get up to date, but now I have had to turn my baseboards on. My bills the past few years are higher than my mom's central air, 3 floor, 4 bedroom house w basement plus heating the outdoor workshop.

Affording to live in winter is impossible when my electric charges skyrocket and I already spend 65% of my income on rent.

RESIDENT #130

In 2005, I began construction of a new home. My wife and I studied the information that was provided to us by the provincial government, regarding the installation of a ground source geothermal heating system. We were convinced that if we installed a ground source (geothermal) heating system, we would be making our home environmentally friendly, and save money in the long run. It did it work out that way... instead we were penalized heavily for our effort to help the environment.

Since the implementation of the two-tiered billing by Fortis, I have calculated that it has cost my wife and I more than \$10,000 just in extra costs for our electricity. This does not include the huge investment which we made in our installation of the ground source system, which included the drilling of three holes on our property.

I have written many letters to my MLA, the Premier, and to the BCUC, with no results. Two years ago we realized that we couldn't afford the penalty, and starting running our gas fireplace almost around the clock in the winter. We managed to reduce our bi-monthly bill with Fortis to the \$800 range in the winter. So much for cutting back on greenhouse gas emissions!

RESIDENT #131

Two tier system should be re-examined (as to how its calculated) or there shouldn't be a tier two. Electric bill went from \$100 per month to #130 per month. We are seniors – limited income – small house in Redwing Resorts; heated by gas (extra) billing. Electric used for lights, stove, etc and water tank. Two senior people, come Christmas Time, think twice about baking and putting up lights. What more do we cut out? Utility bills are becoming hard to manage. Not only for seniors but what about younger families which use more electric -- bills become unmanageable!!

RESIDENT #132

My family of 5 (my wife, 3 children and myself) have lived here for nearly 10 years. We do not own the house/property and are rent paying tenants. We are responsible for paying our utilities. I would consider our house to be substandard as it is an older 1960's-70's construction that is heated solely by inefficient electric baseboard heaters.

The exterior walls are 2x4 inch, not 2x6 inch, and the majority of our window surface area is single pane glass. Some are sliding single pane glass and are very poorly sealed (drafty). Our exterior doors are uninsulated and without weatherstripping. The house also has a open fireplace where you can see/feel the warm air from inside being sucked out. On a cold winter day you'd think there was a fire burning in the fireplace by the heat waves coming out the chimney with such force due to the heat stack effect.

Our Fortis bill since the two tier billing systems implementation always lands significantly in the 2nd tier during winter months and also summer (air conditioning). Although we've tried to save power by installing LED lighting and even line drying laundry when possible we still find our electricity bills to be unaffordable. We are a single income family and often are forced to neglect our Fortis bill just to pay rent. Usually we receive up to two disconnection notices a year because of the overdue bill. When this happens we are forced to borrow money from my wife's parents or my parents which we have never been able to repay. Without them I don't know what we would have done and I can only imagine how difficult this situation must be for people in similar circumstances without any options.

RESIDENT #133

In 1979, we put the electric furnace in. It was the cheapest way to go since we also burnt wood for heat. Now, I am a pensioner and on my own and can no longer burn wood. At an age where it is not practical to convert to gas, it is a very high heating bill in the winter time.

RESIDENT #134

I am a 78 year old senior. My last three hydro bills have been \$100 or more. My pension is fixed as you probably are aware and it is hard to pay for bills this high. I would like to stay in my own home for some time to come.

RESIDENT #135

We serve marginalized members of our community by operating a food bank and offering, when funds permit, financial support for rental and utility bills. We have noted that increasing electricity rates have negatively impacted some of our clients, with even normal household hydro use being difficult to finance. However, as winter approaches, we are aware that the added costs of attempting to maintain an adequate level of warmth in their homes will be onerous.

We wish it to be noted that we believe any further increases in electricity rates will be a challenging financial burden to those in our community who are already struggling.

RESIDENT #136

Our home is heated by an electric forced air central furnace, and consequently a substantial portion of our electricity cost is subject to the higher tier during each winter heating season. I have calculated the impact of being assessed at the higher tier during the winter heating season at \$297 for 2016/2017 and on average \$296 for the past five winter heating seasons. Note that I have NOT simply calculated this as the difference between the tier 1 and tier 2 rates. I have used the weighted average of the tier 1 and tier 2 rates based on a 2,500 Kwh per month consumption as the base level rate that would otherwise exist (this was the same methodology used by Fortis when the two tiered rate system was introduced in 2012).

The cumulative effect is a 65.3% increase in that portion of our heating costs impacted by the higher tier since its introduction in 2012. More significant for me, than the impact on our personal finances, are the adverse consequences of poor public policy on the broader economy and our environment. It is a well established fact that electricity is a cleaner form of energy than either natural gas or oil, and therefore public policy should encourage the use of electricity rather than natural gas or oil for household heating. The two tier rate structure drives the exact opposite behaviour.

In our case, I have been considering replacing our electric furnace with a gas burning unit. The consequence would be a perfectly good electric furnace finding its way into a landfill, the replacement furnace consuming resources and energy for its manufacture, and the resulting replacement furnace being more harmful to our environment than our existing furnace. But personally, after a few years, the cost savings will have paid for the new furnace and future savings will be mine.

I have held off on switching to gas only in hopes that public policy will change in the future.

RESIDENT #137

I think this billing system is discriminatory. Many of us live in homes without natural gas in rural areas. We have no choice but to heat with electricity. I have done everything I can to lower my electricity bills. LED lights, new windows, new insulation, wood heat etc. but my bill is 30 to 40 percent higher under this new system.

The 2 tier system was to encourage people to use less power. And I do use less power, way less, but my bill is far higher than it used to be. In a statement a while back by BC Hydro made the claim the average home usage would be below the first tier limit. My usage is at least 3 times that of the threshold. I am subsidizing cheap power of those who have natural gas, while I do not have the option. It would be near impossible, no matter what I did to drop my usage below the threshold, unless I shut off my furnace and hot water heater completely.

It's really an unfair system. People should just pay for what they use, equally. It is not my fault that Fortis did not have gas in my area. I have been legislated into near poverty as my power bill is my biggest expense next to my mortgage.

Imagine if the cost of a litre of fuel varied depending of the car you drive. If you drive a KIA, it's one price but if you drive a truck for work, it's a higher price per litre. There would be a riot. Please go back to the old system. It was fair.

RESIDENT #138

I am a member of Fortis Power Smart and monitor my household power usage on a daily basis. I have found it is impossible to stay within the first pricing level and I use fossil fuels to heat my residence and hot water.

We are a two person dwelling. Any household usage for cooking, baking or using an electric clothes dryer will put your usage into the second tier. As well, many homes use electricity to heat their hot water forcing people to switch to fossil fuels. The two tier system in power usage forces users to seek out other energy options, mainly fossil fuels.

