August 30th, 2017

Dear Members of the Commission Panel,

Re: Inquiry into continuing, suspending or terminating the Site C project ("Site C Inquiry")

On behalf of Sekw’el’was please find attached a submission regarding the BC Utilities Commission’s ("BCUC") Site C Inquiry.

Pursuant to the Order of the Lieutenant Governor in Council No. 244 (the "OIC"), the Inquiry was ordered to assist in determining whether continuing with the Site C Project is in the public interest.

The submission made by Sekw’el’was provides an analysis of a viable alternative to the building of Site C, through the refurbishment and restoring of the capacity and energy from the BC Hydro’s Bridge-Seton hydro generation facilities.

Thank you for your consideration of our submission.

Respectfully,

Chief Michelle Edwards
British Columbia Utilities Commission

BC Hydro and Power Authority
British Columbia Utilities Commission Inquiry Respecting Site C

Submission from First Nations
Sekw’el’was Cayoose and N’Quatqua

August 30, 2017

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Part 1 – INTRODUCTION AND OVERVIEW

A. Overview

One August 2, 2017, the Province Government of British Columbia (the “Province”) issued an Order in Council directing the BC Utilities Commission (BCUC) to provide advice BC Hydro’s Site C project (the “Site C Inquiry”), including implications of the following:

i. completing the Site C project by 2024, as currently planned,
ii. suspending the Site C project, while maintaining the option to resume construction until 2024, and
iii. terminating construction and remediating the site.

The BCUC has been asked to address several questions including:

Given the energy objectives set out in the Clean Energy Act, what, if any, other portfolio of commercially feasible generating projects and demand-side management initiatives could provide similar benefits (including firming; shaping; storage; grid reliability; and maintenance or reduction of 2016/17 greenhouse gas emission levels) to ratepayers at similar or lower unit energy cost as the Site C project?

Sekw’el’was Cayoose and N’Quatqua will set out in this submission that the restoration of BC Hydro’s Bridge-Seton Generation System (“System”) to full capacity provides an alternative source of capacity and energy in conjunction with other generation and demand-side management initiatives that has similar benefits to Site C and can be provided at a similar or lower cost to the production of capacity and energy through the Site C project. The reality is that the Bridge-Seton Generation System is being de-rated while billions of dollars are being spent on Site C.

The Communities of Sekw’el’was Cayoose and N’Quatqua wish for a firm commitment for the near-term rehabilitation for the Bridge-Seton Generation System.

B. Sekw’el’was Cayoose and N’Quatqua

We, the people of Sekw’el’was, have survived and thrived through many hardships. We are proud of who we are and where we come from. Our community has a rich history of tool-making and trading with other nations. Sekw’el’was is known as a gathering place for many neighbouring nations.
Our community is located in an area rich with resources such as water, fish, game, and medicines, which makes us a prime nation to trade with. Our ancestors are known as strong stone tool-makers and this is evident in the stories that are written on the land, which is another reason nations came to trade with us.

Sekw’el’was is located at the heart of the St’át’imc nation, and our community is a central location for other St’át’imc to visit. Our community is connected to other nations through a variety of transportation corridors, including trails and waterways, which provides great opportunities to trade and barter. Other nations came from all over to trade their traditional foods, tools, clothing, and stories. We are friendly, inviting and great hosts, and these qualities are still very evident in our community today.

Our ancestors are a strong nation; they passed down their knowledge and way of life to the next generation. Our culture and land are gifts from the creator which should be cherished forever. The land, Mother Earth, sustains our people and we are now moving forward in a positive way.

The Community of N’Quatqua is situated at the head of Anderson Lake and has a distinct culture and shares the St’át’imc language. As Interior Salish we have strong connection to our land, water and all life, we value our cultural teachings and hold our traditions high. We believe in having strong roots with our past, as well as continual growth with the future to bring a balanced and harmonized approach to our lives. Our people have thrived in our territory for generations, and have many amazing teachings that have helped us live in abundance and showed our people how to live in harmony.

