

August 19, 2016

VIA EMAIL

Laurel Ross  
Acting Commission Secretary  
BC Utilities Commission  
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**BCPIAC**  
Public Interest Advocacy Centre

Reply to: Sarah Khan  
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Our file: 7615

Dear Ms. Ross:

**Re: BC Hydro 2015 Rate Design Application Module 1  
Opening Statement of Roger Colton and Summary of Colton  
Recommendations**

We enclose the Opening Statement of BCOAPO witness Roger Colton for filing in this proceeding.

As Mr. Colton's Direct Testimony (found at Exhibit C2-12) does not contain a summary of his recommendations, we enclose a document which summarizes those recommendations and references the page numbers in his Direct Testimony that relate to each recommendation. The summary does not contain any new information, and can be added to the end of Mr. Colton's Direct Testimony.

Should you have any questions, please let me know.

Sincerely,

**BC Public Interest Advocacy Centre**

Sarah Khan  
Barrister and Solicitor

c. Tom Loski, Chief Regulatory Officer, BC Hydro

Encl.

**Before the British Columbia Utilities Commission**

British Columbia Hydro And )  
Power Authority 2015 Rate ) BCUC Project No. 3698781  
Design Application )  
)

**Opening Statement of Roger Colton**

**on behalf of:**

**British Columbia Old Age Pensioners' Organization, Active Support  
Against Poverty, BC Poverty Reduction Coalition, Council of Senior  
Citizens' Organizations of BC, Disability Alliance BC, Together  
Against Poverty Society, and The Tenant Resource and Advisory  
Centre (BCOAPO *et al.*)**

**August 19, 2016**

## INTRODUCTION

My name is Roger Colton. My business address is 34 Warwick Road, Belmont, MA 02478. I am a principal in the firm of Fisher Sheehan & Colton, Public Finance and General Economics of Belmont, Massachusetts. In that capacity, I provide technical assistance to a variety of federal and state agencies, consumer organizations and public utilities on rate and customer service issues involving telephone, water/sewer, natural gas and electric utilities.

Over the past 30+ years, I have worked for local, state and federal agencies, for nonprofit community organizations, and for both public and private water, natural gas and electric utilities. I have authored three books and more than 80 academic articles. I have testified as an expert witness in somewhat more than 250 utility regulatory and state and federal judicial proceedings.

### AN ESSENTIAL SERVICES USAGE BLOCK FOR LOW-INCOME CUSTOMERS.

In the first section of my testimony, I examine the need for and operation of pricing an initial block of essential services within BC Hydro's inclining block rate structure. I conclude that such an initial block is required to serve an affordability need, can be justified on traditional regulatory principles, and is operationally feasible to implement.

My testimony regarding the Essential Services Usage Block is based first on the fact that low-use customers, which are disproportionately low-income, are over-charged under BC Hydro's existing inclining block rate structure. There is no dispute in this proceeding that income and usage are directly related. The data shows that usage for low-income customers is substantially lower. At each decile of consumption, low-income customers have lower consumption than residential customers overall. No-one in this proceeding disputes the relationship between low income and low consumption.

This relationship between income and consumption is significant because low-use customers impose a proportionately lower cost on the Company than do higher use customers. The Company's own data shows, for example, that low-use customers make a lower contribution to the Company's peak demand. The Company's data shows further that higher use residential customers tend to have lower load factors and, conversely, that lower use customers have higher load factors.

This relationship between low use and higher load factors has cost implications. As the Company, itself, states: "low load factors are indicative of customers that are relatively more costly to serve and load factor is therefore a consideration when evaluating rate class segmentation." Given that low load factor customers are more costly to serve, high load factor customers are less costly to serve. Despite these relatively lower costs that low-income

customers impose on the system as low use customers, low-use customers do not have the reduced costs reflected in their rates. Instead, quite to the contrary, low-income, low use rates are increased while denying those low-income, low use customers the ability to avoid the rate increase through mechanisms commonly available to residential customers as a whole.