RESIDENT #139

I bought my home in 1999 and over the past few years have totally renovated it and have tried to be as energy efficient as possible: over insulating the attic, new energy efficient windows, appliances and hot water tank -- pretty much everything that I could improve on, I have done. But it all seems for nought, when I receive my Fortis bill in the mail. I have been contemplating on investing in solar panels to try and cut down on bills.

I only have three people that live in my home and we try our best to conserve power. I normally had my account set up on equal payments to cut down on the higher winter months but they sent me a notice saying that they were increasing that payment to \$500.00 per month. I cannot afford this. Last winter with this system in place my winter bills soared to over \$900.00 per month (that is nearly \$300.00 more than my mortgage). How can this possibly be?

I have lived in my home for 29 years now and the only thing that has change from before this system was put in place is that I have become more energy efficient and also more aware of the dreadful state myself and others that depend solely on electricity are facing. I feel as helpless when I receive my Fortis bill as I do when I go to the pumps to fill up my vehicle.

RESIDENT #140

Please find below a summary of our household's electricity changes, based on our actual hydro bills, for the period of Jan. 15, 2009 to Sept. 25, 2017. Please not the rising cost of energy despite falling electricity consumption due to house improvement efforts. We have not alternative heating options. During the critical winter months, the two-tier billing system is responsible for our hydro costs literally going through the roof.

Billing Period	Days	kWh	Bill
1/15/09-1/14/10	364	24644	2116.91
1/14/10-1/18/11	369	17989	1728.79
1/18/11-1/18/12	365	21557	2245.37
1/18/12-1/21/13	369	20165	2302.32
1/21/13-1/21/14	365	18337	2282.13

1/21/14-1/22/15	366	18206	2366.90
1/22/15-1/25/16	368	16786	2282.60
1/25/16-1/23/17	364	17764	2531.06
1/23/17-9/25/17*	245*	10698*	1519.41*

*partial year

RESIDENT #141

I find something really unfair about the two-tiered rate system that negatively affects our household. We have a legal rental suite. With renters living in it, our power consumption is a lot higher of course because there are now 2 families living in the same house. I think a valid argument is that if people, such as ourselves, are willing to have legal suites they should have a benefit over people with illegal suits. That benefit should be an increased high limit when the two-tier rate jumps to that higher rate. This has an added affect that people with illegal suites now have an extra incentive to make them legal.

The negative effect left in place by not changing the current system is already in effect in our household. We pass the increased costs on to the renters. We have raised the rent to compensate for the current system in an already unaffordable rental market. We also personally leave our suite a lot colder than we would like and sit in the dark a lot more to help control the costs.

If people, like ourselves, are willing to have legal suites we should have a higher limit before the two-tiered system clicks upward.

RESIDENT #142

I am appalled at our rates for electricity in BC. I work from a home based office because I can't afford to rent retail space. I must have my heat on at home all day as I work there and have clients who also come there. Even if I were able to open an office space, I don't think I would be able to afford all the other costs for heat and lights etc. Please review electricity costs for everyone in BC.

RESIDENT #143

We are pensioners on a fixed income and are angry at what we consider outrageous pr month prices. We thought as in the past that summer rates would be lower. December 20, 2016, we had a burst pipe and were using our gas fire to heat the house, which was inadequate. We did not put our furnace on due to cost, but after being told we would not be covered by the insurance man, if we had another burst, I went home feeling very shaken up. I am 78 and my husband is 89 – so we had no alternative. The restoration people had heaters on and tried to put us through for thousands of dollars – that is another story. Old people are taken advantage of and costs are prohibitive (nothing goes down).

Costs per month: \$131 Dec; \$122 Jan; \$285 Feb; \$299 Mar; \$265 Apr; \$165 May; \$199 June; \$183 July; \$187 Aug; \$201 Sept; \$150 Oct; \$160 Nov.

Drying machine is not used; only washing machine with cold water. We don't understand fluctuations, as we use things the same consistently.

RESIDENT #144

Roughly 28 years ago when we built our home my husband was in logging so we had access to free wood. We put a wood furnace and electric furnace in our basement. We had to go Electric because we did not have enough room to put in a natural gas chimney with the wood chimney together. My husband no longer is in logging. Wood on the side of the roads is hard to find. I had two months last year where I had to pay \$500 for power. I keep my home at 19 for a high and 16 at night. My friends and family come to visit and complain our house is too cold but who can afford to pay more.

RESIDENT #145

My wife and I are retired and on a fixed income. The situation and setting that we find ourselves in are that we have no other means of heating available that we can afford. I'm sure we speak for many others. We live in a rural area where natural gas is not available. A quick study, recently of wood heat alternative is out of the question as it is far too expensive to install--- and then to purchase wood.

Our insulation has been upgraded to what we can afford. Our windows and patio door have been upgraded recently. We have done what we can. Our present older home was my wife's inheritance. We cannot imagine what seniors are dealing with who are paying high rent prices or are still trying to make payments on their home they do not own yet! It is our plea, not only for ourselves, but all folk who struggle desperately to keep food on the table...and pay the electrical bills that have recently skyrocketed; our plea is that there be a special rate for seniors and others who are on fixed income.

RESIDENT #146

The two tiered system is a severe money grab for those, like myself, who have a home with electric heat. My winter electricity bill has risen to \$500 per month for at least 4 months. It would be about \$350, if the rate stayed the same, instead of a 50% increase after 800 kwh. It is horrible for a Pensioner to try to keep up.

RESIDENT #147

Yes, definitely, the two tiered rate system has affected the amount I pay to FortisBC. It seems like I am always over the line and I am not sure how they figured out what the line is. Yes, exactly what is it based on? We all need/want electricity and heat and it seems like the cost always goes up and it is becoming increasingly too costly for anyone. I am 65 and due to retire soon and it is going to become hard to make these kind of payments with pension only, so likely I will end up working longer.

RESIDENT #148

We are pensioners and this new system has been tough for us financially. We have resorted to wood heating to help keep our costs down. Not energy efficient and harder to bring home wood at our age.

RESIDENT #149

I was living in a mobile home from July 2016 to September 2017. The heat was electric. I'm glad I phoned in September to find out what my heating bill would be through the winter so that I could go on a monthly charge. I was told that one bill from the previous winter was over \$700.00. I ended up paying \$180.00 per month for my electricity and was just coming to a zero balance when I moved. I was away for 5 weeks in 2017, January and into February so the heat was down and no lights or TV on.

This is a hardship for seniors and people on a fixed income or just government pension. Fortunately I have a source of income, other than my pension. By the time I paid my Electricity, my cable, my pad rent, bought a few groceries and gas for my car, there was nothing left from my pension income. If I was going to stay in that home, I would have changed to natural gas. A large outflow of money in the beginning but I'm certain it would have paid for itself in a short time. I will probably purchase a home in the near future, but I will make sure it is not heated with electricity.

RESIDENT #150

As a single mother to two wonderful teenage boys, I would love to reflect on how this system has forced me and my children to make difficult choices regarding our expenses since the implementation of this unfair system.

