Box 484, Kaslo
British Columbia, V0G 1M0

Phone: (250)353-7350
E–Mail: ashadra@telus.net

October 26th, 2017

British Columbia Utilities Commission Sixth Floor
900 Howe Street, Box 250
Vancouver, B.C.
V6Z 2N3

Attention: Patrick Wruck, Commission Secretary

Dear Sir:

Re: FortisBC Inc. Application for Reconsideration and Variance of Order G-199-16 FBC Net Metering Program Tariff Update Decision ~ Phase 2 ~ Project No. 3698875

Final Argument:

Setting a Framework for Discussion

There has been a long history of community hydro and micro-hydro installation in the Kootenays that started at the end of the nineteenth century when large numbers of Europeans first began settling here: Sandon, Nelson Hydro, Mirror Lake, Kaslo and properties like the Cowan's at Shutty Bench to name a few. Currently nearly five percent of residential properties have mostly self-built and some self-installed solar PV systems, and there are a few micro hydro production systems at the north end of Kootenay Lake. However, only .7% net meter, and the average installation, in the BC Hydro Lardeau service area, is double the size of that built in the FortisBC (FBC) service area.

In 2005 our household, customers of FBC and its predecessors since August 1987, determined that we could not afford to install a $70,000 solar PV system, so we embarked on identifying and implementing demand side and energy efficiency measures instead. In 2014, during a casual conversation with a representative of Backwoods Solar (Canada), we determined that the price of installing a solar PV system on our property in Kaslo had more than halved during the preceding decade.

After meeting with a senior representative of FBC in May 2014 over the issue of installing a wireless meter we decided to enroll in FBC's Net Metering (NM) program, with the understanding that the Company would pay for any production, excess to our electrical needs, at the retail rate. Prior to enrolling in the program we and our installer signed an agreement, but our household has never received back a copy of the agreement with FBC's signature on it. So we are unclear as to whether we have a legally enforceable agreement or contract with FBC as they have never deemed it advisable to send us a copy of the document with their signature on it.

Compared to 2006 our daily and annual consumption of grid electricity from FBC has declined from 17.03 kWh to 1.09 kWh in the first five billing periods of 2017, and for the first time since we became residential customers in August 1987, at the end of the August 2017 billing period we achieved net zero with a $1.72 credit on our bill – a goal that took us nearly twelve years to achieve (Appendix B). Consequently, we believe that our household use of electricity since 2006 shows a firm and reliable decline in household consumption and purchase, as well as a consistent and reliable transfer of electricity to the Company's grid on an annual basis since April 2015 when we enrolled in the NM program.

Since 2006, when we purchased 6.216 MWh of electricity, we have reduced overall grid consumption of electricity, in the intervening years, by 36.858 MWh (Appendix B). That is .512 MWh less per billing period – a 49.4% average reduction in grid purchase. So far in 2017 this net reduction in consumption amounts to 5.042 fewer MWh of grid electricity being purchased than in 2006, of which 1.755 (34.8%) MWh was transferred from our solar PV production system to the FBC grid. This averages 1 MWh less per billing period in 2017 than 2006, of which .35 MWh was transferred from our solar PV production system – a 93.9% net reduction in grid electricity use.

In 2006, before we started any reduction in our consumption and purchase of grid electricity, we had a consumption level equivalent to 51.8% of an FBC residential household, as stated at 64 in the Company's Final Argument. Thus far in 2017 our net consumption is approximately 97.3% lower than that average FBC residential household. Use of grid electricity, some of which is subsequently offset by our solar PV production transfers, is now 17.4% of that consumed by an average FBC residential household.

Thus FBC's oft stated claim, in various hearings before the Commission, that adoption of Demand Side Measures (DSM), energy savings in general and Net Metered energy are not a consistent and reliable source of electricity for the Company to use in their Long Term Planning is simply not borne out by our consumption/reduction experience or the statistics that I have provided in Appendix B, which are based on FBC billing information dating back to 2005. In three of the 2017 billing periods, for example, our household grid consumption was within 10 kWh of each other and in the last three winter billing periods of December/February, grid consumption was within 4 kWh.

The range in consumption for the April, August and October billing periods in 2017 is between 5.95 kWh per day and 6.5 kWh per day, for an average over 178 days of 6.17 kWh. For the three billing periods of February 2016, December 2016 and February 2017 the consumption range was between 8.5 to 8.6 kWh per day for an average over the 188 days of 8.6 kWh per day. So I am not sure how much more stable the consumption patterns have to be, to be reliable and firm.

Between 2008 and 2015 our household's February billing period grid consumption ranged from between 576 and 710 kWh – a variance of around 20%, with an average consumption of 635 kWh for the eight years. Enrollment in the FBC NM program has thus far seen a further average reduction in consumption of nearly 15%. Consumption for the December billing period ranged from a high of 698 kWh to a low of 537 kWh for the seven years prior to enrollment in the NM program, with an average consumption level of 628 kWh. Average reduction in consumption after enrolling in the NM program appears to be around 15.5%.

Finally, our sole objective in engaging in energy reduction and self production has been so that we could achieve energy self-sufficiency as stated in section 2 of the *Clean Energy Act*. In this regard, unlike all the Company's DSM programs, we have never asked, nor anticipated, that we would be subsidized for transferring electricity to FBC's grid. At the same time, however, <u>we are not in favour of subsidizing the purchase price of other customers or profits of the Company either</u>.

In this regard we refer you to Appendix C which shows that a customer who uses 5 MWh of electricity from the FBC grid in 2017 pays, per annum, the same amount per MWh as a customer using four times as much electricity; a customer who uses double pays $17 per MWh less and a customer who uses three times more pays nearly $6 less per MWh. We think this clearly demonstrates that those customers who engage in adopting demand side measures, energy conservation and/or enroll in the NM program are still subsidizing those customers who have chosen not to reduce their household consumption or even increase it.

Further, those who have enrolled in the NM program, and had the temerity to try to generate sufficient kWh to offset their annual Basic Charge costs of $192.54 in 2017, have to produce nearly three times more KWh than if they were a BC Hydro residential customer, and if FBC is approved to reduce NEG payments to $.048 per kWh, the number of MWh needed to offset the Basic Charge will have to rise from 1.724 to 4.011.

Contrary to FBC claims that those NM customers who offset their Basic Charge are “freeloaders”, the Company currently grosses $238.76 retailing kWh deployed by an NM customer to offset the $192.54 annual Basic Charge, and the Company will, if the NEG rate is reduced to $.048 per kWh, gross $555.56 retailing those 4.011 MWh. Our household believes that we have a right to know how FBC allocates the money earned from sale of transferred energy to offset the Basic Charge, as we do not believe that NM customers should be subsidizing the Company’s profit margin.

Defining Net Excess Generation

Before the Commission determines what the price of Net Excess Generation should be, a legal definition of NEG should be delineated, and how much is actually created under the existing FBC NM Program agreed upon.

According to FBC, NM, under the RS 95 tariff, is defined as:

"*...a metering and billing practice that allows for the flow of Electricity both to and from the Customer through a single, bi-directional meter. With Net Metering, consumers with small, privately-owned generators can efficiently offset part or all of their own electrical requirements by utilizing their own generation*" (Schedule 95 - Net Metering, Definitions: Net Metering - https://fortisbc.com/Electricity/CustomerService/NetMeteringProgram/Documents/FortisBC%20Electric%20Tariff%20-%20Schedule%2095.pdf).

Further, FBC has provided evidence that only three of 86 customers in 2016 and two of 233 customers up to mid-2017 received NEG cheque payouts. That is only 3.5% of all program enrollees in 2016, and .86% up to mid-2017. Thus 96.5% of enrollees in 2016 and 99.14% in 2017 have not been paid any NEG cheque as allowed for under section 5 of the "Billing Calculation" section of RS 95:

"*In the event that the operation of a renewable energy generating system results in a credit balance on the Customer-Generator’s account at the end of a calendar year, the credit will be purchased by the Company. If such amounts are not large, they will be carried forward and included in the billing calculation for the next period at the discretion of the Company"* (Schedule 95 – Net Metering, Billing Calculation 5 - https://fortisbc.com/Electricity/CustomerService/NetMeteringProgram/Documents/FortisBC%20Electric%20Tariff%20-%20Schedule%2095.pdf).

