



**VIA EMAIL**

bhydroregulatorygroup@bhydro.com

March 21, 2016

**BC HYDRO  
2015 RATE DESIGN**

**EXHIBIT A-24**

To: British Columbia Hydro and Power Authority  
Registered Interveners

Re: British Columbia Hydro and Power Authorities  
Project No. 3698781/G-156-15  
2015 Rate Design Application Module 1

The British Columbia Utilities Commission (Commission) is in receipt of several emails from Mr. Roger Bryenton. In his emails dated March 9 and 10, 2016, Mr. Bryenton makes a request for reconsideration of his intervener status in the above noted proceeding, which was previously rescinded by Order G-175-15. Mr. Bryenton also raises a number of additional issues in this proceeding.

The Commission is seeking submissions from British Columbia Hydro and Power Authority and registered interveners on Mr. Bryenton's request for reconsideration of his intervener status in the above noted proceeding. For reference, Mr. Bryenton's emails that are relevant to this issue are attached to this letter. Specifically, your submissions should address:

1. Whether Mr. Bryenton's request for reinstatement of this intervener status is appropriate and relevant to the 2015 Rate Design Application proceeding; and
2. If yes, should the Commission allow Mr. Bryenton's late intervention to address his stated issues?

Please provide your submissions on this matter to the Commission by Tuesday, March 29, 2016.

Yours truly,

*Original signed by:*

Laurel Ross

YD/cms

Enclosures

March 9, 2016

Ms. Laurel Ross  
Acting Commission Secretary  
British Columbia Utilities Commission  
Sixth Floor – 900 Howe Street  
Vancouver, BC V6Z 2N3

Dear Ms. Ross:

**RE: Project No. 3698761**  
**British Columbia Utilities Commission (BCUC or Commission)**  
**British Columbia Hydro and Power Authority (BC Hydro)**  
**Application of Approval of the Rate Design Application**

**REQUEST FOR RE-INCLUSION OF INTERVENER STATUS – Roger Bryenton**

I am writing to you to express my deep dismay that I have been excluded, upon BCHydro's request and BCUC agreement, from participating as a registered intervener in the BC Hydro Rate Design Application process and hearings.

As I am reviewing the various application documents and IR's, I find that a number of the questions I wished to ask, and many of the points that I hoped to make, are exactly those questions and points that other registered interveners are asking and making; with notable exceptions, omissions, lack of clarity, lack of detail or depth in many cases. I do not feel it is fair that I have been excluded from the opportunity to raise these exact points, while other interveners are allowed, particularly BCUC, and BC Hydro is addressing and changing details such as LRMC figures. Thus while I do not wish to repeat such questions or points, I feel that it is important that this additional depth be included, and as others have not done that, including BCUC, that my input is worthwhile and valuable. I attach my original submission regarding BC Hydro's application.

As I read BC Hydro's responses, there are a number of deeply concerning issues that have not been clarified, and several that have not been explored sufficiently. I will address those shortly.

I do request being re-instated as a registered intervener for the following reasons:

1. Those questions I raised are fully in keeping with the RDA, as they are similar or identical to questions other interveners, including BCUC are raising, and thus I should not be excluded on the basis that my questions are not relevant or important.
2. Many of the points I raised are being raised by other interveners, such as LRMC, cost of transmission and distribution, and other interveners have not been excluded from making these points, including BCUC.
3. There are a number of additional points and questions which ought to be raised and addressed.

3.1 Bonbright Criteria – definition and use. The 8 criteria are taken to be “gospel” by rate makers. Yet there are at least three other criteria, that I believe take precedence in this day and age, and during these hearings in particular:

A. COOPERATION – this ought to be the **fundamental principle** of rate design. The concept of Supplier and Customer are no longer valid. To create the most robust, reliable, and cost effective electricity generation and delivery system and to provide those functions which “users” require involves, fundamentally, a “cooperative” environment, where users need heat or light or power for appliances in various degrees of importance – medical equipment, communications, lighting, refrigeration, heat, etc. Most users do not much care about how this is provided. Many suppliers, BC Hydro included do not seem to much care about how the power is used, as long as it creates revenue. Thus we have “providers” and “users”, not unlike the concept of “addiction”. Yet, cooperatively, users will become and are becoming, suppliers, often to the consternation of traditional utilities. And suppliers are becoming “service providers”, storing and shaping power, facilitating movement of electricity, and they are addressing criteria such as how do we ensure that low income people are adequately provided heat and electricity, at all times, at affordable prices.

B. CUSTOMER SERVICE – when was the last time BC Hydro had a representative, such as the CEO, go door to door and ask customers how they feel about BC Hydro’s products and services, and explained rates and conservation to them, and asked them what their needs and fears are? What happened to “customer contact”, “customer service”? Reliable, Safe Power – yes, absolutely, but real customer service? Such a concept is not included within the Bonbright Rate Design Criteria, yet effective rate design does take customers into consideration, that they must understand power use and pricing, and be able to make informed decisions based upon clear information.