The traditional territory of the St'at'imc people, now known as the Sea-to-Sky corridor is the home of N'Quatqua, and has served as a key route to connecting the interior to the coast. Once known as the Douglas Trail, the road ran from the coast into the territory of the St'at'imc people and was used for prospectors going North. Now the Douglas Trail is seldom used but is crucial to reach many isolated reservations such as N'Quatqua, Seton, Shalalth, Port Douglas and Skookumchuck. N'Quatqua has a rich history that predates European contact, and is steeped in mystery and ancient teachings.

C. BC Utility Commission Site C Inquiry

It is Sekw’el’was Cayoose and N’Quatqua understanding that the BCUC has been asked to conduct the Site C Inquiry to determine if Site C is an economical means to supply electricity to BC Hydro’s ratepayers in British Columbia.

There are a number of financial risks that arise if capital continues to be committed for the completion of Site C, these including the:

1. Provincial credit rating as the Province guarantees BC Hydro’s debt;
2. Current financial state of BC Hydro, with over $6 billion in deferral ("regulatory") accounts by 2019\(^1\) and absence of a real equity base,
3. Discriminatory water rental rates with payments to the Province of $392 million in Fiscal 2016\(^2\);
4. Until recently, determination by the Province to delay rate increases that would pay for accumulated debt, and deferral accounts and other unfunded mandates.

In the past, the Province has required a dividend equal to 85 percent of BC Hydro’s earnings. The result of this dividend has been to reduce BC Hydro’s ability to pay for sustaining capital expenditures, without having to borrow the money for capital projects.

In 2017 Moody’s Investors Service B.C. put BC Hydro on a credit watch list, noting “that projects like Site C are pushing up B.C. Hydro’s debt levels, and adding to concerns about the province’s overall “high debt burden” compared to its peers, Moody’s also wrote in its credit opinion. B.C. Hydro’s debt has increased from $8.1 billion in 2008 to a projected $18.1 billion last year, and there is a further $20 billion expected in the future for infrastructure projects, a $2-billion annual upgrade program and the Site C dam.”\(^3\).

“The anticipated increase in debt continues to pressure the province’s rating since it raises the contingent liability of British Columbia,” wrote Moody’s, which has expressed similar concerns the past three years. Hydro’s debt is ultimately backstopped by taxpayers if the situation worsens, noted Moody’s.

The building and completion of Site C will add additional debt to BC Hydro and it remains uncertain whether the additional energy and capacity represents the best value for ratepayers.

One of the questions that the BCUC will need to address in their response to the Province is the accuracy and timing of load forecasting. BC Hydro must take into consideration a myriad of issues when trying to forecast load over the next 20 years, including resource development, electric vehicles, railroad fuel-switching, industrial, commercial and residential self-powering, going off the grid, and net-metering.

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\(^1\) British Columbia Hydro and Power Authority (BC Hydro) Fiscal 2017 to Fiscal 2019 Revenue Requirements Application, Chapter 7 Regulatory Account Balances: Fiscal 2015 and Fiscal 2016 Actual, Fiscal 2017 to Fiscal 2024 Forecast Table 7

\(^2\) British Columbia Hydro and Power Authority (BC Hydro) Fiscal 2017 to Fiscal 2019 Revenue Requirements Application Table K-8 Fiscal 2016 Cost of Energy

\(^3\) Rob Shaw - Vancouver Sun January 23, 2017
BC Hydro has demonstrated in the past that their demand forecasts tended to overestimate the actual demand growth. The Joint Review Panel Report on Site C noted:\(^4\):

“that the difference between sales forecasts and actuals from 2005 to 2011 were seriously askew in 5 of those 7 years, a period that included the unusual, but repeatable, recession of 2008–2009. The Panel further notes that the 2012 load forecast is substantially lower than 2011: by four percentage points, on average, for the 2013–2032 period. The difference is roughly half of what Site C would provide.