Currently, I work three jobs just to make ends meet. After a meeting with my kids and scrutinizing our extra curricular plans, currently we have none, it has been agreed that as I drive my kids to work, they in turn will commit 15 percent of their paycheck towards our Fortis bill. My boys are 14 and 16. They should be spending money on video games, chocolates, chips etc.

It's October 2017 and I just recently paid off last year's winter bill, the highest being over \$1300 for 60 days. What I don't understand is my consumption is way down, as I don't have a choice, yet my bill keeps rising and rising. I'm petrified about this winter. It's October 28th and I still haven't turned on my heat... We are cold! This is not the freedom my dear grandfather fought for. But instead it's a morbidly insane money camp for which I'm a slave. I have no other options. My hands are tied and my voice silenced.

RESIDENT #151

I live in rural area and your billing system is the reason we are broke all the time. This isn't fair.

RESIDENT #152

In 2001, we inherited my Family home built in 1907. After much deliberation for a heating source for our restored-refurbished home, the following decisions took place:

- Geo-Thermal - not advanced enough for a city lot in 2001.
- Oil furnace. We removed the oil furnace and recycled the oil tank and fuel. After the electricity costs were established - we did wonder about that decision.
- Grey Water Tank. Tried to get Interior Health to approve a 'grey water' tank as a heat source. They had no comprehension of such a heat source.

- Reviewed Heat Pump and its properties - benefits and draw backs. Priced an appropriate Gas Furnace to complement the Heat Pump as back -up.

We decided to purchase and install the heat pump and the appropriate heating runs; along with the gas furnace for a back up- in case of a power outage. We could use our heat pump until -2 to -5; not that efficient but the cost was still OK

Come forward to Fortis and the 2 tier system. In October 2015, we turned off our Heat Pump - to use our gas furnace. We tracked the KWH usage and cost and compared to the 2014 winter heating year. In October 2016, we again turned off our Heat Pump and continued to track the costs. This year, October 1st. 2017, turned Heat Pump off. We cannot use our Heat Pump as a source for winter heating. We are cognizant of our environment - but we cannot help, given the cost - as we can't afford to use electricity with the 2 tiers. This goes in the face of - conservation.

RESIDENT #153

I bought a house for my growing family a few years ago. Got my first 2 month electricity bill for over \$1100 and spent my next mortgage payment on it and have been behind ever since. I financed a heat pump. Nothing changed. Put in a wood burning stove. Bills are now \$900. Anyways my electricity bill is same as my mortgage payment. I'm struggling to provide good food. That's it

RESIDENT #154

I am subsidizing other Fortis users because I heat my home with a 100% efficient electric FA furnace. Rebates are offered for conversion but not to "new Fortis customers" and not for conversion from an electric furnace to a natural gas furnace. If the Commission and Fortis were truly serious about energy conservation through the conversion to natural gas, they would have included those of us who use electricity exclusively. If they were serious about conserving energy, they would offer rebates for conversion to solar. They do not and they are not.

RESIDENT #155

We are affected by the 2-tier system unfairly. When we built our house in 2008, we were encouraged to have only electric heat as a green, renewable energy source. The 2-tier system has disadvantaged us, since we would be paying less had we opted for gas as well as electric. This should be rectified.

RESIDENT #156

The Fortis unilateral billing change has been a policy and financial disaster for local families. The whole concept in real world application is highly suspect. We crunched the numbers in 2016, and although energy is not our highest cost contributor, the inability to predict where it was going in the next 5 years made the decision an easy one. Shut down our local business operation (a medical device search & development firm) and move our domicile from where we have been local taxpayers and employers for 12 years. This also involved four well paying jobs. This quiet move to another region occurred this summer.

BC's government and subordinated monopolies have been on a relentless, untested, and very high-cost and economically unsustainable energy experiment. For family households when combined with new property taxes, energy taxes at the pump, and higher Fortis utility along with many higher user fees there is no additional spare cash for day to day living.

Fifty per cent of British Columbians are living paycheque to paycheque and most cannot manage an added \$100.00 rise in monthly mortgage fees when rates rise. Families are profoundly economically fragile. The rub is that we all all supposed to economize and be rewarded by better sustainable behaviours, but as soon as the 'efficiencies dividend' manifest and ... threaten any regime's budget/cash flow... regardless of the heroic consumer effort a new fee model is imposed from the prior lost cash flow.. This has happened with waste tipping-fees, water use, and now domestic energy. It all seem a bit of a 'racket' where polished brochures promise nirvana if we just support these new programs ... but the result is higher living costs.

The dark dividends are now showing up: a dramatic increase in local homelessness, a quiet out migration of business that you cannot afford to loose and exceedingly low new business formation. We looked at the overall Fortis program, and voted with our wallets and our feet. We left. I fear for young families and seniors who cannot move as they will find the new feudal energy economy as dismal. I wish I could write a happier letter, but the truth is the truth.

RESIDENT #157

I am writing to say that the 2 tier electrical system has cost me more. I live in a older town house which only has electrical heat. I have asked coworkers who own homes with gas and their combined bills are less than mine plus their homes are more than twice the size of mine. I know the billing hurts the lower income more.

RESIDENT #158

We were put on a budget of \$200 per month. We moved as the Fortis bill was almost \$800 per month and our rent was \$700. We moved to a new rental and our monthly payment plan was pro-rated and increased to \$250 per month. We just received a bill stating that our outstanding balance is \$2,585.00. Odd considering we never used the baseboard heaters since we moved in here. Fortis even went so far as to tell my husband maybe he should sell something of his to pay the bill. We requested that they come and look at the meter and they flat out refused and said we can see it on the computer and it works just fine. Our neighbours have homes twice the size of ours and their Fortis bill isn't even a third of what they are billing us.

RESIDENT #159

My frustration with this system rests with the excessive cost associated with it. My power bills have increased by over 40% for power used, since this system was implemented. The higher the power bill, the less power I use and since most of my power needs are based on home heating, I live in a cold home environment even with supplemental wood heat.

It is also an extremely unfair charge for people like myself and my neighbors none of whom have access to Natural Gas. I have never used power excessively and am a firm believer and advocate for energy efficiency and reduction; however, this system is disproportionately unfair to consumers unable to utilize Natural Gas due to lack of access.

RESIDENT #160

We recently moved to a more rural property for quality of life reasons but unfortunately have no access to natural gas. We renovated the house during the summer knowing we would face increased utilities costs this winter and added a high efficiency heat pump to replace the aging electric baseboard heaters, added insulation, and chose higher efficient appliances. All these will help but I feel we may go over the 1600 kWh tier. This is unjust for the people who have no gas access and should be reviewed to stop penalizing people with no option.