In fact these NEG payouts are a miniscule proportion, not even a fraction of a percentage point, of the $184,326,000 in electricity that residential customers purchased from the Company in 2016 (B-10 ShadrackIR#1.1.20.a, Net Metering Program Tariff Update). The $21,252 cited in FBC’s Final Argument at 42, for example, represents a cost to all residential customers of approximately 18 cents per customer, and the number of customers currently enrolled in the NM program, if they were all residential, would barely achieve .002% of the residential customer base of 114,600.

I raise these facts because it is very important that the Commission and FBC customers in general understand the red herring that the Company would have us focus on in these hearings, compared to the Company’s costs for other DSM programs and energy savings activities. It would be very interesting, for example, to know what size of DSM and energy saving payouts the Company is

making to other individual customers, in exchange for what kind of kWh/MWh savings.

FBC is really making a mountain out of a molehill as 100% of the current NM program enrollees meet all the requirements of FBC's current RS 95 tariff definition of what a NM system is:

A facility for the production of electric energy that:

(a) uses as its fuel, a source defined as a clean and renewable resource in the BC Energy Plan;

(b) has a design capacity of not more than 50 kW;

(c) is located on the Customer-Generator's Premises;

(d) operates in parallel with the Company's transmission or distribution facilities; and

(e) is intended to offset part or all of the Customer-Generator's requirements for Electricity

(Schedule 95 - Net Metering, Definitions: Net Metered System – https://fortisbc.com/Electricity/CustomerService/NetMeteringProgram/Documents/FortisBC%20Electric%20Tariff%20-%20Schedule%2095.pdf).

The largest FBC NM system that I am aware of is 20.5 kW, which is 59% below the design capacity allowed under the tariff, noting that the tariff wording is absolutely silent on the size of NEG that can be produced, and provides a definition of NEG that contradicts both the definition of "Net Metering" and "Net Metered System".

Contrary to statements made by the Company in Exhibit B-12, there really are different kinds of electrical energy as a result of there being different ways in which electricity is created or made available to the Company. One such method is described in the BC government's *Clean Energy Act* at section 2(b) whereby increased energy demand is to be decreased by 66% by 2020 through implementation of DSM and by conserving energy (*Clean Energy Act* – http://www.bclaws.ca/civix/document/id/consol24/consol24/00_10022_01#section2). In this instance DSM and energy savings create kWh through reduction of consumption that in turn allows new customers, and other customers expanding their own consumption of electricity, to purchase grid power, without the Company itself either expanding production or purchase of electricity.

Acknowledgement of the existence of these kinds of programs can be found on the FBC website at:

https://www.fortisbc.com/Rebates/RebatesOffers/Pages/default.aspx

More specifically, the Company lists a variety of rebates that it will pay a residential customer in Kaslo to create this kind of energy availability or reduction:

https://www.fortisbc.com/Rebates/RebatesOffers/Pages/Results.aspx?type=homes&city=Kaslo

These payments to individual customers are covered by other customers through the price that each customer pays for a kWh of electricity, and in effect amounts to a personal subsidy for an individual customer to create energy savings that can then be used by the Company to sell to other customers who are either joining the FBC grid or using more electricity than previously.

According to FBC, in 2016 the cost of their residential DSM program averaged 2.9 cents per kWh, ranging from 13.7 cents for appliances to 1.1 cents for lights, for an overall estimated savings of

12,538 MWh (Table A-1: FBC DSM Summary Report for Year Ended December 31, 2016, Electricity Demand Side Management Programs 2016 Annual Report - https://www.fortisbc.com/About/RegulatoryAffairs/GasUtility/NatGasBCUCSubmissions/Documents/170331_FBC_2016_DSM_Annual_Report_FF.PDF). It would therefore be extremely useful to know the total amount of MWh that the NM program is transferring and what if any, costs per kWh there are so as to be able to compare them with the DSM programs.

In contrast to those utilizing FBC's DSM and energy savings programs, NM customers produce two kinds of electricity. One is very similar to the kind produced by FBC and those companies that FBC purchases electrical energy from commercially (and so far in the first five billing periods of 2017 we estimate that our household, for example, has transferred approximately 1.755 MWh of electrical energy onto the FBC grid while purchasing 2.083 MWh from the Company – Appendix B). Ostensibly our household has purchased .328 MWh more than it transferred. Thus, according to the definition of NEG in the tariff wording, to the end of the fifth billing period in 2017, our household's NEG point is 2.083 MWh:

"*Net Excess Generation results when over a billing period, Net Generation exceeds Net Consumption*" (Schedule 95 - Net Metering, Definitions: Net Excess generation – https://fortisbc.com/Electricity/CustomerService/NetMeteringProgram/Documents/FortisBC%20Electric%20Tariff%20-%20Schedule%2095.pdf).

That, as I understand it, is the position taken by FBC, both in the original Net Metering Program Tariff Update hearing and then in this hearing. If my understanding of FBC's NEG point is correct, then I disagree with the Company's calculation point, and feel that the definition and wording of what constitutes NEG needs to be refined so that it captures all of the electricity that is produced by a NM system, as per the RS 95 tariff definition wording found in "Net Metering" and "Net Metered System", namely:

"...*offset part or all of their own electrical requirements by utilizing their own generation*".

and

"...*offset part or all of the Customer-Generator's requirements for Electricity*".

In effect the current definition of NEG totally overlooks the second kind of electrical energy that a NM customer creates, which is the energy that a customer consumes from his or her own system. This electricty is very similar to that created by DSM, in that through personal consumption of our own production NM customers are able to reduce/offset electricity previously purchased from the Company. In 2014 our household, for example, consumed 2.723 MWh of electrical energy from the FBC grid in the first five billing periods – .636 MWh (23.4%) more than that consumed in the first five billing periods in 2017 (Appendix B). Thus there are two kinds of electricity created by a NM customer, both of which equally serve to offset electrical energy requirements previously purchased from the Company.

Thus the NEG point should contain creation of both kinds of energy as both are equally used to offset purchase of FBC grid power and can be determined by the amount of electrical energy purchased in the billing periods prior to joining the NM program and the billing period for which the NEG point needs to be determined. Thus in 2017 our household should be able to, in the first five billing periods, transfer an additional .636 MWh: .304 MWh more than the amount that the Company believes should be the NEG point.

To date FBC has thus far failed to provide statistical evidence that any of the current NM enrollees are in fact producing and transferring more MWh per annum than they consumed prior to enrolling in the

NM program. That said, I acknowledge that FBC is correct that up to some five Customer-Generators transfer more kWh/MWh than they currently purchase from the Company, either overall annually or relative to the amount of Tier 1 and Tier 2 residential electricity purchased previously in a particular billing period. However, that is not the same definition as the wording found in the RS 95 tariff that states that a customer can offset "*part or all of their own electrical requirements"* in a particular billing period or on any annual basis.

Statistics from our households's FBC bills in Appendix B demonstrate what our household purchased from FBC prior to joining the NM program, which is presumably what the Company based their sizing assessment on for our NM system and what our household purchased in the first five billing periods of 2017. From that I have calculated that in 2014 we purchased 8.93 kWh per day and thus far, in 2017, only 6.92 kWh per day.

Clearly our daily "*electrical requirements*", as defined in "*Net Metering"* and "*Net Metered System*", are not the sum total of purchases of electrical energy from the FBC grid less the electrical energy transferred to the Company's grid, as that only represents a portion of the electrical power purchased by our household prior to joining the NM program. Further, my method of calculating NEG is presumably the very same method that FBC uses to size a customer's system prior to joining the NM program, so that that customer does not overproduce electrical energy.

You cannot by definition have one method by which a customer is sized to produce electrical energy before they enter a program, and then use separate methodological parameters by which to define overproduction after a customer has enrolled in the program. As FBC correctly submits in its Final Argument, you cannot have two legal meanings in the same tariff, in this instance for NEG: one that is used to determine the size of a NM production system before the customer enters the program, and one that is used to determine production and transfer levels after the customer is enrolled in the program.

If FBC sized the NM system so that our household could build our system based on our 2014 purchase level, 3.26 MWh (or for the three years before that, 2011 to 2014, to average purchase levels out – 3.247 MWh), they cannot then argue that if we only purchased 2.715 MWh in 2016 (the first full year of enrollment) that the NEG point is 2.715 MWh when in fact we purchased 3.26 MWh for our electrical requirements prior to enrolling in the program.

So I would submit that the first decision that must be made is to determine which definition of NEG is to be used to both size the NM system to be built before, and operated after, entering the program. Otherwise our household is potentially going to be approved by FBC to enter the program with a NM system that can create and transfer 8.93 kWh per day, but then when we only purchase 6.92 kWh in 2017, FBC is going to argue that we are over producing by 2.02 kWh per day, which is now NEG and that we should only be paid 4.8 cents per kWh for those 2.02 kWh per day – not the retail rate that we were previously promised in exchange for every kWh of reduced consumption.