I will discuss in more detail the market barriers that prevent low-income customers from implementing energy efficiency measures as a means to control their bills. However, for now, I note simply that the Company agrees with the proposition that, without external assistance to defray the costs of installing energy efficiency measures, low-income customers have empirically been found to install fewer energy efficiency measures in their homes than non-low-income households on a per-household basis.

Affordability is certainly an underlying issue with the provision of an Essential Services Usage Block. The proposal for an Essential Services Usage Block, however, is not based exclusively on affordability concerns. It is a mechanism through which BC Hydro can simultaneously address affordability concerns, improve cost reflectivity in rates, and improve the efficiency of its operations and reduce overall operating costs.

I propose that a limited low-use Essential Services block of electricity be available to income-qualified customers. The Essential Services Usage Block should be available to customers confirmed as having income at or below 100% of the Pre-Tax Low-Income Cutoff (LICO-PT). I recommend that BC Hydro not engage in its own income qualification for the Essential Services Usage Block. Instead, BC Hydro should accept the income qualifications of designated federal and provincial social assistance programs. BC Hydro need not know the precise income of the customer; instead, income qualification is a yes/no toggle. The relevant third party need only confirm that a customer is (or is not) income qualified under the LICO-PT decision-rule.

After considering multiple options, I recommend an Essential Services Usage Block rate discount of \$0.04 per kWh for the first 400 kWh of consumption. The 400 kWh usage is based in part on BC Hydro's own finding of what constitutes "low usage" and partly on an analysis of the relative consumption of low-income customers and of residential customers as a whole to keep the focus, to the maximum extent practicable, on low-income low-use customers.

In recommending the Essential Services Usage Block, I considered the operation and structure of the proposal in light of the Bonbright principles for rate design. Providing a discount on the Essential Services Usage Block improves rather than impedes cost reflectivity. In this sense, the Essential Services Usage Block is consistent with the Bonbright criterion of "fair apportionment of the costs amongst customers."

In addition, section 60 of the *Utilities Commission Act* (“UCA”), subsection 60(1)(b), provides that the Commission “must have due regard in the setting of a rate. . .to encourage public utilities to increase efficiency, decrease costs and enhance performance.” Increasing the efficiency of operations and enhancing performance extends to all elements of the Company’s provision of service, not simply to the power production function. One aspect of the Company’s operations is the collection of the revenue which it bills. I cited more than 60 third party program evaluations that provide empirical support for the proposition that adopting a low-income discount such as an Essential Services Usage Block will help BC Hydro to “increase efficiency, decrease costs and enhance performance” as required by the *UCA* by improving bill collection and reducing the costs of low-income nonpayment.

I considered three alternative ways through which to recover the costs of providing the Essential Services Usage Block discount. I recommend spreading the costs over all consumption by residential customers. The cost per kWh if spread over the entire residential consumption base is 1.54 mils per kWh. At median consumption, the bill impact is less than \$1.00 per month.

This program cost analysis assumes a 100% take-up rate. It would, however, be unreasonable to expect a 100% take-up rate. The actual take-up rate will thus be less than 100%. When fully ramped up, I would expect a participation rate of roughly 50% of the total income-eligible population.

In calculating these program costs, I have calculated only the gross costs of providing such a discount. I have not calculated any of the offsetting expense reductions. In fact, as I explain in my testimony, the bill reductions achieved through the Essential Services Usage Block discount would have the effect of reducing both working capital and bad debt. These cost reductions will occur whether or not the customer could “avoid arrears altogether” and even “if the customer continued to have arrears but the outstanding balance was lower.”