RESIDENT #161

I hate Fortis now. Since i was forced to use their service, I have had nothing but heartache from them. My move-in bill was over \$1200.00 for a month and half. I do not have a furnace nor baseboard heat. I use a wood stove and my light bulbs are LED bulbs. My appliances are energy efficient. Every 3 months I get a phone call from them stating they are cutting my power off; stating we owe over 1200 bucks every time. I know when the meter guy comes because I wait for him so he doesn't cut my power off. The manager phoned me and told me for my best interest i should move my family out, so they can shut my power off. But when I can pay it and move back in, there will be an additional charge to hook me back up.

The meter guy drove into my back yard going past my car and damaged it -- hit and ran it instead of getting out of his own SUV and walking to the back like normal people do. I get calls non stop threatening to shut my power off. I've had to go without paying my rent and also food to pay the large amount they want. My son is diabetic ...The stress of not being able to provide them with a certain amount of money was always a threat. They told me to go beg borrow or steal for it or no power.

I refused their smart meter. Two weeks ago I was given a letter stating they would be by and they are changing my meter to a smart meter. I told the supervisor who attended my home with workers that I don't want that meter because it causes health issues and asked what would happen if i refused it. He told me I have 3 choices: 1 I accept the meter, radio freq on; or 2 radio freq off; or 3 they will shut my power off. So what am I going to do? I was forced into it.....I now suffer from Anxiety and have to take medications for it. I'm scared they will shut my power off without any regards. Either we eat, pay rent or pay power bill. There is no in between. Somebody help save us.

RESIDENT #162

I am writing to voice my concern over the negative financial impact that Fortis two teir rates have had on our electrical bills in the past few years. We only have Fortis as a choice for power and as such their monopoly on the tier system for rural customers has given them a disregard for the effect the two teir system has on our bimonthly bills. Overall they have doubled during the winter months since the implementation of the two

tier system. This is despite the fact that we use a wood stove to help heat the house. Please let Fortis and the new NDP government know that these rates need to change.

RESIDENT #163

I agree that people like me who are seniors in a small home are spending more on power to heat our homes than is reasonably acceptable. Please consider the 2 tier system sooner than 5 years. I will be dead by then. The river runs right past our home. Why such high costs? And you want more yet.

RESIDENT #164

After two years of having a two-tier rate system for electricity use we cannot see how this particular rate system actually helps preserve energy/respectively encourage customers to use less energy.

First of all, electricity is costly enough and the vast majority of consumers try their best to use as little as possible. The majority of people have no other options but to use electricity for basic needs such as heating, cooking, hot water, and general appliances, and these consumptions can only be reduced in a very limited form, unless they switch to alternate options for heating.

For our family of five, our general electricity consumption has not increased above the norm since the rate changes came into effect, but our bills have close to doubled since the implementation of the two-tier system, particularly during the summer months. We have a small orchard which relays on irrigation for 5-6 months of the year. Regardless of the rates, we have no other options but run the irrigation pumps at the same level as before the two-tier system. There are no ways for us to preserve electricity during these months. Our cost for irrigation has doubled, but our income from farm revenue has not.

For the remainder of the year, we do our best to reduce our electricity consumption as much as possible. We heat our home with natural gas/wood, let our laundry air dry in the basement (= no clothes dryer), and we keep our hot water use at a minimum. Despite all of these measures, we have still seen a substantial increase in our overall electricity bill once the two tier system was introduced.

In general, a flat rate, at large, is much fairer. I have not yet met any family who has not seen a dramatic increase in their electricity cost, respectively have actually been able to save electricity or money with the two-tier system. The two tier rate system is an unfair system and at large benefits the power company rather than the customer.

RESIDENT #165

Our household consists of 2 adults and 2 kids. We have electrical heating but we installed a pellet stove due to our electricity bills being too high. We do not have access to natural gas. Environmentally I am pretty sure it would be better to use electricity only but the cost is too prohibitive. The impact of the higher rate is worse for the environment not better.

RESIDENT #166

We live in a house that was built in 1989 when electric power was cheap... meaning electric heat in the ceiling panels in the whole house. It is not efficient. We are in an area that natural gas does not reach so our only option is to add wood heat which does not heat the whole house.

Also we bought an electric car to save gas money and use clean energy. If you have an electric car the government and hydro should try to encourage you to use clean energy not charge you extra. With two tier charging we are being unfairly charged extra for charging our car and heating our house.

RESIDENT #167

We have a 22 year old energy efficient dwelling with an energy efficient rating of 82.7 out of a possible 83. High electric costs are driving consumers to switch to fossil fuel. We are living proof.

When we built this house we had to choose our heating method. We did not want wood as we have a resident with asthma [EPA certified wood heaters were not available at that time]. We eliminated gas as it was not available. Oil and propane were also ruled out due to cost. We chose electricity as it was green and close to the price of gas. According to West Kootenay Power Ltd. (now FortisBC) on March 10, 1995, the annual average house heating cost for a high efficiency gas furnace was \$361.83 and for an air to air heat pump was \$427.68. Electric was \$65.85 more expensive [18.2%]. We wish this ratio existed in today's world! With the new rates electricity no longer is viable as an affordable option.

However we installed our infrastructure to support electric heat as it was then a reasonable option. We were not alone in coming to the same conclusion. Now all of us are facing extremely high heating costs because government changed the rules and moved the goal posts. Electric heating customers have always been aware of the higher costs and accordingly have been keenly interested in conservation. When government speaks to conservation, the people who heat with electricity were already out front and leading the parade.

We have heated with an air source heat pump since 1995. Since then we have spent in excess of \$25,000.00 in upgrades to have a high efficiency heat pump, Zone heating, LED & CFL lighting, energy efficient appliances, insulated our duct work, installed an efficient hot water heating system on a timer, installed solar film on the windows, heat only one room at night to livable standards, cook with a toaster oven & microwave to reduce electric consumption and wash clothes only when a sufficient volume has been accumulated & installed low flush toilets. In the winter we live in one room from 7 pm until 7 am to reduce our energy use.

My wife had a stroke on Dec. 20th 2016 and still has serious mobility issues and is constantly cold because of this. We can no longer suffer the low temperatures we have tolerated since 2 tier pricing went into effect in July of 2012. In this almost 5 year journey the price for the second tier went only in one direction; UP! Now it is 50% of the tier 1 rate and too expensive to use for heating. Meanwhile people who heat with gas (not

available to us) purchase their kWh at below the cost of production, while the poor stiff with electric heat either freeze or pay an exorbitant fee for their basic human comfort.

Electric heat is green, but Fortis has pushed us all to want the fossil heat side. We are 75 & 79. We do not have a lot of time left and we will be cold soon enough in the ground. We have now gone fossil. Last winter our house was an average of 16.3 C in January and 15 C in February. Had we heated the house to 20 C for 12 hours a day and 17 C at night our cost would have gone up \$800.00. This amount will buy us 3.36 tons of pellets (enough for two seasons) and a daytime temperature of 22 C [a temperature we can only dream of when using electric heat]. It's extra work, but the results are more than worth the effort. Oh, by the way.....forget electric cars for us. We cannot reasonably heat our home so why would we want to add any further misery. **At least at the gas station we all pay the same price for a liter of fuel.** We wish to remind you that no other fuel in B.C. is priced on a tier basis. In fact discounts are available with volume for other heat sources.