This situation is likely to be further compounded by any customer who enters the program prior to adopting any energy savings measures. If our household had entered the program in 2006, for example, instead of April 2015, we could have been sized to offset purchase levels of 17.03 kWh per day instead of purchase levels of 8.93 kWh per day. Thus I submit that customers who utilize any of the DSM programs or conserve electrical energy as per the information found on FBC's website are also likely to be penalized by the current definition of NEG and FBC's proposed NEG payout scheme. This is the same conclusion that was reached by the panel majority in its decision in Order G-199-16:

"*...there are many circumstances in which a customer might in good faith generate Annual NEG after having their initial investment approved for the program. The Panel feels that these customers should still be entitled to compensation for all the energy that they generate, given that they were approved*

into the Program with appropriately sized generation capacity; denying these customers compensation for their Annual NEG runs the risk of eliminating or dampening the incentive for them to reduce electricity consumption" (Order G-199-16, Appendix A, p14).

Finally, FBC's proposed NEG definition will only ever allow a customer to offset a portion of his or her "*electrical requirements*", never the full cost of electrical service. In contrast, as FBC states in B-11 in response to Shadrack IR#1.4:

"*Residential electric utility service in British Columbia is offered only on a fully bundled basis, which includes all charges associated with the generation, transmission, distribution and customer service functions and costs and applicable taxes. Commodity - only service is not available*" B-11, Shadrack IR#1.4).

To the contrary, the FBC NM Program NEG definition "*unbundles*" the electrical service so that only the purchased "*commodity*" portion of a customer's bill can be offset by household production, which will eventually result in a NM customer paying for infrastructure costs twice: once when they purchase electrical power from FBC, and once if and when they sell any NEG to the Company at their proposed price of 4.8 cents per kWh (See Appendix C).

Why, we ask, should our household only be allowed to offset 55% of the infrastructure costs charged to us and not 100%, because it is not as if we would not be transferring a valued commodity in exchange for the cost of all of the Basic Charge. To be consistent with FBC's acknowledgement that residential electric utility service is offered only on a bundled basis, the NEG point should only start after a residential customer has paid for the entire service bill that they receive from the Company.

Setting a Fair Price for NEG

In 2016 FBC estimated that the average all-in price for residential electricity, before GST, was $134.8 per MWh, whereas the Company is only paying $48 for BC Hydro's RS 3808 PPA Tranche 1 energy per MWh (B-8, Shadrack IR#1.20.a and B-11 Shadrack IR#1.4). If I index that 2016 rate to the 2017 rate increase, I extrapolate that the cost to each residential customer in 2017 is now $135.81. How the differential of $87.81 is allocated to costs of delivery, etc is critical to understanding what a fair price for NM NEG might be.

Further, FBC claims that NEG payouts cost it $124 per MWh in 2016, but I have been unable to determine whether that is the amount paid out by cheque or the average price of NEG to all NM customers and what the overall average transfer value for all NM electrical energy transfered was per MWh (B-11 Shadrack IR#1.4).

So far in 2017 the value credited to our household for net metered energy is $101.17 per MWh, while we paid $191.52 for .328 MWh of net consumption, which is the equivalent of $583.9 per MWh (Appendix B). If we divide the amount $191.52 by the gross number of MWh purchased from the Company of 2.083, we achieve a $91.94 per MWh value. Thus the net effect of the cost of the current Basic Charge is to nearly neutralize the credit value transfer of some 1.755 MWh of net metered energy. The Company, by the way, realizes $238.35 from the retail of that 1.755 MWh that is transferred to it.

Given that our household, in 2017, has paid somewhere between $91.94 per MWh for the gross amount of energy purchased and $583.90 per MWh for the net amount of energy consumed, while being credited $101.17 per MWh for the energy transferred to the FBC grid, we are hard pressed to understand the claims of the Company that they and other customers are subsidizing our enrollment in the NM Program. We think that it might be the other way around, and note that FBC grosses $34.64 on retail of our electricity which is a 34.6% return over purchase price.

Next, in their Final Argument FBC acknowledges that the General Electric Tariff, the RS 95 tariff and the Net Metering Interconnection Agreement are all service agreements/contracts. The Merriam-Webster Dictionary defines a contract as:

a: a binding agreement between two or more persons or parties; especially: one legally enforceable

- If he breaks the contract, he'll be sued.

b: a business arrangement for the supply of goods or services at a fixed price (https://www.merriam-webster.com/dictionary/contract)

Now let's look at what the FBC contract contains concerning NEG:

1. It defines NEG, noting that this definition is not consistent with the definitions of "Net Metering" and "Net Metered System" found in the same tariff document:

"*Net Excess Generation results when over a billing period, Net Generation exceeds Net Consumption*".

2. It provides a contract rate for the purchase of NEG at a fixed set of prices, as per 3 of the "*Billing Calculation*" section of RS 95:

"...*Net Excess Generation shall be valued at the rates specified in the applicable Rate Schedule and credited to the Customers account*".

3. As per 5 of the "*Billing Calculation*" section of RS 95, the tariff provides for two methods by which the contracted rate payment will be executed, in that when:

"...*the operation of a renewable energy generating system results in a credit balance on the Customer-Generator's account at the end of a calendar year, the credit will be purchased by the Company. If such amounts are not large, they will be carried forward and included in the billing calculation for the next period at the discretion of the Company*".

4. At 4, under Special Conditions, it sets the term of the contract as one year, renewable annually for successive years.

So we have a clear definition of what NEG is, a rate at which it is to be paid, two clear methods of paying for it and a date by which it is to be paid. What is not expressed in the RS 95 tariff, and elsewhere for that matter in FBC literature, is a clear statement of how much NEG can be produced and transferred within the NM program, beyond the 50 kW maximum installed generation capacity and 750 volt limit.

I further submit that if the RS 95 tariff, and Net Metering Interconnection Agreement in specific, as well as the General Electric Tariff as an adjunct, form the basis of a service agreement/contract between FBC and the Customer-Generator enrolled in the NM Program, then these documents, while outlining the specifics of a Customer-Generator's obligations, do not address clearly enough the contractual obligations of FBC to the Customer-Generator and nor do they address the contractual rights of the Customer-Generators as long term investors in NM production equipment.

Instead what we learn from FBC is that any customer enrolled in the NM program who does not meet the Company's subjective and arbitrary criteria to stay in the program should be prepared to accept anywhere from $.017 per kWh to $.043 per kWh instead of the $.10117 offered in the equitable exchange for Tier 1 residential electricity previously promised:

"*FBC has no tariff or program in place to purchase IPP power. However, FBC purchases from a small*

number of IPP's at a monthly energy rate ranging from $17 to $43 per MWh for 2015, based on individual contracts with the IPP"(Net Metering Program Tariff Update B-12, BCUC IR 13.5).

In the absence of a clearly defined and understandable limit to NEG production in the RS 95 tariff, we concur with the finding of Madam Justice Hudart that:

"*Customers of utilities are vulnerable to arbitrary management decisions*" (Princeton Light and Power Ltd vs MacDonald, 2005 BCCA 296 at 67).

In this context FBC is claiming that certain NM NEG transfers are the equivalent of individual IPP purchase contracts, when in fact the two are completely different kinds of power. IPP power is like all commercial contracts purchased and transmitted to wherever in the FBC system it is needed for sale, and arrives at its point of sale less up to 8% of the volume that was originally purchased. Whereas NM power, which is ostensibly an offset program, arrives at the point of re-sale without any accompanying line loss, and unless it is sold outside of the local area network where it is purchased, it never uses FBC's transmission system at all – as is claimed by FBC with regard to its proposed solar PV farm pilot project in Kelowna.

Try as I may, I have been unable to persuade FBC to provide any dollar figures towards the cost of transmitting electricity to a customer. But I will now outline what I understand to be the case. FBC sells both Tier 1 and Tier 2 residential electricity bundled together with the Basic Charge and GST for an all-in price of $134.8 per MWh in 2016. In their Final Argument the Company states that the Basic Charge of $32.09 plus GST of $1.60 represents only 45% of the non-electric cost of delivering that electricity (Final Argument, p27 at 100).

