

From: hadland@pris.ca
To: [Site C Submissions BCUC:EX](#)
Subject: Fwd: BCUC submission from Randal Hadland
Date: Tuesday, August 29, 2017 10:26:45 PM

----- Original Message -----

Subject: BCUC Randys draft

Date: 2017-08-28 13:13

From: [REDACTED]

To: [REDACTED]

Patrick Wruck
Commission Secretary and Manager, Regulatory Services

British Columbia Utilities Commission

Some of the material that I believe is necessary for the Panel to be making sense of Hydros application is as follows.

Balancing Terms of Reference

Remediation in the case of suspension

A statement from the BC Hydro about what the costs, an estimate, of remediation would be in the case of suspension, for example the costs of slope stabilization, and the cost of controlling drainage from Hydros earth moving to date, under TOR 3 b ii. BC Hydro needs to present benefits that could be derived from some of the work that the contractors have done as well as the costs in 3 b iii, such as road improvement and clearing of flat land with agricultural potential.

I appreciate that the terms of reference were put together in a hurry, but there is an imbalance in the idea that we would look at the costs of remediation of one option and not at the other. The Site of Hydros construction destruction to date would be a serious mess if the project were simply suspended for 7 years or a decade. The slope stability issues that Hydro has had to try to contend with are not going to go away during a suspension and not just at the dam site but any areas where the slopes would be subject to increased slippage because of having been cleared. The leaching from the rock that hydro has been moving is going to continue into the soil and the rivers over that length of time. There would need to be a comprehensive cleanup of the vegetative matter that Hydros contractors have knocked down and chewed up and spit out on the ground wherever they have been working, otherwise a serious fire hazard, an impediment to wildlife travel, and an eyesore for tourists will continue. One of the major costs of a suspension as opposed to termination would be that of leaving present users of the valley in limbo for additional years. Generations of people who have argued for the preservation of the valley, have worked against big odds to keep their hopes for the future alive, and who see a decision to suspend their future for another decade as a burden on themselves and their children.

Including the benefits of work that Hydro has done.

In the same vein, it doesn't do enough to calculate the costs of remediation work for the suspend or terminate options being considered,

unless one also calculates the areas where work done by Hydro has the chance of being of long term benefit under those options. There aren't a lot I can think of but a few come to mind, some of the clearing has been done on low lying flat land in the valley that has large potential for farming, whether in a First Nations system of land management or a cross-cultural one. The roads and bridges that Hydro has upgraded and to some extent made workable would contribute to the benefits the Province and the Peace Region would gain. For example there is recognition that the Bridge across the Peace at Taylor needs to be replaced and the bridge Hydro has had built at the site could handle a portion of the traffic that would otherwise have to go through a longer detour and it could help with traffic problems on other routes. The money and time that has gone into the work site camp can be of short and long term benefit to the people of the Province by using it for a cultural and educational center that might specialize in electricity options, agricultural learning, and as a seniors residence.

A value, either through projected revenue from farming, education, and/or road maintenance savings, can be attributed to these benefits that can be reclaimed when Site C is stopped. Again, if we are going to look at the possible costs of remediation associated with discontinuing the Site C proposal, we should also consider the value that we can recapture and the value that would not have to be spent in some areas for remediation.

Information requirements concerning direct construction costs

In addition to BC Hydros financial documentation, (cost of service, cost benefit analysis, including borrowing considerations, potential cost overruns and categories of them, the contracts signed for work on Site C,) and the forecast mentioned in the TOR, that I expect the BCUC will make public as the crown Corporation makes them available, it is necessary to see transmission line costs required or the segment of transmission line upgrades that would be necessary because of Site C, highways realignment costs, value of Crown land trade/compensation contemplated or completed for First Nations, and any other costs that have been accepted by BC Hydro or the BC Government as part of the site C effort, that have not been included in Hydros estimates of construction costs. For example, any compensation and mitigation measures that would be the responsibility of ratepayers/taxpayers or the governments, the value of crown land that Hydro would be using, or such as mitigation for the loss of agricultural productivity, which Hydro suggested would be 20 million dollars.

The costs associated with decommissioning of the dam if it were to proceed are an important component of the costs of the dam. BC Hydro in its submission to the Joint Review Panel stated that it chooses to not be responsible for this cost, even though there are other high impact energy production systems that require a decommissioning fund. Hydros position is that if, in the future, the people of the Province should require the land for food, should need that particular potential of the valley, that they can pay for it. While arguing for consideration of decommissioning costs in the Environmental Assessment Review I did not think to ask Hydros spokespersons the simple question of Why. Why should it fall on the shoulders of our grandkids to reverse the damage done by the present generation to a valley that otherwise would not need such expense.