We apologize to our neighbors for adding to air pollution in this area. However, we purchased a stove which the manufacturer states as 91.7 % efficient so we have mitigated our choice as much as we could. We feel sad for those who do not possess the means, either physical or financial, to escape from 2 tier hell.

RESIDENT #168

I am a rural homeowner. I have tried hard to cut energy costs in my home. I purchased an energy efficient wood stove and have installed plastic on windows. Also I have used space heaters when necessary. My home is two levels and my senior family live in lower level. My power bills are overwhelmingly high even in summer months. Winter is outrageously high. Those with larger families are being penalized which is unfair. All rural families should have utilities as a necessity not a luxury. How is \$700.00 a month justified {in Winter}. I have other friends in the community with the same problem, without senior family sharing the home. Please reconsider the Two Tired Billing System as I find it to be unfair to rural people.

RESIDENT #169

I just received my wonderful Fortis bill for the months of mid Oct to 15th Dec. I live in an older home and we heat with electricity, it is just my wife and I that live in the house. So here is the wonderful Xmas gift from Fortis -- a bill for \$712.47 for the 2 months. The smallest bill we will get from them this winter. This 2 tier system is certainly not fair to people that have no choice but to heat with electricity.

RESIDENT #170

Our home is 100% electric. Last winter some of our billing for two months were as high as \$1200.00, this equates to a double mortgage payment for us. I have a high efficiency 15 kilowatt Furnace and a 40 gallon HWT. The lower half of our home is only 10 years old, the box joisting polyurethane sprayed, R 20 in the lower floor walls and R 50 ceiling blown in insulation.

What are people in our situation to do? if we were ever to consider upgrading the balance of the house, the electrical costs make it impossible.

RESIDENT #171

We are property owners living on a small rural acreage in Oliver, BC. We are a family of three living in a modern, modest-sized (1900 sqft) house that is heated using a newer two-stage geothermal heat pump. We do not have any heated outbuildings or other major draws on electricity. We are conscious of phantom power usage, and unplug all non-major appliances when not in use. We do not own typical household devices such as televisions, wash all our laundry in cold water, use window coverings to help prevent excess heat transfer, use solar energy to power electric fences for our livestock, and turn off our energy-efficient lights when not in use. We have read all of Fortis's recommendations regarding limiting power consumption, and try to follow them to the best of our ability while still meeting our family's needs. All this is to say that we do not have excessive electricity needs in comparison with many other households.

Despite our continued attempts to curb electricity use and waste, we find it impossible to run our household within the lower limits of the two-tier system. In order to do so, we would need to cut our power consumption by half. This is completely unrealistic – we would not even be able to heat or cool our house to comfortable temperatures in order to do so.

We find the two-tier system to be unnecessarily punitive. Fortis claims that it is intended to reduce energy consumption. We find this to be patently false. Those who do not have to rely on electricity for heating receive a lower rate, thus encouraging consumption, while rural customers who have no access to gas and must use electricity are paying incredibly high bills, particularly through the winter.

On behalf of all rural residents who have been unfairly impacted, we would like to request a single-tier billing system that would be fair for everyone.

RESIDENT #172

I'm a senior who moved to the Olalla area in August of 2016. I live in a seniors mobile home park in an older trailer that has been totally refurbished with new siding, insulation, drywall and flooring etc. My home is approx. 900 sq. ft. including a small insulated addition, so not huge at all. Being on a fixed income means that I live frugally in order to make ends meet (no unneeded lights on, few Xmas lights etc). My biggest challenge in that is keeping my home warm without breaking the bank so to speak. For the most part I use a 4ft energy efficient baseboard heater which I turn up or down as needed to try to keep my electricity bill as low as possible. When I'm relaxing in the evening, I wear a sweater and cover my legs with a blanket. My Fortis bill eats up approx 20/25% of my income some months. Can you imagine that! The golden years are not so golden when Fortis is lowering my quality of life just to keep warm. I'm hoping for a short mild winter.

RESIDENT #173

I live in a rural area that is not supplied with any alternative to electrical power. As a direct consequence of Fortis 2 tier pricing my road of approximately 30 homes suddenly became users of logging truck size loads of wood to heat our homes. As you no doubt can imagine the air quality of our narrow valley has decreased. Who knows what effect this has had on our collective health? I'm sure the Fortis Board doesn't care.

RESIDENT #174

I live in a mobile home in Oliver, B.C. My only source of heat and power for the home is electrical, as is the hot water heater. In order to save costs for electricity I shower every 5 days and never run hot water through 15 feet of cold pipes into my kitchen, so I do my dishes with water heated in my tea kettle. I have plastic over some of my windows, never use my clothes dryer and also refrain from baking unless I want the occasional pizza. The temperature inside is rarely as high as 20 degrees celsius and I turn the heat off at night. In fact I turn it off and on all day as needed. I dress warmly with sweater and light jacket. I have even wrapped the pipe that leads from my kitchen stove fan to the roof because it conducts the outdoor temperatures right into my kitchen. The fan in my bathroom is blocked for the same reason. I also block off my back bedroom and side additions during the winter weather.

During the summer with air conditioning as needed my bimonthly bill averages \$100 and, in contrast, during the months of winter from Nov. to March it rises to an average of over \$500! My retirement income from pensions and G.I.S. is less than \$1700 per month along with a grant that I receive from the provincial government to assist with my pad fee. This grant will cease next August. I have no other source of income. Fortunately, I own my house and car outright and have very low debt. Elimination of the two tier billing system would make a great difference in my cash flow.

RESIDENT #175

The Fortis 2 block system is taking more and more money out of our pockets. For Oct 23 - Nov 23, we payed \$343.71, including taxes. Block 1 = \$80.94, 800 kilowatts; Block 2 = \$230.35, 1475 kilowatts. And it's not even the coldest part of winter yet. Why are we always in the second tier?

My wife and I both work still and the last of our 3 boys has moved out. We are only 2 in our home and we keep our heat low enough that we wear light jackets or sweaters. Home is well insulated, quality windows. Electricity is our only option. I don't know how the low income population can afford these rates with this 2 block system. Our fear is we could end up, after retirement, spending our savings on power before anything else.

RESIDENT #176

I am a senior on a fixed income. I moved to Oliver on Oct 1/2014 which is the date my home was completed. I have a high efficiency heat pump (ductless heating), with auxiliary baseboard heat. I also have an electric fireplace for auxiliary heat in the winter because the heat pump cannot keep up when it is really cold and there are "cold spots" in some of the "living" area.

All of my appliances were new as of Oct 1/2014 and are all energy efficient. I have replaced most of my light bulbs (all of the ones I use regularly) with LED bulbs. I do not turn on any heat in rooms that are not being used (ie. spare bedroom, spare bathroom & laundry room). I close the door to those rooms in the cold weather & close blinds in order to retain heat. I wear an undershirt & a sweater in the winter.