I therefore calculate that the non-electric cost of a MWh in 2017 is approximately $71.31 plus the GST of $1.60, which would indicate that, of the $135.81 each residential kWh costs in 2017, $62.9 can be allocated to the overall purchase/production cost of electricity, less any amount taken out for profit. I therefore submit that offering NM customers a NEG price of $48 per MWh and a non-NEG price of between $17 per MWh and $43 per MWh, when the average cost of purchasing a MWh of electricity is $62.9, is not an equitable and fair contract price to offer NM Customer-Generators. Clearly the average price of producing and purchasing FBC electricity is well above the BC Hydro RS 3808 PPA Tranche 1 rate of $48 per MWh.

It is also not appropriate for the Company to retail our electricity for $135.81 per MWh, while proposing to only pay us $48 per MWh up to twelve months after we have delivered that electricity to the FBC grid, without the Company explaining to all NM Customer-Generators how the remaining $87.81 per MWh will be allocated. Questions arising uppermost in my mind are: does FBC get to pocket the $87.81 for itself, or does it use it to subsidize the costs of other non-participating FBC customers, and what does FBC spend on delivering this electricity, especially if it does not use any of its transmission system to do so.

Further, if there is no line loss associated with the retailing of NM electricity, that sale of our electricity comes with a premium of anywhere from $1.50 to $4 more per MWh, so it is actually being retailed at a value of between $137.31 to $139.81 (B-11 Shadrack IR#1.1.ii and 2). Therefore the gap between purchase price of $17 per MWh and $48 per MWh actually becomes anywhere from $89.31 to $122.81 per MWh.

This situation, without some serious answers as to how the between $135.81 and $139.81 is being allocated from retail of our electricity, is not experienced as a mutually respectful "*business arrangement for the sale of goods and services...*[*or*] a *binding agreement between two or more persons*".

Our household would therefore prefer to be grandfathered with the credit system that the Company

offered when we signed up into the NM program at the time of our long term investment. We ask for this not solely for ourselves, but for every other enrollee Customer-Generator who has invested hard earned dollars into their NM systems based on a projection of a financial return that would help offset the cost of that investment at retail rate.

Further we note that in California, for example, the Public Utilities Commission has set a clearly defined period for which the current purchase price has to remain in place so that Customer-Generators can offset their investment at a consistent rate of credit for the kWh that they transfer to a utility. Therefore if FBC wants to change the terms of the agreement and contract that originally existed when this program was initiated, they need to agree to sit down with representatives of their NM enrollees and negotiate those changes face-to-face as they do with every other supplier of electricity to their grid.

In 2006 our household purchased approximately 48.2% fewer kWh than the average household, as stated in FBC's Final Argument, and in 2017 we have so far utilized nearly 5.7 times fewer kWh from their grid than the average household, and yet FBC continues to portray us as "freeloaders" when it comes to paying our fair share of infrastructure costs.

If gasoline, groceries and other goods and service prices were structured with a Basic Charge, the way the BC Utilities Commission allows BC utilities to structure electricity prices (we have no experience with natural gas), we believe that there would be a public outcry against this pricing structure.

This is the only pricing structure we know where the less we purchase of a commodity, the more the company that sells that commodity to us wants us to pay for their infrastructure costs of delivering that commodity. It simply makes no sense to us that if our net consumption of electricity is down to 6.1 % of what it was in 2006, and 2.7% of what the average residential household consumes, we should now pay more than the $33.69 per billing period that every residential household currently pays for infrastructure costs.

If other residential customers want to keep their consumption of electricity the same, increase their consumption of electricity, not implement DSM and energy savings measures, nor install a NM production system, we do not see why we should subsidize their level of consumption by paying the same share or more for infrastructure costs of delivery of that electricity (Appendix C).

The fact that FBC has, to date, chosen not to sit down with its NM Customer-Generator enrollees to discuss ways that the value of the energy being transferred to their grid could be enhanced through installation of smart inverters, storage enhancement, etc is not any reason for the Commission to accede to a lowering of the price for NEG.

We believe that our household has the current capability to only draw down on grid electricity, via our battery system, during non peak hours and replenish those batteries in non-peak hours, having so far previously operated our system for 18 hours without FBC grid energy availability. Further, with regard the only two appliances in our household now attached to the grid, hot water heater and kitchen stove, we can choose to not use electricity for them during peak hours as well. Currently there are very few days when we draw a measurable amount of electricity from the grid between 8.00 AM and 7.00 PM at night, and even then it is only 1 or 2 kWh.

In the winter of 2017, during five of ten peak demand days determined by FBC for January and February, our system replenished the average consumption of 8.6 kWh per day from their grid with 4.6 kWh transferred from our system. We are ready, willing and able to work with the Company to help resolve outstanding issues with regard net metered energy, but instead feel undervalued as contributing customers to their grid and misrepresented as to our potential capabilities as well.

Finally our household does not understand how FBC can argue for a NM NEG value of $48 per MWh in this hearing's Final Argument, while stating to the same Commission in its Final Argument in the 2016 Long Term Energy Resource Plan & Long Term Demand Side Management Plan that the Long Run Marginal Cost (LRMC) "f*or acquiring electricity generated from clean or renewable resources in BC*" is $100.45 per MWh (Final Argument, FortisBC Inc. 2016 Long Term Electric Resource Plan & Long Term Demand Side Management Plan [BCUC Project No.3698896], 179).

We simply do not comprehend the rationale as to why FBC NM Customer-Generators should be paid $52.45 per MWh less than that. Especially when FBC goes on to state:

"*The LRMC of $100.45/MWh for DSM purposes was estimated as part of the portfolio analysis FBC conducted for the LTERP. It reflects the LRMC of a portfolio of resources without any DSM: Portfolio B1, which includes wind, biomass, biogas, run-of-river, and market purchases out to 2025"* (Final Argument, FortisBC Inc. 2016 Long Term Electric Resource Plan & Long Term Demand Side Management Plan [BCUC Project No.3698896], 180).

Kilowatt Bank: No Thanks, Our Household is Better off Without it

The majority of NM customers that our household knows are ready and willing to accept that FBC should be allowed to adopt a kWh bank rather than calculate the $ value of any credit at the various rates customers now pay. Our household, on the other hand, says no thanks, we are happy with the way things are.

FBC argues that since nearly every other utility, including BC Hydro, uses a KWh bank, they should be allowed to adopt that method of calculation too. I used to try that line on my Father as a child, and every time I did he would respond by saying that I was not every other kid but his son and as my Father he would help me determine what was best for me under the circumstances.

First I will observe that many NM programs across Canada likely adopted a kWh bank before they installed smart metres. BC Hydro, which has a kWh bank, now reads most of their bi-directional meters automatically. (The only meters now read manually by BC Hydro are in remote and rural locations outside the smart meter collection network, and those where the customer has opted out of the program). So the issue of manually reading bi-directional meters and manually calculating each customer's bill is only a requirement if the utility does not install the software to read the meter and calculate the monthly or bi-monthly charges and credits.

As a local computer programmer has said to me, each company is free to choose how it organizes its billing process, but if there is automated software available to undertake billing calculation and a company chooses to do it manually instead, then that is the company's choice and the customer should not be forced to pay for the cost of doing it manually when automated calculation would likely be cheaper.

In fact I would submit that any modern department store till can be programmed to handle many more multiple bill calculations than those required to operate FBC's NM program, so ease of calculation should be dismissed as an argument to switch from the current method to a kWh bank, as that situation has more to do with FBC's choice of calculating the billing than it does the difficulty of handling multiple calculations.

Currently a customer is allowed to offset each kWh that they transfer to the Company's electrical grid at the going retail rate for which they purchase that kWh, which is how an offset program should operate. At the end of the August 2017 billing period, for example, FBC determined that our household had purchased 363 kWh and transferred onto the grid 713 kWh, for a net transfer of 350 kWh. For

these 350 kWh, we were credited with $35.41 (350 times $.10117 per kWh – Appendix B). This offset both the Basic Charge of $32.09 and the GST on the Basic Charge of $1.60, and left our household with a $1.72 credit to be carried forward to the next billing period.

This is a very simple system for me to keep track of through the six regular billings that the Company sends me by email over the course of one year. Further, our low income senior household currently budgets $89 per month for electricity and wood heat, representing 2.7% of our monthly spending allocation. In the billing months when the electricity charges are less than the $89, we place those funds into a bookkeeping reserve account so that we can save up to purchase our firewood during the year.

If the Commission directs FBC to set up a kWh bank, as applied for in the original Net Metering Program Update application, those 350 kWh will be set aside until such time as our household purchases more kWh in a billing period than we transfer to the Company's grid. Thus our August 2017 bill, and every other bill, would then minimally be $33.69 or whatever the going rate is for the Basic Charge and GST. Thus, instead of having $89 to set aside for purchase of firewood in August 2017, we would have only had $55.31. Our household will now have to find the difference from an alternative source to purchase the firewood, which in our situation means cutting back on some other purchases, as we are both on a fixed monthly income, being pensioners.