C. UTILITY PRICING MUST NEVER LEAD INFLATION – This is generally ignored by all rate designers and Utility commissions, BCUC , BC Hydro and Bonbright included. There is no absolute or fundamental reason why utility prices should ever be greater than the rate of inflation, or CPI. In fact there is a very good reason why utility prices should lag inflation rather than increase or cause it. A stable economic and financial system does not and should not intentionally create inflation. Thus as a fundamental Rate Design Criterion, “rate increases should always be held to at or below the rate of inflation”.

3.2 Application of Bonbright and additional criteria. Ranking of the 8 criteria, as part of the RDA process, plus the additional 3 I have included, will create a much different ranking, I believe than that obtained to date by BC Hydro as part of the RDA. I suspect that the 3 above will outrank “fairness”, and possibly “price” will outrank all 4.

#### LRMC – LONG RUN MARGINAL COST

The concept of LRMC and its application to the RDA is elusive, as far as I can determine. In BC Hydro’s IRP and RODAT, it was stated, originally as \$95/MWh. This was changed to \$83/MWh by decreasing the discount rate from 6% to 5%. In responses to IR’s, BC Hydro has stated that it is \$85/MWh. In fact the “**effective**” LRMC is ranging between those long term- IPP contracts at roughly \$100/MWh and Mid-C prices which can be negative (BC Hydro is paid to take the power – a windfall to the utility).

It is noteworthy that BC Hydro has requested a delay in responding to BCUC’s request for LRMC information, in that additional time is necessary to determine the latest demand and load balance numbers. If BCH cannot supply accurate demand and supply numbers, and these are varying from month to month, how can a prediction out 8 to

10 years be taken with any degree of assurance? How can an LRMC be determined when demand alone is so variable?

Thus to accurately pinpoint the true LRMC is difficult. Yet utility planning is based upon this premise. BC Hydro's concepts of "incremental" and "least-cost" ought to be **the key criteria**, yet in the next proposed additions to BC Hydro's generating capacity, there is no way that 1,100MW is either "incremental" nor "least-cost". **Thus BC Hydro is defying its own stated design criteria. How can this be resolved?**

BC Hydro's newly stated LRMC of \$85 seems co-incidentally to be very close to the projected cost of the planned addition of capacity and energy, at \$83. **But this is not at all the case! Incrementally and least-cost is conservation, which in the RODAT data in the IRP starts at about \$32/MWh, WHILE THE HIGHEST, INCREMENTAL AND LEAST COST, DSM 5, IS ONLY \$49/MWh**. This is at the point of interconnection, which is **the customers meter!** It further saves an additional transmission and distribution cost in the order, according to the BCUC IR response, of the same order - \$26 TO \$57 USD, and **IN FACT THE CONSERVATION OPTION MAY ACTUALLY BE FREE!**

**THUS BC HYDRO IS DECEIVING THE PUBLIC AND BCUC INTO BELIEVING THAT A NEW MASSIVE PROJECT IS BOTH NECESSARY AND THE BEST CHOICE. CLEARLY THIS IS NOT THE CASE!**

#### CONCLUSION

As a direct result of such LRMC considerations, **great care** must be taken planning, designing and implementing "the next steps". Detailed rate design is important, however, we must constantly keep in mind what are the implications. Clearly identify "what is incremental and what is least-cost", and not just from the utility perspective, but also from the users (customers') perspectives. It may make more sense to have "storage" and "peaking" supplied by the user, than the supplier – COOPERATION. There are many more instances. **LRMC is not "one fixed number" in this new paradigm.**

#### REINSTATEMENT REQUEST

**I believe that I do represent an actual "class of customer" of BC Hydro, I would estimate perhaps 90% of ratepayers, who are concerned about costs of supply, price of power, financial and economic stability and reliability of power supply and use. I also represent a segment which is relatively knowledgeable about utility practices and regulations and how these function, yet without fully detailed knowledge of financial instruments such as rate swaps and hedging practices. I also represent an informed and experienced professional: as a user, designer, electricity supplier, and power trader.**

**I believe that I offer valuable and helpful information and insight into the RDA process, which can help guide BC Hydro and the Province and Ratepayers into a new era of electricity supply and use, and therefore respectfully request reinstatement as a registered intervener.**

Respectfully submitted,      Sincerely,  
 Roger Bryenton,  
 P. Eng.( former), MBA  
 Ratepayer and Energy Systems Consultant

March 9, 2016

Ms. Laurel Ross  
 Acting Commission Secretary  
 British Columbia Utilities Commission  
 Sixth Floor – 900 Howe Street  
 Vancouver, BC V6Z 2N3

Dear Ms. Ross:

**RE: Project No. 3698761**  
**British Columbia Utilities Commission (BCUC or Commission)**  
**British Columbia Hydro and Power Authority (BC Hydro)**  
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Prima Facie Evidence of Significant and Multiple Errors:

I assert that several errors were made in determining that Roger Bryenton should be denied status as an intervener:

1. Rate Design is as much an art as a defined science with rigorous protocols. Scott Madden of Edison Electric Institute in 2013 discussed Pricing vs Rate Making. The Brattle Group in 2012 similarly addressed the Theory and Practice of Cost-Reflective Rates. The eight ( in fact 10) Bonbright Principles used to guide BC Hydro and BCUC, I believe, are insufficient to fully address the issues involved in Rate Design, and I attempted to explore these aspects in my request to be an Intervener. There are several more which I have subsequently presented for consideration.