### **Crisis Intervention Fund.**

In the second section of my testimony, I explain why BC Hydro should adopt a small rate rider to fund a residential crisis intervention program. A crisis intervention program would involve providing funds when a low-income customer faces a situation that threatens the continuing ability of that customer to take electric service. Such a crisis situation may, but need not necessarily, involve providing a grant to prevent the disconnection of service for nonpayment. In the alternative, a crisis intervention grant might respond to a level of arrears that the program administrator deems is of sufficient size that the customer will never be capable of retiring them in full. Moreover, a crisis situation might involve circumstances where a customer is already “off-system” and lacks sufficient funds to make an arrearage payment, along with paying a reconnection charge and possibly a cash security deposit.

A crisis intervention fund responds to the fragility of income of many working poor customers. Income for the working poor, in particular, can be erratic and unpredictable. Working poor families, for example, tend to find themselves in lower quality hourly wage jobs, often marked by considerable income fluctuations due to the number of hours they are called upon to work. Even aside from the level of wages, the presence of hourly wages and unpredictable hours mark occupations that are the province of the working poor. Another factor contributing to the instability of income of the working poor involves the paid leave benefits provided.

The combination of hourly wages with the absence of paid vacation and sick leave can directly affect the ability of a household to maintain utility payments over time. These circumstances directly affect the ability of a working poor customer to maintain utility bill payments. A person working 35 hours a week on hourly wages may lose three days of work simply due to a sick child missing school and requiring care. If no leave time exists for that employee, the sick child translates into permanently lost wages.

A crisis intervention program benefits not only the customers receiving such grants, but benefits the utility as well. In research I did for the United States federal LIHEAP office on measuring the outcomes of federal fuel assistance (i.e., LIHEAP), I found that “the range of negative options available to a consumer facing unaffordable home energy bills far outstrips the range of constructive options available to such a low-income consumer. Most of these negative options are counter-productive to utility bill payment. Not only do they not solve the consumer's inability-to-pay problem, they affirmatively contribute to or exacerbate that problem.”

My research on responses to bill nonpayment found that there are, indeed, “constructive responses” to bill unaffordability. Pursuing usage reduction strategies, budget billing, and taking household actions to reduce expenses and increase income are all constructive responses to nonpayment.

All too frequently, however, the customer is faced with an immediate need (*i.e.*, bill payment by a date certain) with the available constructive responses to an inability-to-pay unable to deliver assistance either in the form, the time period, or the magnitude necessary to meet that need. Given the immediate consequences of failing to address the short-term nonpayment crisis, the customer is pushed into negative actions identified in my research.

One purpose of the crisis intervention fund is to address the immediate need to prevent the consumer from pursuing one of the “negative options” that will be ineffective, or even counter-productive, to having the customer maintain a long-term paid-up relationship with BC Hydro. The purpose of the crisis intervention process is to short-circuit the need for the customer to pursue those negative options that cost not only the ratepayer, but cost all ratepayers, money.

### **Low-Income DSM and BC Hydro's Rate Design Application.**

In the third section of my testimony, I review the commitment of BC Hydro to low-income usage reduction programs in light of current and expected bill increases to low-income customers. The purpose of my testimony in this section is to document that low-income customers, without external assistance, are not capable of relying on energy efficiency investments to reduce or respond to higher bills; to describe how, and why, and to what extent low-income energy efficiency measures can help respond to inability-to-pay; to explain how and why the Company's low-income DSM programs as they are currently designed and funded are inadequate; and to make recommendations on available remedies to the shortcomings I identify.

My discussion is designed to help the BCUC respond to the letter to the BCUC from the Honorable Minister of Energy and Mines Bill Bennett (dated July 6, 2015), in which letter the Minister specifically requested that the Commission provide information on several issues, including "within the current regulatory environment, what options are there for additional Demand Side Management programs, including low income programs?"