In contrast FBC does not just get to collect $33.69 every billing period, it also gets to retail those 350 kWh for up to $47.53 ($.13581 per kWh) as soon as they enter the FBC grid. And if, at the end of the calendar year, any or all of those 350 kWh is deemed to be surplus to our household needs (while FBC has already sold them for $47.53), the Company is in fact proposing that our household receive, not the $33.69 that we previously used to cover the cost of the Basic Charge and GST, as we did on the August 2017 bill, but $.048 per kWh for a maximum credit of $16.8 for the entire 350 kWh.

So we do not see it as appropriate for FBC to immediately retail the electrical energy our household produces and transfers to it, for a value of $47.53 (which has virtually no costs associated with retailing that electrical energy), while forcing us to wait up to twelve months to receive only $16.8 – $30.73 less in value than the Company will receive – without ever explaining what the Company will use that $30.73 for.

And here we want to note that the Company is supposed to reconcile a customer's account at the end of the calendar year, in accordance with 5 of the RS 95 tariff "*Billing Calculations*", but instead has been waiting until March – 90 days into the calendar year, or even longer, before issuing cheques, presumably in the hopes of knocking back what it has to pay out for NEG to customers.

FBC's application is not the straight value exchange our household was promised before we enrolled in the NM program. Thus we feel misled by a Company that, in May 2014, before we invested $30,500 in solar PV production equipment, promised retail rate for every kWh transferred but now applies for an Order from the Commission in such a way that our August 2017 bill would credit us with 64.4% less dollar value than the amount that the Company is going to make on the retail of our electricity. And FBC says that we are being subsidized for this exchange!!

All this is in a situation in which FBC has an absolute monopoly in its service area, and thus our household cannot go into the market and sell our electricity to BC Hydro (which is only 14 kilometers down the road in Schroeder Creek) for the 9.99 cents per kWh they offer for NM NEG electricity, or the 10.65 cents that they offer for Micro Standing Offer Power (See Appendix A).

How many of the companies, we ask the Commission to consider, from whom FBC purchases energy have to wait up to twelve months to be paid for the electrical energy that they have sold to the Company? That is why I asked FBC whether or not they had considered offering interest on the

outstanding banked kWh, because as long as we are not obtaining a $ value credit at the time of transfer of those kWh, we are actually losing cash-in-hand elsewhere because we have to make up the lost credit on each FBC bill by finding additional money with which to purchase our firewood.

Further, FBC customers already pay nearly 2.8 times more for the Basic Charge than BC Hydro customers, and with a proposed NEG purchase price of 4.8 cents per kWh, a FBC NM Customer-Generator will have to transfer 669 kWh per billing period to the FBC grid while a BC Hydro NM customer will only have to transfer 114 kWh to cover their Basic Charge cost (Appendix A). This certainly is not a fair and equitable arrangement for residential customers and small businesses operating in remote and rural BC, especially in the Southern Interior FBC Service Area.

That's why we submit that the present method of crediting a NM customer is preferable to banking the kWh hours that exceed those purchased from the Company. We get the credit on the bill where we can see it in the billing period for which we have transferred the electrical energy to the Company. It does not disappear into some mysterious kWh bank where we have to keep track of it to make sure that the Company is storing those kWh credits appropriately. And, unlike the convoluted process that FBC is proposing that sees us end up with a credit value that is only a third of the dollar value of what the Company is going to retail our electricity for, we are credited at par with what we currently purchase each kWh for.

In their Final Argument, FBC implies that implementing a kWh bank will in part ensure that NM Customer-Generators will no longer be able to offset the costs of their Basic Charge, as if somehow transferring up to 669 kWh at the proposed NEG price has absolutely no value to the Company (see Appendix C).

Instituting a kWh bank, as currently proposed by the Company, will eliminate any incentive for NM customers to lessen grid consumption during on-peak demand times and increase production and transference during on-peak demand times, as there will be no price incentive mechanism for a customer to purchase energy at off-peak times or to produce and transfer energy during peak times as would be the case with a Time-Of-Use (TOU) pricing mechanism. That would no longer be feasible under this kWh bank proposal.

BC Hydro, for example, pays the City of Kimberley for their solar PV production from the Sun Mine Solar farm, eleven different TOU rates as is possible with the advent of AMI meters. Implementing a single price kWh bank seems like a step backwards when FBC is discussing presenting On-Peak, Mid-Peak and Off-Peak pricing scenarios in its 2017 Rate Design COSA application in November.

FBC's Right to Remove Customers from the NM Program for Producing Net Excess Generation Does not Exist

FBC cites three legal authorities to bolster its argument of its right to remove a customer from the NM program for producing NEG. In British Columbia Power and Hydro Authority vs Heathcote 2011, BCSC 394, Justice Voith notes that BC Hydro can disconnect its services for various reasons, and at 15 cites:

"It can do so, for example, because its accounts have not been paid and because its meters have been tampered with" (British Columbia Power and Hydro Authority vs Heathcote 2011, BCSC 394, 15).

We agree that FBC, within its General Electric Tariff, the Interconnection Agreement and RS 95, has clearly delineated grounds upon which it can interrupt and/or terminate a customer's service for non-compliance, but producing NEG is not one of those grounds for removal from the NM program.

At 43, however, Justice Voith noted that:

"Hudart, JA at para 11 (as per Princeton Light & Power Co. Ltd. v. MacDonald, 2005 BCCA 296) *simply said 'It is not disputed that the Commission had exclusive jurisdiction to order reconnection of Power to Mr. MacDonald's property"* (British Columbia Power and Hydro Authority vs Heathcote 2011, BCSC 394, 43).

This is confirmed at 46 when Justice Voith states:

"Hydro's application is dismissed except to the extent that the Counterclaim seeks relief which would compel Hydro to reconnect Mr. Heathcote's electrical services." (British Columbia Power and Hydro Authority vs Heathcote 2011, BCSC 394, 46).

In this context I would submit that the Commission panel majority, in Order G-199-16, made no error in fact or law in denying FBC's ability to remove a customer from the NM program for simply producing NEG, and that the jurisdiction of the Commission is legally exclusive on this issue as both authorities cited refer to the manner in which the various utilities' tariffs are administered by the Commission under the *Utilities Commission Act*.

Further, the two authorities cited, concerning utilities and customers, primarily deal with whether or not financial damages were caused to customers by the fact that the utility exercised its right to remove a customer from the service. Neither of these two court cases were about whether the utility had the right to remove a customer from a service outside of the reasons that were clearly outlined in their respective tariffs. These two authorities are therefore irrelevant to this particular hearing, other than that they instruct the reader that utilities need to be cautious about exacting punitive actions against customers.

The third case cited, Gilchrest vs Western Star Trucks Inc., 2000 BCCA 70 (CanLII), at 18, clearly defines how a contract must be read when it states:

"The words of the contract must be looked at in their ordinary and natural sense and cannot be distorted beyond their actual meaning." (McMillan Bloedel Ltd vs British Columbia Hydro Power and Authority (1992 1992 CanLII 2287 (BC CA), 72 BCLR (2d) 273 (CA); Melanesian Mission Trust Board vs Australian Mutual Provident Society [1997] 1 N.Z.L.R. 391 (PC).

Using that legal guidance, I have then reviewed FBC's General Electric Tariff, the Interconnection Agreement and RS 95 tariff wording. In the General Electrical Tariff the only section where I believe that FBC could claim a right to interrupt or remove a customer from the NM program is found in 10:

"The Customer's protective equipment shall not be modified in any manner and the settings thereto shall not be changed without first obtaining written approval of the Company" (Electric Tarriff B.C.U.C. No 2. Sheet TC 23, 10. Customer Owned-Generation, 10.1 Parallell Generation Facilities - https://fortisbc.com/About/RegulatoryAffairs/ElecUtility/Documents/FortisBCElectricTariff.pdf)

This section, however, as with other parts of section 10 of the General Electric Tariff, simply refers to a customer not having the right to modify protective equipment and settings without written approval of FBC. This clause implies nothing with regard the production and volume of electricity that may or may not be transferred to FBC's grid. So we are left to refer to the specific language of the RS 95 tariff for legal guidance as to FBC's right to act in removing a customer from the RS 95 tariff.