One factor affecting utility forecasting is a tendency to regard the costs of a too low forecast as greater than the costs of over-building to a too high forecast. Insufficient capacity is seen as calamitous: brownouts, rotating blackouts, or expensive emergency purchases from uncertain suppliers might result, and the regulatory, public, and political pressure might be very high. Recent experience in Newfoundland produced “language…that was quite elevated.” Legislation reinforces this bias. Further, the consequences of producing a surplus may be positive, if it can be sold for more than it costs to produce. For a long time, this was generally true. But times have changed, and BC Hydro’s expectation is that it might sell Site C surpluses for only about one-third of their costs, leaving B.C. ratepayers to pay for the rest.”

Part 2 – REASONS FOR SUBMISSION TO SITE C INQUIRY

Sekw’el’was Cayoose and N’Quatqua are making this submission to the BCUC to direct discussion towards alternatives to Site C. Specifically, BC Hydro has existing de-rated facilities that are in disrepair and yet could provide additional capacity and energy as one of the alternatives to continuing to build Site C.

In addition, Sekw’el’was Cayoose and N’Quatqua wants BC Hydro to restore the System as a priority in their capital planning and expenditures. By not maintaining the System on an on-going basis over time, BC Hydro has caused substantial damage to the ecosystem, fisheries and wildlife that Sekw’el’was Cayoose and N’Quatqua and the St’at’imc people depend upon to sustain their way of life. BC Hydro is choosing, on their own, to destroy ecosystems that are interdependent, and to destroy ways of life to all people. To choose to not repair aging assets over what we are all gifted from the Creator shows how lost our societies are becoming.

\(^4\) Page 286 of the Joint Review Panel Report of Site C - dated May 1, 2014
Part 3 – AN ALTERNATIVE TO SITE C

A. Legislative and Legal Framework

Under the Terms of Reference for the BCUC Site C Inquiry the Province has directed that consideration be given to the objectives under the Clean Energy Act. For the purpose of the BCUC considering this submission the following objectives apply:

Part 1 (2) (e) to ensure the authority's ratepayers receive the benefits of the heritage assets and to ensure the benefits of the heritage contract under the BC Hydro Public Power Legacy and Heritage Contract Act continue to accrue to the authority's ratepayers;

(k) to encourage economic development and the creation and retention of jobs;

(l) to foster the development of first nation and rural communities through the use and development of clean or renewable resources;

(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;

The BCUC must also consider the impacts that BC Hydro is having on aboriginal rights and title should a decision be made that continues to commit capital expenditures to Site C and continues to minimize the use of available capital to restore the Bridge Seton System.

B. Current Condition of BC Hydro Assets in the Bridge Seton System

BC Hydro has substantial aging assets that are in poor to extremely poor condition throughout the System. Over the past fourteen years BC Hydro has planned and then delayed capital maintenance, repairs and replacement of equipment and facilities. This has resulted in progressive deterioration of equipment and facilities.

Bridge River Generation Facility (“Facility”) – Year after year, BC Hydro management continues to defer improvements identified in its capital plan. The
generators have been de-rated resulting in reduced ability to convey water through the Facility. The Revenue Requirements Applications (RRA) filed publicly with the BC Utilities Commission 2007–08, 2009 -10, 2011, 2012–14 and Fiscal 2015 -16 identified work that was required for the System including seismic problems in relation the LaJoie Dam and upgrades of Bridge River unit generators. However, these units were commissioned almost 50 years ago and have not undergone a major refurbishment since being placed in service. Most of work that was identified in the RRAs has been either postponed or deferred.

- In 2005 BC Hydro reported that four of its generators at the Facility were in poor condition.
- Subsequently in 2015 and 2016 BC Hydro de-rated all of the Bridge River generators reducing the ability to pass water from a maximum of 160 cm/s to 107 cm/s.