In the summer, I keep windows & blinds closed. I have installed an awning on the west side of the house and have planted some trees for shade to try & minimize cooling demands.

There is natural gas in the area - my neighbours have it. I inquired what the cost would be involved in bringing natural gas in to my residence, with the thought of installing a high efficiency gas fireplace to act as an auxiliary source of heat in the winter months, and possibly replace my electric water heater with a high efficiency natural gas heater sometime in the future. (It would also provide backup in the case of a power outage). Fortis advised they would have to trench through my neighbour's front yard and driveway in order to bring a line to my home. I would of course be responsible for the cost of restoring and repairing their landscaping and driveway. Not a feasible option....total cost including fireplace would be over \$10,000. Some neighbours have installed solar panels at the cost of roughly \$18,000 to \$20,000. Again, not an option for me - I don't have that kind of money to invest & don't believe the return makes it feasible in any case!

Despite my efforts and the newest energy saving devices, I am not able to escape the high rates of Tier 2 billing, even during periods of lower demand. I am not sure what else I can do to reduce my energy costs. It is no wonder some seniors have to rely on the food bank to exist in this area!

RESIDENT #177

We are two seniors who have lived at two addresses since the inception of the 2tier system. At our rural (Oliver, B.C.) residence, we took advantage of all government and Fortis grants and rebates; having our house upgraded by insulating attic/basement; new windows; a heat pump with electric furnace backup; to an efficiency rating of 84. Although the house and appliances were as efficient as we could possibly make it, we were unable to keep our power usage below allowable kwh of the 2tier system. Gas was not available in the area.

One year ago, we moved into the town of Oliver; a 10 year old totally electric house (heat pump with electric back-up furnace). Recently (1 month ago) we had solar panels installed (\$1900.00) instead of switching to gas, which is an available option. After one month of solar usage (cloudy days), we are still into the 2tier usage. Possibly the 2tier system needs to be adjusted to reflect real normal comfortable home usage, not a bare necessity existence in an uncomfortable cold house.

RESIDENT #178

Last March 2017, we returned from our travels south to receive a hydro bill which was higher than the same period the former year despite the fact that we were away for one of the then two month billing period. The thermostat was turned down to 10C, the hot water tank was turned off. I called Fortis, who, to put it in a nutshell: the lady told me that space heaters consume a lot of power. Well, we didn't use a space heater and haven't for a year or so. In the period Feb/March '17 the bill was \$442.74; in the same billing period the previous year it was \$269.68. The difference is over 60%! And remember, we were not in our home for a month in 2017.

Why is Fortis allowed to double bill? In decades of business, we offered lower rates to loyal customers, not inflated 'penalties' for loyalty. Moreover, Fortis does not have competition unless you consider their parent natural gas side competition? We, and many other people, feel that we are being gouged. We may have to look at solar and/or wood heat to bring the costs down.

RESIDENT #179

We are two seniors that own a mobile home with only electric heat. We try to keep thermostat at 19 c to keep our costs down. We have replaced all lights with LED. We close off rooms we do not use. In spite of trying to conserve energy we still go into tier two because of having only an electric furnace to heat our home, so I don't think tier two is fair to us.

RESIDENT #180

I live in a rural area where there is no natural gas service to my or the other 180 homes. We have lived here for 30 years and just after purchasing, then West Kootenay power was encouraging all rural resident to switch to electric heat as it would be abundant, clean and affordable well into the future. That has not been truth for near the last ten years.

In spite of changing all appliances to power smart, lighting to LED, upgrading windows and double walling and adding insulation where ever possible our power bills have climbed out of reach. We now use wood as our primary heat with propane and oil for back up. Even with that, our power bills last winter reached to \$500.00 per month. Retirement income cannot cover these amounts and we become desperate.

RESIDENT #181

Our home is serviced entirely by electricity; appliances and furnace. We have no natural gas hookups to the house. We reside in a mobile home in Ok Falls. All the windows have been replaced, and we have all Power Smart appliances. I always have throw blankets and sweaters available in the winter. No alternative heating used.

We have been billed the #2 Tier charges since it was introduced. When I received the first billing, I called Fortis and told them I paid less for rent than I was being charged for services. Of course, there is nothing they will do about the high prices. I have an equal payment plan, (of course this amount changes once a year based on your previous years usage. Can you imagine that my monthly bill was almost doubled one year, from \$239 to \$367 per month. (Even the lower charge is too high)

RESIDENT #182

I am a 59-year-old woman on disability, living in a not energy efficient subsidized sub-standard housing. Air conditioning in the hot months is a necessity because I live in the South Okanagan. Even though I always had efficient power consumption habits, my power usage is far less now than it was prior to the two-tiered system..

I have been forced to alter my lifestyle to the extent that it is compromising my physical and mental health. Because of the two-tiered system, I only turned on heat a few

weeks ago. I am forced to rely on wearing layered heavy sweaters. My hands are consistently cold, so I run them under hot water throughout the day to lessen the pain and then burrow myself under a pile of blankets. The two-tiered system has a serious negative affect on my health and wellbeing. It unreasonably penalizes those, like me, with limited means and who only have access to electric heat without the ability to secure a different source of power.

I am unable to alter my unit enough for it to make a meaningful difference in my Fortis bill. What has been terribly demoralizing is that on disability, I receive \$375 for shelter yet just my monthly Equal Payment Plan Fortis bill is \$172.00, leaving only \$203 for all the rest of my shelter costs, including my rent. It is inhumane to believe that is enough for a person to survive.

I feel unfairly burdened by this two-tiered system. It has contributed to my declining health as it makes it virtually impossible to meet my basic needs.

RESIDENT #183

We are sick and tired of these high electrical bills. Our only source of heat is electric. To reduce our hydro bill, we installed LED Lights throughout the house and sealed drafty areas. We have double paned windows, we keep the thermostat at 66 degrees during the day and before bedtime we turn it down to 60 degrees. We use sweaters and blankets to keep warm. Electric heat is our only option in our area. Fortis should eliminate the 2 tier system when the only source of power is electric.

RESIDENT #184

I live in a 1 bdrm mobile home. To do electrical conservation:

- cut off all electrical appliances
- infrared heater
- new-double panel windows

Thus I did my list I've showed you for conservation on my Utility Bill. The Utility Bill should not jump 3X and some when not using items and especially suddenly one month to another from fall to winter bill.

RESIDENT #185

My Fortis Bill for Oct 10/17 to Nov 8/17 (29 days) was \$285.66, with 58% of my electricity consumption in the second tier. In our area, we do not have Natural Gas, so electricity is the only option for home heat plus appliances such as hot water, stove and clothes dryer.