As previously noted by FBC, eligibility specifically states:

"To be eligible to participate in the Net Metering Program, Customers must generate a <u>portion or all of their own retail Electricity requirements</u> using a renewable energy source...and <u>shall have a maximum</u>

installed generating capacity of no greater than 50 kW" (Electric Tariff B.C.U.C. No. 2 Sheet 45, Schedule 95 – Net Metering: Eligibility).

Unfortunately FBC's reading of their own RS 95 tariff appears to stop there, after which they invoke a right to remove customers on grounds that contradict the actual language and meaning of the tariff when they fail to include within their overview the following sections:

"3. If in any billing period, the eligible Customer-Generator is a net generator of energy, the Net Excess Generation shall be valued at the rates specified in the applicable Rate Schedule and credited to the Customers account"(Electric Tariff B.C.U.C. No. 2 Sheet 45, Schedule 95 – Net Metering, Billing Calculation 3).

"...5. In the event that the operation of a renewable energy generating system results in a credit balance on the Customer-Generator's account at the end of a calendar year, the credit will be purchased by the Company. If such amounts are not large, they will be carried forward and included in the billing calculation for the next period at the discretion of the Company"(Electric Tariff B.C.U.C. No. 2 Sheet 45, Schedule 95 – Net Metering, Billing Calculation 5).

What sections 3 and 5, under the "Billing Calculation" section of RS 95, clearly state is that a customer will be allowed to produce and sell to the company NEG, and "large" amounts of it, without ever defining what limits, if any, there are on the sale of NEG to the Company.

In fact the only clear definition of the program I can find in FBC official literature is contained in the title of the Net Metering Interconnection Guidelines, which state:

"*Guidelines For Operating, Metering and Protective Relaying For Net Metered Systems Up To 50 kW and below 750 Volts*" - (https://fortisbc.com/Electricity/CustomerService/NetMeteringProgram/Documents/Net%20Metering%20Interconnection%20Guidelines%20final.pdf).

And it this wording that FBC uses for section 2 of "Special Conditions" under the RS 95 tariff:

"*The Net Metered System and all wiring, equipment and devices forming part of it, shall conform to FortisBC's, "GUIDELINES FOR OPERATING, METERING And PROTECTIVE RELAYING FOR NET METERING SYSTEMS UP TO 50 kW And VOLTAGE BELOW 750 VOLTS" and shall be installed, maintained and operated in accordance with those Requirements*"(Electric Tariff B.C.U.C. No. 2 Sheet 46, Schedule 95 – Net Metering, Special Conditions 2).

Thus the only grounds that I can conceive of for interrupting a customer's service and/or removing them from the RS 95 tariff are for non-payment of charges and fees, operating the system in a manner that endangers the FBC grid, and building a system with a design capacity above 50kW and 750 Volts.

These grounds are in fact partially confirmed at section 7 of the "Special Conditions" of the RS 95 tariff where it states:

"*The Company maintains the right to disconnect, without liability, the Customer-Generator for issues relating to safety and reliability*" (Electric Tariff B.C.U.C. No. 2 Sheet 46, Schedule 95 – Net Metering, Special Conditions 7).

Beyond that, the only reference to termination of the service contract under the RS 95 tariff is found at "Special Condition" 4 and 5 which specifically state:

"*...After the initial period, the Customer may terminate Service under this Rider by giving at least sixty (60) days previous notice of such Termination in writing to FortisBC.*

5. If the Customer-Generator voluntarily terminates the net-metering Service, the Service may not be renewed for a period of 12 months from the date of Termination" (Electric Tariff B.C.U.C. No. 2 Sheet 46 Schedule 95 – Net Metering, Special Conditions 4 & 5).

The term "initial period" in fact refers to an initial one year contract, and there are absolutely no provisions relating to production of NEG found in the tariff should a Customer-Generator apply to renew the contract after previously terminating it.

Next, with reference to when FBC removes a customer from one tariff and places them in another, it is my understanding that there are always clearly defined kWh/MWh limits that set the boundaries for each tariff. In the instance of FBC's NM tariff, unlike BC Hydro's, there are no proscribed limits on the amount of NEG production contained within the wording of the tariff and, by their own admission, no program or tariff available to remove an NM customer to.

In Appendix A at page 9 of G-199-16, the Commission finds that:

"*FBC has no tariff or program in place to purchase IPP power. However, FBC purchases from a small number of IPP's at a monthly energy rate ranging from $17 to $43 per MWh for 2015, based on individual contracts with the IPP*" (B-12 BCUC IR 13.5).

The right to remove a customer for producing excessive NEG was never foreseen by FBC, and certainly cannot be claimed to exist within the General Electrical Tariff, the majority of whose wording was written before the conception and implementation of NM came into existence. As Madam Justice Hudart states in Princeton Light and Power Ltd vs MacDonald, 2005 BCCA 296 at 67*:*

"*Customers of utilities are vulnerable to arbitrary management decisions*" (Princeton Light and Power Ltd vs MacDonald, 2005 BCCA 296, 67).

<u>Without a clearly defined NEG production and saleable limit within the RS 95 tariff wording, and a program and/or tariff to send NM customers to, this Commission panel, by granting FBC the power to remove a Customer-Generator from the program, will be condemning any customer who produces NEG to the vagaries of a subjective and arbitrary management as to how that customer's NEG production and sale will be priced and paid for</u>.

And in this context it is absolutely critical that one goes back and reads the previous Commission panel majority's own thoughts on these issues as stated in its Order in G-199-16. At pages 8 and 9 of Appendix A the Commission outlines, in four bullet points:

"*...the tariff still does not explicitly limit generation to usage*".

In terms of the eligibility clause, the Commission panel finds that "*...the sentence is silent on excess generation*".

And then in the third bullet finds that:

"*As in the Tariff's definition of a net metered system, this sentence does not explicitly prevent the generation of annual NEG*".

Finally, as found by myself, the Commission finds that:

"*...the Tariff explicitly anticipates Annual NEG in the billing calculation, whereby FBC commits to purchase surplus energy*".

So in terms of the findings of Justice Hudart, in Gilchrest vs Western Star Trucks Inc., 2000 BCCA 70 (CanLII), I reiterate that "*...the contract must be looked at in their ordinary and natural sense and cannot be distorted beyond their actual meaning*", and I submit that the reasons for the Order G-199-16 were legally sound as they were based on a careful reading of the RS 95 tariff wording.

Contrary to the RS 95 tariff's own wording, FBC is asking for a right to remove customers from a tariff for consistently producing NEG, when, beyond a design capacity limit of 50 kW, the intent of the program is to allow purchase of NEG without specifying what the production limit of that NEG might be.

The Commission, then recognizing the very fact that the tariff wording fails to set any limits for production and sale of NEG, outlines in three bullets what needs to be addressed and then thereafter goes on to:

"*...approve...FBC's proposed changes to the RS 95 tariff that clarify that new customers will not be accepted into the NM Program if their proposed generating capacity exceeds their anticipated annual consumption (i.e. in addition to being limited by the 50kW maximum)*" (Order G-199-16, Appendix A, p10).

Next the Commission notes that:

"*...BC Hydro's Net Metering Tariff (RS 1289), Special Conditions 2 includes:*

The Customer shall not...add to or modify the Generating Facility without the prior written consent of BC Hydro (Order G-199-16, Appendix A, p12).

And then "*...directs FBC to submit to this Panel, proposed changes to the RS 95 tariff that clarify that customers who are already participants in the NM Program and wish to remain in the NM Program, must not increase their generating capacity without prior approval of FBC, which shall be granted on the same basis as a new customer will be evaluated for entry into the NM Program. For greater certainty, this change to the tariff should only speak to additions to capacity, and must not obligate customers to obtain approval from FBC if they intend to reduce their generating capacity*" (Order G-199-16, Appendix A, p12).

This is a direct reference to the fact that FBC was aware and had brought to the Commission's attention that a residential customer had expanded their nameplate capacity from 5kW to 20.5 kW between 2011 and 2012, and when further questioned the Company acknowledged that they neither chose to remove the customer from the NM program for over production of NEG, nor chose to stop paying for all of that NEG (Order G-199-16, Appendix A, p11 & B11 Shadrack 8.i, 8.ii, 8.iii, 8.iv).

I therefore find it unfathomable that the Company, having been aware of a situation for five years beyond that, and having done nothing about the situation at all, can then turn around and accuse the Commission of violating its legal right to remove a customer – a right that it has singularly chosen not to exercise.