I ask the Panel now to ask that question. The Commission is going to look at the costs of remediation for a small fragment of the valley when

the dam is turned down, again. I don't think that Hydro needs to go to great lengths at this time to determine what those costs of decommissioning a flood destroyed valley would be, but it would be appropriate if Hydro would give a general level of multiplication for the entire valley that also considers the return of the valley to its current topography.

Conservation Potential to affect Demand

BC Hydro needs to provide the commission with 1992-95 BC Hydro Conservation Potential Review Collaborative Reports, and the most recent conservation potential review from 2007. The 1992 study done as a direct comparison with Site C at a then projected cost of 3.6 Billion found an end use savings potential of about 30,000 gigawatt hours of electricity, similar to 6 Site Cs. It also considered lifestyle change within the different parts of Hydros consumer base on an initial look basis and found that there could be 15,000 Gwhs that would not necessarily be additive to the above figure but would be much much cheaper. This review took into account social and environmental effects of another Hydro megadam, and the awareness that is evident in society that our ecological footprint has not been recognized in our Hydro rates.

The most recent full review of conservation potential that I am aware of is the 2007 BC Hydro Conservation Potential Review. The report from this study inspired then Hydro President and CEO Bob Elton to write the following, "Our goal is to develop and foster a conservation culture in BC that leads to customers choosing to make a dramatic and permanent reduction in electricity intensity; a visionary approach to energy use that will minimize the impact on the environment and ensure that the provinces electricity needs are met. Following this vision we strongly believe that we can go beyond the 50% conservation target set out by the 2007 BC Energy plan and lead a change such that by 2027 we would return to 2007 electricity consumption levels while allowing for growth and economic prosperity. In the short term, growth will go up, but with concerted action we can bring it back down to 2007 levels."

When you consider that consumption has not gone up since 2007 in part because of the economic downturn, higher price induced conservation, less use in the industrial sector, it appears that Hydros in service date for Site C for use in BC is wholly unrealistic. The economic potential of conservation of electricity to mitigate the rate increases BC Hydros customers are going to be paying over the next few years is very important to the Provinces well being.

In this more recent study after first pointing out that there are likely additional opportunities for conservation and efficiency due to a significant variety of factors, the study sets out the following. "In the combined Upper Achievable Potential scenario, the electricity savings of 15,070GWh/yr in F2026 means that total electricity consumption would increase to about 53,600 GWh/yr, a decrease of about 28% relative to the Reference Case." this finding was based on the following, "BC Hydro has determined that its energy reference price is \$88/MWh, or \$0.088/kWh, based on an average of the results of the 2006 call for new energy supply. It represents the average real levelized cost to deliver firm energy to the load centre in the Lower Mainland.

The conservation potential by 2026 was also referenced to Hydros forecast which has been seen to be inflated. And they have been inflated since the 60's. At the time of the 82/82 BCUC Hearing into

Site C, then Hydro chairman Robert Bonner was fond of saying that we would be freezing in the dark by the late 80's if we didn't get to work immediately on the dam. Thirty-five years later and we still don't need it.

There are a series of recommendations provided at the end of the 2007 review summary concerning next steps, suggestions for 'the next review'.

I am asking the BCUC Panel to direct Hydro to respond with details about the progress on those recommendations and whether Hydro has made plans to instigate the next review. As well, BC Hydro and/or the BC Ministry of Energy needs to provide an explanation of what the current Power Smart and conservation efficiency efforts are comprised of within Hydro.

Development Limitations imposed on BC Hydro

The former government, for reasons that were not made clear, or perhaps were not made at all, chose to limit our Crown Corporations developmental options. BC Hydro or the Ministry of Energy needs to provide an explanation of why other large hydro dams were excluded, and a definition of the difference that allowed Site C to be included, under 3 b iv of the TOR. From the Clean Energy Act, "The projects of the authority, as set out in appendix F-8 of the authority's long-term acquisition plan, exhibit B-1-1, filed with the commission on June 12, 2008, are prohibited projects for the purposes of section 10, in particular, the following projects identified in appendix F-8:

- (a) Murphy Creek;
 - (b) Border;
 - (c) High Site E;
 - (d) Low Site E;
 - (e) Elaho;
 - (f) McGregor Lower Canyon;
 - (g) Homathko River;
 - (h) Liard River;
 - (i) Iskut River;
 - (j) Cutoff Mountain;
 - (k) McGregor River Diversion."
- These projects should not be built, but by exactly the same criteria, neither should Site C. To proceed with Site C simply because it was left off a list seems like a poor way to plan our energy future. The BCUC and the people of BC and our government needs this information about why Site C was not included in the prohibited list.