In an effort to minimize our electrical bill, we have:

1. Energy saving appliances (water heater, washing machine, refrigerator)
2. We use a wood burning stove in winter months to provide additional home heat
3. Energy saving thermostat
4. We use outdoor cooking appliances (propane BBQ, wood pellet stove) in summer months

We are billed tier2 rates every month - winter and summer. Unfortunately, our monthly bill during the summer months is considerably higher than the one above due to air conditioning costs.

RESIDENT #186

I am retired and living on a pension. Winter heating costs are exorbitant under the two tier system, and are forcing me to go to alternate heat sources. Natural gas lines are approximately 1/4 mile away, and Fortis Gas laughed when I asked if they were planning on supplying gas on my street. That leaves oil, propane, or wood --- why am I being forced to spend money that I really can't afford to convert my heating system to burn fuel that causes pollution? This seems to me to be a backward step.

How is it that friends living in Summerland can get their power cheaper than I can? City of Summerland buying power in bulk from Fortis and reselling to residents --- really doubt Fortis selling to Summerland at a loss --- and really doubt Summerland reselling to residents at a loss --- bottom line, Fortis is a rip-off.

RESIDENT #187

The 2-tier system has impacted our household in a very negative way. In order to try and keep our costs down, we have done the following:

1. When replacing appliances we bought only ones that were labeled as power smart
2. Turned the furnace down to 19 - 20 degrees and put on extra blankets on the bed
3. Put in a new wood burning fireplace - insert (cost of \$14,000.00)
4. Took out the existing electric baseboards and put in a heat-pump (cost of \$21,000.00)
5. Replaced a patio door that was not sealing probably (\$700.00)
6. Recently purchased all new black out drapes with thermal backing.

But even with doing all the above we find ourselves going over the 1600 kWh rate each month (Oct thru Mar). An average winter month (October to March), we find the cost per month from \$530 to \$631 per month. Please get rid of the 2-tier system, especially for folks who have but no choice but to use electricity to heat their home.

RESIDENT #188

I live in Area D, upper Carmi neighbourhood and am writing regarding the Fortis 2 tier billing system. Our neighbourhood does not have access to natural gas and most of us burn wood or use pellet stoves to supplement electric heat over the winter months.

Unfortunately, we are being penalized by Fortis for not having access to natural gas during the winter season. My bills are only in tier two during winter. I have a wood/electric furnace, the idea is to have electricity kick in once the coals burn down and no longer produce enough heat. Sadly I no longer set my electric furnace to come on and wake up cold using only wood to heat to keep my bill down. I had my furnace checked this year and it was fine so only the blower motor is engaged to blow wood heat threw the ducting and still I am in tier 2! I only use the dishwasher once a week; no

outside lighting. If I use the oven, I cook more than one thing. I wash in cold water with an energy star washer and hang clothes to dry by the wood furnace. Last year Dec 2016 - Jan 2017 we had a cold spell -20 and I unfortunately was not able to burn wood and had to use the electric furnace. It was never above 65 buy my two-month bill was for \$1316.19! My house does have open ceiling and I do shut off the lower bedrooms.

The realization is that I simply cannot afford to use electric heat. If I am sick I would have to leave my home and put anti-freeze in the toilets. It seems unjust. Electricity rates in tier 2 are almost double what Fortis rates were prior to the tier system.

RESIDENT #189

I never saw a convincing argument for the BCUC to approve this rate structure. I upgraded my house in 2010: new windows and outside doors; R18 in the walls and R70 in the ceiling; a new energy efficient heat pump; high efficiency furnace and an on demand water heater.

I can very easily get into the second tier rate with the heat pump. I find that the minimum threshold is way to low. I keep my house at 21C and have all LED bulbs. (I am a retired electrician so I have some knowledge of energy efficiency.) If I have to use my dryer I am there. I usually hang my clothes out even in the winter time.

To add insult to injury I live by myself. I feel for those particularly like myself who are on pension and have to rely on electric heat because they don't have natural gas available and who are therefore having a tough time. I sincerely hope the BCUC will listen to the general public and wake up to this rip off.

RESIDENT #190

We live in rural Keremeos. We have Fortis electric and billed every month and do not access to natural gas. From October to March, we are always in the tier 2. Had a heat pump installed a few years ago on advice we would use less power. We use more than the old furnace. I think it was a poor installation; kept calling the company that supplied and installed the unit. They came out a couple of times but it never got any better. We had an air leak test that came in at 81%. The house is 2x6 construction, with double glass windows. Had seals installed in all electrical sockets inside walls. Yes, we do wear sweaters and extra blankets. Had a new water heater and new light bulbs and shower head.

RESIDENT #191

Feb / Mar 2017 \$142.03 & 60.02 (2 tiers consumed)
Apr /May 2017 \$146.39 (only 1 tier consumed)
June / July 2017 \$161.87 & 1.09 (2 tiers consumed)
Aug / Sept 2017 \$161.87 & 62.62 (2 tiers consumed)
Oct / Nov 2017 \$139.92 (1 tier consumed)

Our home is 2300 sq ft, open floor plan for easy heating, we use ONLY wood heat, we do have electric wall units and baseboards and NEVER use them. Our home is 2 x 6 construction, plenty of insulation in ceiling, windows are all double insulated wood frames, new fiberglass exterior doors. We have a normal energy saver fridge, washer

and dryer, one 15 cu foot deep freeze and one 10 cubic foot both indoors. We DO NOT leave lights on unnecessarily, we only view one tv at a time, never leave it on unless we're sitting in front of it, bbq more often than use our oven, only run dishwasher once weekly, only do laundry minimally as there's only 2 of us.

This past summer we did use our air conditioner a dozen times and only at nite for a few hours consequently the double tier kicked in. If we were not extremely conservative and didn't have wood or heating, we could not afford to live in this residence. We are extremely unhappy with the current system and feel we are being gouged. Looking forward to a change for the better for us all,

RESIDENT #192

My parents bought this house in 2010 and I purchased the house this past September. Since I moved in I've done the following:

- Added heavy curtains and area rugs.
- Sealed all the windows and doors with insulation and insulation tape.
- Put a quilt in front of the sofa on the floor and another quilt to cover myself when watching tv.
- Light candles, seems to warm up the house a bit.
- Wear heavier socks, slippers and a sweatshirt.

Last bill: tier 1 \$163, tier 2 \$103, I keep the thermostat at 20 and yes its cold. I don't get why I'm in tier 2????? It's too bad that Fortis is making billions a year while their customers do what they can to stay warm They lost sight of their customers needs and just see the bottom line \$\$\$\$\$.

RESIDENT #193

I am writing to inform you of two very pricey billings that I received in the early months of 2017. Both of them were terribly higher than the same billing period of the year before. They are listed below:

Billing period	Amount	Same Billing Period 1 yr ago	An increase of
11/22/16-1/23/17	\$944.06	\$710.35	\$233.71
1/23/17-3/22/17	\$695.59	\$515.27	\$180.32

I do not waste electricity. I put on extra wool sweaters in the winter to try to keep warm, so as not to have to turn the furnace temperature up to heat the whole house in order to be comfortable. I turn the temperature down to 17C at night to conserve energy. I even have a NOMA, oil filled space heater in the living room for the evenings.