One of these is “social inclusion”, “openness” whereby interested parties are welcomed to participate, and are not excluded, particularly if a number of participants share similar questions or concerns, since this is their opportunity to participate and raise their concerns. Being told that “it is not within the scope” does not foster public participation, it is exclusionary. If it is a concern then it is exactly “within scope”, and needs to be raised and discussed. This is meant to be an open and public forum. At worst, the input can be appreciated, and then ignored. At best, it give the process legitimacy, and concerned participants the opportunity to know that they are being heard, and that their concerns are valid. This is the new responsibility of rate-makers, or utility pricers.

2. Rate-Making – Rate Design and Electricity Pricing. BC Hydro’s stated principles of “incremental” and least- cost” sources of conservation (nega-watts) or new supply have been totally ignored recently. A single, non-incremental, high cost project is underway. Yet this total ignores the defining principle! How will this affect LRMC? How will this affect rates to all users, yet none of this is to be assessed and defined? That is not effective Rate Design, not effective project selection, and will dramatically affect

costs and rates in future. I believe that the ramifications of choosing one of the highest cost options ought to be fully discussed, at this time.

3. Technical questions of Long Run Marginal Costs are similarly difficult to precisely define. Is it at a point of generation, interconnection or at the users meter? From a conservation or DSM perspective, it must be at the meter. BC Hydro assumes at the point of interconnection, yet to this must be added T&D, which can result in interesting anomalies for DSM where T&D costs are greater than the DSM measure cost.

Does LRMC become a “erroneous proxy” since it is misleading for larger projects where costs are accrued over years, and not included in the rate base, thus denying the users from the benefit of slowly increasing rates reflective of the increase of costs?

There have been several questions regarding LRMC in these hearings. It is now, as the responses to IR’s are presented, that BC Hydro has changed their LRMC cost, again, that the real effect of LRMC is potentially being discussed, but has not been. They have gone from \$95 in the IRP, to \$83 by arbitrarily choosing a lower discount rate, then to \$85 in these hearing to an undisclosed price or cost, which they are presently “re-determining”. This is not reassuring, since it could be that there are undisclosed reasons for finding a particular price.

One concern I have is that this does not reflect the price the user must pay, and a split in demand/energy of 55/45 may be substantially in error if and when substantial new DSM and self-generation technologies are implemented, which in other jurisdictions, have already created problems integrating variable sources such as solar and wind into traditional grids. These are technical issues seriously affecting LRMC that need to be addressed.

Another concern is that BC Hydro’s contract for IPP power constitute a “defacto” LRMC, at the range of \$100 / MWh. So the various gyrations and changes BC Hydro is making to their LRMC could well be meaningless. This needs raising and discussing.

These hearings and evidence become part of the public record, and will likely be used in future as part of other hearings, Revenue Requirements, IRP’s etc. Numbers such as LRMC presented here, without discussion and dissection may misguide future decisions without being thoroughly addressed.

4. Similarly, with my submissions and the attention to DSM, costs of various levels of DSM will affect the cost to users. Whether price elasticity ought to be included in DSM determinations, whether new DSM technologies should be included, including BC load shaping techniques for large and small and potentially individual households and perhaps appliances, all these affect the demand/energy split, which it appears from evidence to date, that BC Hydro does not have an adequate or thorough knowledge of.
5. Renewables – again BC H does not have current data on geothermal or solar costs. How can they then effectively price power if they do not know the costs?

6. Housing stock and End user analyses. Shouldn't the analyses of impact of energy/demand include various groupings of the housing stock, by electricity use and demand, by age of house, by age of occupant, rented or owned, by elasticity, to determine how Rate Design can affect electricity use, and hopefully, reduce waste and increase efficiency? I do not see these analyses.
7. I believe that I offer technical insight that will be of value in these hearings, with my decades of experience and knowledge, my analytical approach and somewhat broader perspective of integrating suppliers and users to create the most robust, cost-effective generation and service delivery system.
8. Another BC Hydro error: I am a BC resident, ratepayer and have a substantial interest in a substantial aspect of the RDA Hearings and process.

This summarizes what I consider to be serious and numerous errors of fact, presented and used, based in large upon BC Hydro's complaints, in denying me the opportunity to participate in the RDA process and hearings.

I hereby request, respectfully, to be re-instated as a registered intervener in the RDA Hearings.

Thank you.

Sincerely

Roger Bryenton, P. Eng. (former), MBA  
Energy Systems Consultant