Although some of the work (transformer replacements and unit upgrades) is being undertaken in 2018, this represents only a small portion of the capital plan that is required to bring the entire Bridge-Seton Generation System up to a good, reliable condition.

**Seton Dam and Canal** – The Seton generating facilities were completed in the 1950’s. The concrete used in the civil infrastructure is over 60 years old and the dam has an expected lifetime between 50-100 years. Along the 3.8 km canal there is continuous and increasing seepage through the Canal walls, raising local concerns about deterioration of the Canal integrity and the possibility of a breach in the canal. BC Hydro repairs only the most significant cracks in the Canal.

- BC Hydro needs to address how the Seton facility upgrades will be implemented and prioritized within the entire Bridge River System
- The structural integrity of the Seton facilities should be addressed in the next 10 to 25 years, coinciding with the LaJoie and Bridge Generating capital upgrades.
- Although BC Hydro Dam Safety recommendation is for the Canal to be inspected every five (5) years, BC Hydro had not inspected the Canal since 2010. The most recent inspection was in 2017.

Sekw’el’was Cayoose Creek Band wants the Canal to be de-watered on a more frequent basis, such as every three years or more, so that maintenance can be done on a regular basis. The Sekw’el’was Community resides just below the canal.

**LaJoie Dam and Downton Lake Reservoir** – BC Hydro’s Dam Safety identified significant seismic risks in the LaJoie Dam facilities and ordered the Downton reservoir to be lowered which required release of substantially higher water flows
through the Terzaghi Dam into the Lower Bridge River, and through the Bridge River facilities into Seton Lake and the Seton River. Of note:

- In 2016 the Comptroller of Water Rights issued an authorization to BC Hydro to lower the maximum Downton Normal Reservoir from an elevation of 749.80 m to an elevation of 734 m.
- BC Hydro Dam Safety completed a study that outlined the seismic risks and options for addressing the LaJoie Dam and facilities in 2003.
- To enable these operational changes BC Hydro applied to the Comptroller of Water Rights for a Variance Order to increase water flows down the Lower Bridge River via Terzaghi Dam.
- The Comptroller issued an Order on March 14, 2016 stating the Terzaghi Dam Target Flow Releases and Annual Water Budget. This order was superseded by subsequent Orders on April 20, 2016 and May 20, 2016, respectively. The May 20th order was then superseded by a further Order issued on June 17th, 2016. The reason for the number of revision was due much higher water flow than had been originally projected.

Although the most recent Revenue Rate Application contains a 10-year Capital Forecast (2016) that includes LaJoie Dam, the forecast does not identify a start date for the work to begin nor has any capital funding been committed to the project.

C. Impacts on Sekw’el’was Cayoose and N’Quatqua

The St’at’ímct spent over 20 years negotiating with BC Hydro to resolve historic grievances caused by impacts from the hydro-electric facilities that were built in St’at’ímct territory. One of the key objectives of St’at’ímct was the restoration of the ecosystem and to see the return of salmon and other fish and wildlife to our territory.

A key provision of the St’at’ímct (PC) Settlement Agreement, signed between St’at’ímct, BC Hydro and the Province, was to set an average annual water flow of between 3 to 6 cms for the Lower Bridge River.

Starting in the spring of 2016, BC Hydro increased the annual average flow for the Lower Bridge River went from 3 to 6 cms (maximum 15 cms) to an annual average of over 25 cms with maximum flows over 100 cms. On the Seton River, directly through Sekw’el’was territory, flows reached 113 cms yet the target maximum flow is actually 60 cms.

At LaJoie Dam, which is in the territory of N’Quatqua, lowering of the Downton reservoir results in ecosystem changes that will last over the next twenty years under BC Hydro’s current capital planning horizon. The ecosystem will be forced to adjust when new vegetation growth occurs in the lowered reservoir zone and wildlife
will have to adapt to this new zone as part of their habitat. When the LaJoie Dam is finally restored, the water level will return back to its former authorized maximum and wipe out this newly formed ecosystem. Once again bringing destruction to the N'Quatqua territory.