Is there any compensation for this exorbitant increase?

RESIDENT #194

We are senior citizens, on a fixed income, living on Anarchist Mountain. We moved from Alberta in 2000 to retire here to live the rest of our lives in peace. We built a small log home and because gas was not available on Anarchist Mountain, we choose electricity to heat our 2000 square foot house. We installed under-slab heating; water is heated in a hot water tank by electricity and flows through the floor to heat our home from November to March. The first few years were very comfortable and affordable, our thermostat was left at 70 and the cost was acceptable.

Then, with the Provincial approval, FortisBC imposed a new kind of billing that was supposed to promote energy efficiency. We were shocked at our first bill. We immediately realized that we could not afford to leave our thermostat at a comfortable level. We lowered our thermostat but again our bill was more than we could afford.

The energy promoting system of billing is not working...in fact it is doing just the opposite! Over the years of high cost of electricity during the winter months, we have learned how to overcome this expense. We now use wood to heat our home, our fire place is going 24/7 from November to March and our electrical system is manual turned on only twice a day to allow the hot water to flow through the floor...then turned off completely! By doing this we have brought our bill back to where it should be.

We wish to add that this type of billing is wrong. It was imposed on us and we had no choice. We had no alternative. It's a shame that we now have to use wood to heat our home which is polluting the air and have purchased a pellet stove to heat our shop instead of using electricity...but this is life. It's also a shame that big corporations take advantage of us consumers by using whatever reason they dream up to fill their pockets ...at our expense!

RESIDENT #195

Due to Fortis steep pricing we have been forced to install an alternate heat source six years ago. The cost for this over the years is approx 8,800 dollars.

RESIDENT #196

Our house was built in 2008. It was built to a very high level of efficiency because even back then, electricity was a lot more expensive than natural gas for space and water heating. We installed a geothermal, ground source heat pump, at a cost of around \$40,000. We also paid \$26,000 to bring power to the building site from the road. At that time, the electricity rate was 7 cents/kWh.

Ten years later, under the so-called Residential Conservation Rate, we are paying 14 cents/kWh because we have about 70% of our electricity consumption in Block 2. That's a 100% increase in rates. And we are paying rates that are 40% higher than the rates being paid by other residents in our area who are using fossil fuels for space and water heating.

Fortis argues that it is a conservation rate intended to promote increased energy efficiency but that is not true. We were already at maximum efficiency when the RCR

was implemented. So, for us, it is simply a tax. It's an Alice-Through-The-Looking Glass carbon tax -- the lower your carbon footprint, the higher the tax.

Our first response was to install a fan in our propane fireplace and run that as often as we could. However, the fireplace still didn't provide much heat beyond the living room for our single level dwelling. I turned down the thermostat but there were limits on that option because my wife has severe arthritis. So, last year we bought a wood stove for the other end of the house and that helped a lot on really cold days and knocked a couple of hundred dollars of the electricity bill. However, it still meant a \$900 plus bill, for two months, in mid-winter.

Normally in summer, we can keep the air conditioning limited by opening up windows in the evening once the outside temperature starts to drop. However, the last few summers, we have had to keep our windows closed many times in the evening and overnight because of the smoke from nearby wildfires. Of course, that means more air conditioning, so the rate goes up.

The Residential Conservation Rate is a fraud. It's an illegitimate tax on rural residents designed to subsidize urban dwellers so that Fortis can spread fake news about how low their electricity rates are in Kelowna.

RESIDENT #197

My house in Fortis' service area uses a high efficiency geothermal heating/cooling system. It was only occupied parts of the year: July-August 2017, December 18, 2017-January 2, 2018, March 17-28, 2018. Thermostat setting during above occupancy periods is 22 degrees Celsius, all other times 14 degrees Celsius or turned off. Propane fireplaces used occasionally, laundry done in the evenings 1x week. As you can see from the Table below, we go over the Tier 1 energy consumption limit even when our home is unoccupied during the fall, winter and early spring months.

In December-February, 76% of our electricity consumption was in Step 2, resulting in an electricity bill of nearly \$1000. Yet the house was only occupied for 2 of the 8 weeks.

Rural Home				
Fortis Service Area				
<u>BILLING PERIOD</u>	<u>ENERGY CHARGES</u>			
	<u>Step 1</u>		<u>Step 2</u>	
	\$0.10117/kWh		\$0.15617/kWh	
	Energy (kWh)	<u>COST</u>	Energy (kWh)	<u>COST</u>
Apr 15-June15, 2018	1,425	\$144.17	0	\$0.00
Feb 15-Apr 15, 2018	1,600	\$161.87	3,950	\$616.87

Dec 18, 2017-Feb 15, 2018	1,600	\$161.87	5,006	\$781.79
Oct 16-Dec 18, 2017	1,600	\$161.87	2,612	\$407.92
Aug 17-Oct 16, 2017	1,600	\$161.87	239	\$37.32
Jun 17-Aug16, 2017	1,600	\$161.87	949	\$148.21
Apr 17-Jun 16, 2017	1,600	\$161.87	81	\$12.65
	11,025	\$1,115.39	12837	\$2,004.76

RESIDENT #198

My 2008 home was constructed on Anarchist Mountain east of Osoyoos, and was designed and equipped to be as green and energy efficient as possible: orientation, insulation, windows, Energy Star appliances, and high efficiency electrical forced air furnace, heat pump and electrical in-floor space heating. A 2012 EnerGuide energy efficiency evaluation report rates my house as a high performance energy efficient structure. During construction and now, the cost of geothermal or solar energy was prohibitive, and I did not want to enlarge my carbon footprint by installing a wood burning heating source. Every winter I regret this decision as the cost of home heating has increased exponentially.

I have experimented with my three electric heat sources to minimize the cost of heating during the winter, but my power usage is weather dependant. On a cloudy -20C day I use over 100 kW to heat my house, whereas on a sunny -20C day I use about 60 kW. With the advent of the two tier rate system and frequent rate increases over the past 10 years, my January to March heating costs are \$300-\$400 more than when I moved here. Time of use billing would drive my heating costs even higher. I am on a limited fixed income and cannot continue to absorb this pricing system and the exorbitant rates. As I wish to remain in my home, my only option is to install a wood burning stove.

I know exactly the kW usage of each of my appliances, including number of kW required to heat my house one degree, wash and dry a load of laundry, wash dishes and cook a meal. From May-October I can easily stay within a 60 day 1600 kW allocation. However, during the heating season most of my costs are at Block 2 rates.

I do not need Fortis to tell me how to save energy. I do need Fortis to rectify the problem it created by initiating a pricing/billing system that does not encourage energy savings by urban, natural gas served residents, but that does penalize rural customers.

Fortis should not force customers to shift from greener heating options to labour intensive, polluting wood burning alternatives. Please fix this!