As I explain, energy efficiency is not generally available to low-income customers to help them control their usage and to reduce their bills. I discussed and documented substantial market barriers that prevent low-income customers from investing in energy efficiency. Moreover, I noted that the Company agrees. When asked to explain the ways in which it targets marketing its residential DSM programs to low-income households in particular, the Company stated: "BC Hydro offers low income DSM program offerings which provide most of the savings opportunities in BC Hydro's Residential DSM programs in a way that addresses the barriers specific to low-income customers. *In general, it is not effective or efficient to target low income customers outside of the low-income program offerings.*"

BC Hydro significantly under-serves its low-income population through its ECAP low-income program. The Company's ECAP program evaluation reported that "although average savings per household were validated, program participation was significantly below expectations for both fiscal years examined in this report. Approximately 3,750 basic and 1,500 advanced program deliveries (5,250 total) were anticipated by the end of fiscal year 2011. . . Actual participation was much lower with only 2,193 basic and 133 advanced program completions (2,326 in total)."

Rather than seeking to expand outreach, which BC Hydro's own consultant found was required to expand the ECAP participation, the Company has chosen to reduce the number of housing units that it seeks to serve with usage reduction measures on an annual basis. This reduction in the number of low-income units targeted to be served occurs in an environment where the

Company, itself, notes that the low-income customer segment is the fastest growing customer segment on the BC Hydro system. Moreover, in July 2014, the provincial government expanded the definition of “low-income” for purposes of qualifying customers for low-income DSM from 100% of pre-tax LICO to 130% of LICO through the Demand Side Measures Regulation. As the Company states: “The use of LICO multiplied by 1.3 would more than double the proportion of BC Hydro’s residential customers categorized as low income, from 10 to 24 per cent.” In other words, even if the Company had maintained a constant level of program expenditure, the impacts of those expenditures would have been diluted; the Company would have been seeking to serve double the population with the same level of spending.

Despite the fact that the low-income sub-population is the Company’s “fastest growing” sub-population, and despite further that the July 2014 modification to the definition of “low-income” will more than double the number of low-income customers on the Company’s system, BC Hydro proposes to significantly decrease rather than to increase (or even maintain) its low-income program expenditures over time. As a result, the incremental energy savings (and thus the incremental bill reductions) generated by BC Hydro’s low-income programs will be substantially curtailed as well. The Company proposes to curtail the low-income program even though the low-income program has been found to be cost-effective, delivering more benefits than they cost.

It should further be remembered that neither ECAP nor the ESK programs should be confused with comprehensive energy efficiency programs offered to low-income households. When asked, the Company confirmed that neither ECAP nor the ESK program is designed to identify and install all cost effective measures. Relying exclusively on ESK and ECAP will thus leave cost-effective usage reduction potential undone. And, once a home is treated through ESK or ECAP, BC Hydro will not later go back to the home to install cost-effective usage reduction measures left undone the first time around.

In sum, I concluded that in responding to the Minister’s letter, the BCUC should find that offering reasonable utility-funded usage reduction is clearly one way for BC Hydro to help low-income customers respond to the increased rates that are being imposed upon those customers. Based on the above data and discussion, I recommend that in this proceeding, the Commission direct BC Hydro to make certain minimum DSM service level guarantees for low-income customers. The level of DSM funding to be devoted to low-income should be sufficient to reach 50% of the below 130% of LICO-PT low-income population through ECAP, both heating and non-heating, within 15 years. If limited to the population below 100% of LICO-PT, this commitment would reach 5,700 low-income households a year, for fifteen years, through ECAP.

While I propose to defer actual program design and budgeting to the Company’s DSM proceeding, consistent with the Minister’s letter, I find that it is feasible and appropriate to

articulate and require compliance with the principle of serving 50% of the low-income households within a 15 year time frame. That principle should be established in this proceeding.

### **Low-Income Terms and Conditions**

In this section of my testimony, I propose and assess the reasonableness of certain “terms and conditions,” some but not all of which are directed specifically toward low-income customers. In supporting these terms and conditions, I use a cost-effectiveness analysis. There are two sides to cost-effectiveness analysis. On the one hand, cost-effectiveness is used to identify the alternative that, for a given output level, minimizes the cost of achieving the output. On the other hand, cost-effectiveness is used to identify the alternative that, for a given cost, maximizes the level of output. Both components of the analysis—the extent to which the objectives are achieved, on the one hand, and the cost of achieving on the other hand—relate to utility regulation.