We have not seen a complete list of the alternatives that individually or grouped together have been considered by Hydro, as being within the scope of BC Hydros abilities, to meet future needs since the 1982/83 hearings, and that data is somewhat out of date. It would be meaningless to provide a new list and not include options for generation or conservation that the former Government prevented Hydro from examining. The financial risk associated with the long-term expectations of building a Site C dam without looking at all the options is very high. I recognize that the new government has asked for a similar portfolio of commercially feasible electricity projects, but there is ambiguity in relation to the Clean Energy Act objectives cited in 3 b iv.

For example in the Objectives there is often mention of the benefits, but no mention of the costs of following such a policy. The closest the

objectives come is in '(m) to maximize the value, including the incremental value of the resources being clean or renewable resources, of British Columbia's generation and transmission assets for the benefit of British Columbia;' Without presuming anything we have to recognize that the costs and the benefits are both to be included in the calculations of value, and that all such calculations have to be made public in order for the members of the public to be able to make argument about whether such value is sufficient to justify a claim of being in the interest of the Province.

I will make the argument that some of the various objectives within the Clean Energy act as they pertain to the need for additional electricity generally and Site C specifically, such as objectives n) and p), which deal with export of power should not be considered in this review, as per TOR 3 b iv. Construction of Site C has never been justified in terms of export, and the costs on our system, and the Province, of such a plan would rule out export purchases of power from Site C, in the same way that BC consumer demand would drop if Site C costs were factored into rates.

There have been suggestions that if Site C gets built, power generated in the period of time in which it would be surplus could be exported and the Objectives might seem to agree with that comment. The costs though have to be calculated into the equation. Given the possibilities outlined in BC Hydros 2007 Conservation Potential Review it is possible that there would be no foreseeable time when a Site Cs worth of total electricity supply would be needed. From that point you have to assume that the total costs of Site C would be borne by export customers, otherwise the ratepayers/taxpayers of BC would be subsidizing the buyers of the surplus power.

It might also be said that the costs of Site C could be rolled into the heritage system costs in order to make the price of exportable power more in line with export sales pricing. This argument ignores the real social and environmental costs that have been swept under the carpet, externalized from Hydros rate structure and pricing. If those costs and the costs of Site C are accounted for, and at least to some extent they can be, the price of our power, or the price of our subsidization of outside the Province business and residential customers, will make such sales unprofitable. The option of rolling Site Cs costs into the larger system also ignores the point that any next less expensive alternative to Site C would make more sense than another dam. We don't have the costs of alternatives that could be included under the Clean Energy Act objectives, as of the date of the Joint Review Panels examination of Site C, to make the necessary evaluation of the relative exportability of Site C power.

Construction Costs

I understand that there is a tendency to try to keep discussion of costs relative to Site C to strictly financial costs of construction, but there is a dividing line between what the Commission will be considering and that which the Cabinet will consider after the BCUC Panel reports. The costs attributable to Site C from impacts on society, the environment, and current valley resources are not externalities. From a planetary perspective, and I submit that we do need to think globally when we act locally, there is no externality in a closed system. All of those costs will be paid for by society and they would come due in less time than Hydro is projecting to pay off the construction costs if we were to let the dam proceed.

Secondary benefits of a potential Site C dam, such as those that might arise from the use of the electricity one it were sold, or that might arise because of the spending by people involved in construction, cannot be claimed as benefits of Site C since those same benefits would arise from whatever energies the province chooses to develop.

Not all of those costs are non-monetizable and over the years there has been a lot of discussion about how to determine, allocate, and pay for those costs. They are costs of construction. Whatever of those costs, are direct costs to Site C, and to what ever extent that we can include those costs in the decision about the dam, we should do so. As an example, in pre-JRP consultations BC Hydros environmental consultation team agreed that the full potential value of the agricultural land in the valley should be considered as part of the cost of Site C, but when the time came to present the evidence Hydro declined. And yet the estimate that a portion of the land in the valley could produce enough vegetables for a million people by Wendy Holm has not been contested.

My own estimate to the JRP of a potential value was based on blueberry cropping on the agricultural land in the valley, within the area of class one climate capability, and showed a gross income as sold retail of a quarter of a billion dollars/year. I arrived at a similar calculation during the 82/83 BCUC Site C panels examination after that panels legal staff got agreement from Hydros cost/benefit people that Site Cs benefit to the Province could be determined by multiplying it's production by the average price per kwh. The consumers cost. And that is what the panel is supposed to determine.

I ask the Panel to please ensure that you have such a potential value for each of the monetizable values inherent in the valley, and I ask that the panel recognize the cost to society of the significant and irremediable impacts on the First Nations of the area in the context of the greater cumulative impacts on this their Treaty territory as presented by First Nations people.

Please include this letter as a submission to the Site C Panel of the BCUC. Thank you again for your time, Randal Hadland [REDACTED]