N'Quatqua's community is located at the end of Anderson Lake, which feeds water into Seton Lake. The changes in water flows have impacted the return of salmon into spawning areas in the community. Salmon must travel through Seton River into Seton Lake and then make their way all the way through Anderson Lake to complete their spawning cycle. The changes in water flows have already caused early migration of sockeye fry; they would normally rear in the lakes for 2 years before starting their epic journey to the Pacific Ocean.

Over the course of the last two years the Bridge-Seton System has operated out of compliance with their Water Licences and the Water Use Plan. The substantially higher water flows have caused impacts to fish habitat including: erosion of spawning beds, earlier emergence and mortality of salmon smolt and fry, death of adult steelhead, Kokanee and Seton Lake resident sturgeon.

Additional impacts include erosion, impacts and loss of use of cultural and spiritual areas, and the loss of spawning beds which are having great impacts on the wildlife that uses these areas for food. Erosion and flooding have also impacted access to the wildlife birthing areas resulting in stranding and separation of young from their mothers.

The St'at'imc Way of Life is being destroyed, again.

D. Impacts on Ratepayers

In British Columbia, today's ratepayers incur the costs associated with the settlement of historic wrongs perpetrated on First Nations from many of the existing facilities that were built by BC Hydro and its predecessors. These settlements however provide certainty to ratepayers that the facilities can continue to operate as long as BC Hydro honours the terms of the settlement agreements.

In honouring the St'at'imc Settlement Agreement, BC Hydro should make the necessary capital investment into the restoring the Bridge-Seton Generation System to the conditions that are specified in the St'at'imc Settlement Agreement and to the terms of the Water Licences that are required to operate the System.

Without a capital investment into restoration of the entire Bridge-Seton Generation System, Ratepayers are losing more of the capacity and energy that can be produced by the System and they do not gain the full value of the benefits to BC
Hydro under the St’at’imc (PC) Settlement Agreement and individual Community Agreements.

E. Benefit and Costs of Restoring the Bridge Seton System

Restoring the Bridge-Seton Generation System to full capacity should be part of a suite of alternative to Site C that will ensure that ratepayers are not incurring the costs of bring a new generation facility on line.

Other alternatives include continuing to purchase power from independent power producers that are either owned by or in partnership with First Nations. The cost of some of these clean energy alternatives, such as wind and solar power, are declining. These clean energy solutions are far less costly to develop than Site C and development can be timed to meet energy demands of the province.

The Bridge-Seton Generation System has a maximum capacity of 551 MW, of which Bridge 1 & 2 has a nameplate capacity of 460 MW that has been historically operated at 500 MW. At Bridge 1 & 2 a significant amount of the generation capacity has been de-rated due to a lack of capital investment over the last decade and a half. The Bridge River Facility Asset Plan, which BC Hydro provided in response to BCUC IR 1.88.6 to the RRA F17–F19, contains a table showing the Equipment Health Rating for Bridge 1 & 2, which we have recreated and updated below with added notes and changes indicated in the RRA including Appendix R:

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<th>Bridge 1 &amp; 2 Equipment Health Ratings</th>
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We been informed by BC Hydro that all of the generators at Bridge 1 & 2 have now been de-rated, although BC Hydro has indicated in public documents that only Bridge 2 Units 5 – 8 have been de-rated:
Based upon the historical operating capacity for only Units 5 – 8 the System has lost over 100 MW of capacity, however the loss of capacity is even greater with the derating of Units 1 – 4.

It is our understanding that Bridge 2 Units 5 & 6 have several capital projects currently in progress. The projects include the generators, exciters, governors and circuit breakers with a projected In Service Date (ISD) of F19 - within the next 1.5 years. The RRA states that BC Hydro was to seek approval from its Board for Implementation Phase funding in February 2017. The response to BCUC IR 1.88.7 states that the project will re-instate ~54MW of the de-rated capacity (de-rated to 48 MW each), bringing capacity back up to 75MW/unit (150 MW for the 2 units). The response to IR 2.261.5 and BC Hydro’s Final Argument states that restoration of de-rated capacity will bring back 35 GWh of annual energy.