- One objective of utility regulation is to provide least-cost service, the precise objective which cost-effectiveness is designed to measure.
- One objective of utility regulation is to achieve the efficient delivery of utility service, the precise objective which cost-effectiveness is designed to measure.
- One objective of utility regulation is to operate in the most cost-efficient manner to accomplish the desired objectives, the precise objective which cost-effectiveness is designed to measure.

The objectives that we seek to accomplish through a cost-effectiveness analysis involve the complete, regular, timely, unsolicited payment of utility bills. The terms and conditions I offer have been repeatedly found to serve a business function for a utility. They will improve the collection of utility bills while minimizing the resources that need to be devoted to that collection. The terms and conditions I recommend include the following:

- That BC Hydro adopt restrictions on the disconnection of service for nonpayment during the cold weather period stretching from November 1 through April 1 of each winter heating season on a non-income tested basis.
- That BC Hydro adopt shutoff protections for the very young, for seniors and for households facing medical emergencies that mirror the model medical emergency regulation I authored for state utility regulators in the United States, which I attached to my testimony.

- That BC Hydro modify its installment payment plans offered to customers with income less than 100% of LICO. I recommend that required downpayments be set at 10% of the outstanding delinquency. I recommend further that for payments plans offered to customers with income less than 100% of LICO, BC Hydro offer a payment plan term of *not less* than 12 months, with payment plan installments to be paid toward arrears, not exceeding the average of a monthly bill for current service.
- That BC Hydro be allowed to impose an annual Late Payment Charge equal to its Weighted Average Cost of Debt rounded to the nearest one-half percent. I further recommend that no late payment charge should be imposed unless and until an arrearage reaches 60 days beyond the bill's due date.
- That low-income customers --defined to be those customers who are taking service under the Essential Services Usage Block-- be exempt from late payment charges.
- That BC Hydro waive both the account charge and the minimum reconnection charge for low-income customers.
- That BC Hydro adopt several modifications to its cash security deposit practices, including that security deposits be waived for low-income customers (as identified by their taking service under the Essential Services Usage Block); that the Company be barred from using credit scores obtained through an external credit rating agency as the basis for a deposit; and that the Company offer to accept either a surety or a guarantee that do not involve posting a cash security deposit or, in the alternative, that the Company offer to accept entry into levelized budget billing in lieu of a cash security deposit.

### **Company Practices and Procedures.**

In the final section of my testimony, I recommended a set of practices and procedures that would improve both the service provided to needy customers and the collections outcomes experienced by the utility. Each of the practices and procedures I recommend below would help inform the design and implementation of the measures I describe above, including the Essential Services Usage Block, low-income DSM, and the various responses to nonpayment.

Each of these practices has been found to be important and beneficial in helping utilities to design cost-effective responses to residential payment troubles, including low-income payment troubles. It allow stakeholders, including the BCUC, consumer groups such as BCOAPO, and the Company, itself, to more accurately assess what practices are effective and what practices are not effective in improving the complete, timely, regular, unsolicited payment of utility bills.

Because of the length of this summary, I simply note one of these practices in particular. I do not exclude the rest of the recommended practices because they are less important, but rather simply because they were clearly and completely explained in my written testimony.

One critical element of reasonable and prudent management is to establish and exercise a feedback loop by which to evaluate program activities. Creating a feedback loop involves articulating performance criteria; identifying metrics that will measure performance; monitoring performance using those metrics; assessing actual performance relative to the articulated performance criteria; and determining the changes, if any, that need to be made should actual performance not meet the expected or desired performance. After reviewing BC Hydro's planning processes regarding its responses to inability-to-pay, and its data collection (or lack thereof), I conclude that Company does not routinely engage in the fundamental data collection and reporting that would underlie reasonable and prudent utility management of inability-to-pay customers. Without information, BC Hydro can have no metrics. Without metrics, it can have no feedback loop upon which to base fundamental planning.