In this context I submit that, relative to this particular customer, the Commission had no option but to grandfather all customers' sales of NEG as is, as per the legal principle of Promissory Estoppel and/or legitimate expectation. FBC, by annually contracting to let this customer and other customers join the NM program at a variety of nameplate capacities, knew full well that their RS 95 tariff expressed no limits on production of and sale of NEG, but did nothing to propose a clear limit to production of NEG.

To the contrary, as early as the filing of the 2010 Monitoring and Evaluation Report on FortisBC Inc. Net Meter Program the Company recognized and appeared to welcome NM production of NEG above personal consumption levels:

"*The Company is of the opinion that the original intention of the program (to offset all or some of the customers own consumption) is still valid, but there is no reason to prevent additional generation if it falls within the 50 kW cap. The principles in place for compensation for generation under the program remain essentially the same. That is, offset consumption is automatically valued at the retail rate, and a reasonable amount of generation that exceeds personal consumption will also attract that retail rate. The proposed change in the program will affect generation that a customer-generator has installed with the intent to generate additional sales to FortisBC. The Company believes that compensation for these sales should be offered in a manner consistent with that of other small Independent Power Producers in its service area.*

In the second quarter of 2011, FortisBC will file with the Commission an application to change certain sections of the Net Metering program Tariff intended to allow intentional generation above a customer's own use" (A2-1FortisBC Inc. Net Metering Program Tariff Update Application ~ Project No.3698875).

The Company then compounded statements made in its Net Metering report in 2010 by accepting that a customer could increase production investment from a nameplate capacity of 5 kW to 20.5 kW, subsequently paying for that increased NEG production on an annual basis as they stated they would to the Commission in their 2010 report. This customer, and all other customers enrolled in the NM program, have remained within the specified design capacity limit delineated within the RS 95 tariff language in accordance with the option proposed to the Commission in the 2010 report.

So I do not see how any current NM Customer can be legally removed from the program as no legal grounds exist for them to to be removed for producing NEG. FBC knows that, as otherwise they would have exercised that right already. The Company therefore cannot then turn around, six or seven years after the statements made in the 2010 report to to the Commission, when customers have made their investments and having subsequently been paid for the extra NEG, and now claim the legal right to remove that customer, and any other customer, for over producing NEG. Further it is clearly the Commission, not FBC, which, having spotted the Company doing nothing about the situation, then directed the Company to tighten up the tariff wording to close this particular loophole:

"*Based on this evidence, the Panel determines that adjustments to the RS 95 tariff are needed to remove existing ambiguities. However, it does not agree that FBC's proposed revisions alone provide the appropriate remedy.*

It is clear from the evidence before us that the RS 95 tariff as currently worded leaves room for significantly different interpretations, and that clarification is necessary and in the public interest" (Appendix A, G-199-16, p 9).

Section 3 of the of the Billing Calculation of the RS 95 tariff clearly promises a customer that:

"...Net Excess Generation shall be valued at the rates specified in the applicable Rate Schedule and credited to the Customers account" (Electric Tariff B.C.U.C. No. 2 Sheet 45, Schedule 95 - Net Metering, Billing Calculation 3)

Shall, not may, and at rates, not rate that legally implies credit at Tier 1 and Tier 2 residential rates.

Section 5 then expressly explains that:

"...the credit will be purchased by the Company. If such amounts are not large, they will be carried forward and included in the billing calculation for the next period at the discretion of the Company" Electric Tariff B.C.U.C. No. 2 Sheet 45, Schedule 95 - Net Metering, Billing Calculation 5)

This is a promise to purchase credit "*at the end of the calendar year...at the discretion of the Company*". Consequently no one has forced the Company to purchase the credit as they have written the cheques at their own discretion, having determined that the amount is large enough for them to write a cheque.

FBC contracted to purchase the increased NEG production from a 20.5 kW NM system and other customers, knowing full well that under "Special Conditions*"* at 4 the tariff clearly states:

"*The Contract Period for Service under this schedule shall be one (1) year and thereafter shall be renewed for successive one-year periods*."

<u>FBC, having agreed to purchase the additional NEG production for one year, and then agreeing to purchase that same level of production for successive one-year periods, cannot then say to the Commission that it has abrogated FBC's right to remove this customer, when FBC itself, by accepting and paying for that NEG production for an initial contract year and successive contract years has, in fact, through its own actions, abrogated any rights it may or may not have previously had</u>.

Hence my submission that FBC has foregone its right to remove a customer from the program for production of "excessive" NEG, which the Company proposed to accept, in writing, in the 2010 report, as the legal principle of Promissory Estoppel and/or legitimate expectation now applies. That, when you read the findings of the Commission in G-199-16, is the reason why FBC is instructed to:

"...*submit to this Panel, proposed changes to the RS 95 tariff to clarify that RS 95 customers cannot be removed from the NM Program solely on the basis of producing Annual NEG*" (Order G-199-16, Appendix A, p12).

In the context of Madam Justice Hudart finding utility customers being "*vulnerable to...arbitrary management decisions*" (Princeton Light and Power Ltd vs MacDonald, 2005 BCCA 296, 67), the majority panel in G-199-16 agrees and finds that a "...*risk of being excluded from the NM Program after initial qualification would likely pose an unacceptable risk to some customers who might otherwise wish to participate in the NM Program. Investment in self-generation capacity has a long-term payback, and hence any uncertainty in the duration of eligibility would be a deterrent to participation (i.e. in making their initial investment)*" (Order G-199-16, Appendix A, p14).

In addition "...*there are many circumstances in which a customer might in good faith generate Annual NEG after having their initial investment approved for the program. The Panel feels that these customers should still be entitled to compensation for all the energy that they generate, given that they were approved into the Program with appropriately sized generation capacity; denying these customers compensation for their Annual NEG runs the risk of eliminating or dampening the incentive for them to reduce electricity consumption*" (Order G-199-16, Appendix A, p14).

Further, I submit that the Commission cannot grant a right to FBC that the Company, through its own actions, has determined does not exist, in that not just in a single contract year, but in successive contract years, the Company has voluntarily agreed to purchase and pay for unlimited amounts of NEG offered to it by NM Customer-Generator program enrollees in accordance with a written statement made to the Commission in 2010, that was not repudiated until March of 2017.

In contrast, BC Hydro in RS 1289, at special conditions 2, specifically states:

"T*he Customer shall not operate the Generation Facility so as to generate electricity at a rate greater than 110% of the Nameplate Rating of the Generating. Facility, and will not add to or modify the Generating Facility without the prior written consent of BC Hydro*" (https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/integrated-resource-plans/current-plan/schedule-1289-net-metering-service.pdf).

If FBC wants to set a limit to the amount of NEG it wants to purchase under the RS 95 tariff then it should propose just such a limit to the Commission, while at the same time proposing a program and/or tariff to which electricity generated in excess of that limit may be sold. To do otherwise would be to violate the principles and objectives of the *Clean Energy Act*, particularly as it is proscribed at section 2 of said Act.

Further, if FBC wants to resolve certain issues of production and purchase of NEG from the five, roughly 2%, of customers currently enrolled in the NM program, then we propose that it ask the Commission to convene a settlement conference with those specific customers, as initially called for by the Kaslo Group of NM customers in May of 2016.

In Conclusion

I submit that since this entire re-consideration and variance application was submitted on the basis that FBC's a priori right to remove customers from the NM program had been abrogated, that FBC's entire application should be dismissed in toto, as this right did not exist and has never existed, and cannot exist because FBC, by its own written statement to the Commission in 2010, and actions since of purchasing and paying for any and all NEG offered to it, not just in one contract year but in successive contract years, has itself denied the existence of the very claim it has made in its application to the Commission.

I submit that G-199-16 should stand as is and that FBC should be directed to complete re-writing of the wording of the RS 95 tariff in order to close the loopholes identified by the previous Commission panel majority.

The Commission should reject FBC's claim that it has a right to remove NM Customer-Generators from the program for producing NEG, especially given that in contrast BC Hydro has a clearly defined limit for the amount of NEG that can be produced, and especially given that FBC has no tariff or program to remove them to.

The Commission should reject FBC's re-application to have a kWh bank, as this will preclude future TOU pricing that could be introduced through the AMI meters.

The Commission should reject FBC's re-application to change the price of NEG to 4.8 cents per kWh, especially when FBC has stated in its Final Argument in the 2016 Long Term Electric Resource Plan & Long Term Demand Side Management Plan that the LRMC "f*or acquiring electricity generated from clean or renewable resources in BC*" is $100.45 per MWh.

And that further, in preference to resolving the issues that FBC has raised, a settlement conference should be convened in order to bring together the various parties to discuss a fair and reasonable price for NEG – a price that is fair and reasonable not just for the Company and non-participating customers, but one that is also fair and reasonable and takes into account the positive contributions of NM Customer-Generators as well.

All of which is respectfully submitted,
Andy Shadrack

Appendix A

Comparison of FBC proposed NEG Tariff as Compared to BC Hydro NEG, MSOP and SOP Tariffs, and impact on residential customers of offsetting Basic Charge						
	Basic Charge Daily	Tier 1 Rate/kWh	Tier 2 Rate/kWh	NEG Rate/kWh	MSOP Rate/kWh	SOP Rate/kWh
BC Hydro	$.1899	$.0858	$.1287	$.0999	$.1065	$.1069
Kwh per day required to offset cost	1.9	.86	1.3	-	-	-
kWh required to offset Basic Charge per 60 day billing period	114	-	-	-	-	-
FortisBC	$.5275	$.10117	$.1567	$.048	None	None
kWh required per day to offset cost	11	2.1	3.3	-	-	-
kWh required to offset Basic Charge per billing period	669	-	-	-	-	-

Appendix B
Electricity Consumption 2005-2017
Shadrack/Bauman Household

2005	**February**	**April**	**June**	**August**	**October**	**December**
Kwh Daily	1,194 19	1,182 19.1	1,094 18.9	828 13.1	1,048 18.7	1,074 17
Cost - Taxes	$93.73	$94.6	$89.05	$72.07	$85.9	$87.53
Cost +Taxes	$100.29	$101.22	$90.28	$73.86	$91.91	$93.66
2006	**February**	**April**	**June**	**August**	**October**	**December**
Kw/h Daily	1,378 20	1,085 18.7	1,023 16.5	950 15.3	934 16.1	846 13.6
Cost - Taxes	$110.81	$93.42	$89.31	$84.44	$83.38	$77.52
Cost + Taxes	$117.91	$99.96	$95.96	$89.51	$88.38	$82.17
2007	**February**	**April**	**June**	**August**	**October**	**December**
Kw/h Daily	1,063 17.1	829 13.4	681 11.5	678 10.9	572 9.4	662 11.2
Cost - Taxes	$92.63	$77.56	$68.74	$68.53	$61.24	$67.43
Cost + Taxes	$98.19	$82.21	$72.86	$72.64	$65.06	$71.75
2008	**February**	**April**	**June**	**August**	**October**	**December**
Kw/h Daily	710 11.5	630 10.3	551 8.9	403 6.7 Fridge Broken	399 6.5 Fridge Broken	698
Cost - Taxes	$71.98	$67.11	$61.84	$51.45	$51.17	$72.50
Cost + Taxes	$75.87	$70.74	$65.18	$54.23	$53.93	$76.42
2009	**February**	**April**	**June**	**August**	**October**	**December**
Kw/h Daily	604 10.1	678 10.9	581 10	580 8.1	430 7.4	687 11.1
Cost - Taxes	$70.67	$74.34	$67.10	$67.03	$56.64	$76.66
Cost +Taxes	$74.48	$78.36	$70.73	$70.65	$59.70	$80.80
2010	**February**	**April**	**June**	**August**	**October**	**December**
Kw/h Daily	661 10.5	691 11.2	540 9.2	570 9.3	513 8.3	605 10.3
Cost - Taxes	$77.59	$81.59	$69.39	$71.80	$68.52	$76.79
Cost + Taxes	$81.78	$86.00	$73.13	$75.49	$71.94	$80.62

2011	**February**	**April**	**June**	**August**	**October**	**December**
Kw/h Daily	596 9.6	584 9.6	487 7.9	622 10.4	413 6.9	638 10.3
Cost +Taxes	$79.37	$80.01	$72.90	$86.67	$67.40	$88.14
Cost - Taxes	$83.33	$84.01	$76.55	$91.00	$70.77	$92.55
2012	**February**	**April**	**June**	**August**	**October**	**December**
Kw/h Daily	596 9.9	559 9	283 4.6 Away May	554 9.4	491 7.9	612 10
Cost - Taxes	$86.60	$84.12	$57.66	$77.91	$70.20	$80.19
Cost + Taxes	$90.93	$88.32	$60.54	$81.81	$73.71	$84.20
2013	**February**	**April**	**June**	**August**	**October**	**December**
Kw/h Daily	576 9.1	587 9.5	480 9.4 Estimate	563 9.4 Estimate	459 7.9 Estimate	622 9.9 Estimate
Cost - Taxes	$79.88	$82.00	$72.58	$79.89	$70.74	$85.08
Cost + Taxes	$83.88	$86.10	$76.21	$83.88	$74.28	$89.33
2014	**February**	**April**	**June**	**August**	**October**	**December**
Kw/h Daily	665 10.4 Adjustment after strike	513 8.4	617 10	483 8.2	445 7.3	537 9.3
Cost - Taxes	$90.23	$76.98	$86.43	$74.25	$70.79	$79.16
Cost + Taxes	$94.74	$80.83	$90.75	$77.96	$74.33	$83.12
2015	**February**	**April**	**June**	**August**	**October**	**December**
Grid use Solar Transfer Net grid use Daily grid use Daily solar Total net use	673 - 673 10 - 10	398 - 398 9 .25 9.25	504 285 219 2.8 1.5 4.3	351 341 10 .2 3.3 3.5	446 284 162 2.7 2.3 5	509 106 403 6.6 1.2 7.8
Cost - Taxes	$93.05	$59.7	$50.94	$31.28	$45.82	$68.86
Cost + Taxes	$97.70	$62.69	$53.49	$32.85	$48.11	$72.81
2016	**February**	**April**	**June**	**August**	**October**	**December**
Grid use Solar Transfer Net grid use Daily grid use Daily solar Total Total net use	538 52 486 7.8 .8 8.6	491 280 211 3.3 2.2 5.5	325 395 -(70) -(1.2) 2.1 .9	415 354 61 1 2.6 3.6	404 296 108 1.7 2.1 3.8	542 57 485 7.7 .8 8.5
Cost - Taxes	$77.85	$52	$24.43	$37.24	$41.86	$78.98
Cost + Taxes	$82.00	$55.98	$27.5	$40.84	$45.41	$83.21

2017	**February**	**April**	**June**	**August**	**October**	**December**
Grid use	538	364	445	363	373	96** (559*)
Solar Transfer	89	102	334	713	517	36**
Net grid use	449	262	111	-(**350**)	-(**144**)	60**
Daily grid use	7.1	4.7	1.85	-(**5.7**)	-(**2.36**)	5.45**
Daily solar Total	.8	.7	N/A	3.1	3.1	1.4**
Total net use	7.9	5.4	N/A	(-**2.6**)	.74	6.85**
Cost - Taxes	$77.12	$58.60	$43.32	-($**3.32**)	$15.8	
Cost + Taxes	$80.98	$61.53	$45.48	-($**1.72**)	$17.4	

* Estimate only

**Based on the first eleven days information from the current billing period

In 2014, the last year before our household installed a solar PV system, daily grid consumption of electrical power from FortisBC was 50.5% lower than 2005. By 2016, the first full year of solar production, average daily consumption had dropped to below 37% of 2005, and net daily consumption, after transfer of solar produced electrical power, was 19.9% of 2005.

Thus far in the first 301 billing days of 2017 we have purchased 2.083 MWh of electricity from FortisBC, while transferring 1.755 MWh to their grid. So our net consumption from FortisBC's grid is only .328 MWh or 1.09 kWh per day so far in 2017.

This consumption level represents a 93.6% net reduction of grid electricity since 2006. To achieve that we have invested over $30,500 dollars in DSM and energy saving measures, and in a solar PV production system composed of ten 300 watt panels and two 280, twelve batteries and the accompanying inverter equipment.

Appendix C

MWh Needed To Offset Basic Charge And Customer Cost Per MWh Electrical Consumption				
Consumption Per Annum	Cost MWh Plus Basic Charge	MWh Needed to Offset Basic Charge	Cost Per MWh	Retail Value of Electricity to FBC
Net Zero @ 4.8 cents kWh @ FBC Basic Charge rate	$192.54	4.011	-	$555.56
Net Zero @ retail rate @ FBC Basic Charge rate	$192.54	1.724	-	$238.79
Net Zero @ BC Hydro Basic Charge Rate	$69.31	.694	-	-
5 MWh	$698.39	-	$139.68	
10 MWh	$1,226.23	-	$122.62	
15 MWh	$2,007.09	-	$133.81	
20 MWh	$2,787.94	-	$139.40	