In short, while BC Hydro been able to produce, albeit sometimes with some delay, information on nonpayment and credit and collection activities as requested by low-income stakeholders in this proceeding, the Company does not routinely collect and make available such information either internally or to interested stakeholders.

I recommend that the Company be required to begin, no later than six months after a final decision in this proceeding, reporting basic consumer credit and collection activities and outcomes. One reasonable model for such collection is the list of data elements included in a resolution of the National Association of State Utility Consumer Advocates (NASUCA). I attached a copy of NASUCA's proposed list of data reporting elements as a Schedule to my Direct Testimony.

That completes the summary of my Direct Testimony.

**Before the British Columbia Utilities Commission**

British Columbia Hydro And )  
Power Authority 2015 Rate ) BCUC Project No. 3698781  
Design Application )  
)

**Summary of Recommendations  
In Direct Testimony of Roger Colton**

**on behalf of:**

**British Columbia Old Age Pensioners' Organization, Active Support  
Against Poverty, BC Poverty Reduction Coalition, Council of Senior  
Citizens' Organizations of BC, Disability Alliance BC, Together  
Against Poverty Society, and The Tenant Resource and Advisory  
Centre (BCOAPO *et al.*)**

**August 19, 2016**

## Summary of Recommendations

| Item | Recommendation  | Page(s) |
|------|---|---------|
| 1.   | Establish an Essential Services Usage Block (ESUB).   |         |
|      | A. ESUB offered for first 400 kWh for low-income customers.   | 14      |
|      | B. ESUB discount set at \$0.04/kWh.   | 19      |
|      | C. Each ESUB recipient solicited for ECAP participation.  | 21      |
|      | D. Spread ESUB costs over all residential consumption.  | 26      |
|      | E. ESUB intake based on MSDSI in Year One with expansion over time.   | 36      |
| 2.   | Create crisis intervention fund funded at \$0.25/month/account.   | 43-44   |
| 3.   | Expand low-income ECAP to 5,700 customers per year.   | 61      |
| 4.   | Time-based winter shutoff restrictions for all customers: November through April.   | 77      |
| 5.   | Renewable 60-day delay on disconnections for the very young, seniors, and people with medical emergencies based on Colton model regulation. | 78, 81  |
| 6.   | Installment plans (deferred payment arrangements) for low-income customers.   |         |
|      | A. Set low-income downpayment at 10% of arrears   | 87      |
|      | B. Limit term of agreement to not less than 12 months   | 87      |
|      | C. Limit installment amount to not more than average bill   | 87      |
| 7.   | Late payment charges (LPCs)   |         |
|      | A. Set equal to Weighted Average Cost of Debt rounded to ½ percent for all customers  | 97      |

|     |    |   |             |
|-----|----|---|-------------|
|     | B. | Start LPC at Day 60 beyond due date for all customers                               | 97          |
|     | C. | Exempt low-income customers from LPCs on going forward basis                        | 98          |
| 8.  |    | Exempt low-income customers from minimum reconnection charge and account charge.    | 100         |
| 9.  |    | Waive security deposits for low-income customers.                                   | 105         |
| 10. |    | Bar use of external credit scores as basis for security deposits for all customers. | 106         |
| 11. |    | Accept non-cash security deposits for all customers.                                |             |
|     | A. | Offer opportunity to provide sureties in lieu of deposit.                           | 115         |
|     | B. | Offer opportunity to enter into Equal Payment Plan in lieu of deposit.              | 116         |
| 12. |    | Require customer segmentation analysis.   | 120–<br>121 |
| 13. |    | Adopt NASUCA data reporting recommendations.  | 122         |
| 14. |    | Dedicated low-income Customer Assistance Unit (CAU)                                 | 123         |
|     | A. | Adopt an Early Identification Program.  | 130         |
|     | B. | Implement a skills-based CAU.   | 131         |
| 15. |    | Implement a standing Low-Income Advisory Group                                      | 133         |