Due to a number of factors and the history of commitments in previous RRAs being broken with delays and cancelations of projects, the F19 ISD may not be met. The changes in water flows in the System due to the lowering of Downton Lake Reservoir have meant that BC Hydro may not be able to take outages for the duration required for completion of these projects. Since Bridge 1 & 2 has no bypass ability, the generators may need to be kept on-line in order to pass water through the facility to Seton Lake.

Subject to the completion of the Units 5&6 Upgrade project on schedule, the ISD for the Units 7/8 Upgrade project was given as F23. Various IRs, mainly in the 1.88 series, question why U5&6 and U7/8 weren’t managed as a single project, and also whether the U7&8 project ISD could be advanced (see 1.88.5 and 1.88.7). BCH’s response was that the U7&8 project only started Identification phase in June 2016 and is well behind the U5&6 project. BC Hydro has stated that Definition phase for the U7&8 project will only begin in F19 --- (IR1.88.4). We would like to see BC Hydro advance the in-service date for the Units 7/8 Upgrade Project as early as possible,
and if possible by no later than F21. This upgrade would return 37 MW of capacity to the System and corresponding energy benefits.

Bridge 1 Units 1 – 4 are each 50 MW nameplate units, historically operated at 50 MW, with only U4 de-rated to 40 MW. In BCUC IR 1.88.6 Attachment 1 to the F17-19 RRA, BC Hydro identifies four individual projects to upgrade the four units. These projects would include the generators and governors, with ISD's extending from F23 to F28 (roughly 1 unit per year). We would like to see BC Hydro advance the start date and in-service date for each of these projects to regain lost capacity and energy from the assets, and also return the four units to reliable condition.

Other projects related to Units 1–4 includes the Replace Transformers T1 & T2 project (each of the existing transformer handles 2 units), which is on-going with reported ISD of either F18 or F19. Replacement of the U1-4 circuit breakers is also another separately managed project with a reported ISD of F18. We would like assurances from BC Hydro that it is on-track to meet the targeted in-service dates for both of these projects to realize the unit reliability benefits from them.

For the LaJoie Dam project BC Hydro's strategy is to have BR1 and BR 2 restored to full capacity and reliability restored before work on the LaJoie Dam begins to address the seismic and seepage issues. The two plants need to have their full capacity and reliability to handle the flow conditions that work on the dam would create (to control and minimize the flows through Terzaghi Dam down the Lower Bridge River).

BC Hydro has never fully set out what upgrades and reconstruction is required on the LaJoie Dam. However they have communicated that the Dam has seepage and seismic issues. We have had over the last several years' informal discussion with BC Hydro staff and they had indicated that the Intake tower has similar seismic issues that need to be addressed as well. If BC Hydro initiates upgrades to the LaJoie facility with the goal of maintaining the current operating parameters, a drafting of the Downton Reservoir will be required multiple times over multiple years.

The 1996 legal action was the second time that Department of Fisheries (DFO) charged BC Hydro. “In 1991 and 1992, due to large inflows into the reservoir, BC Hydro was forced to spill water into the Bridge River, causing extensive damage to fish habitat due to the removal of gravel. DFO accused the utility of a Harmful Alteration, Disruption or Destruction (HADD) of fish habitat under S.35 of the Fisheries Act. While the court found that BC Hydro had been duly diligent in the 1991 case, responding as best as it could to the major water inflow (a 1 in 200 year flow event) and then providing to mitigate the situation, the utility suffered from bad press coverage as a result of the event. Furthermore, out of court negotiations for
the 1992 case resulted in an agreement between BC Hydro and DFO whereby the utility would pay $600,000 for modifications to the dam structure and fish habitat restoration, in addition to releasing water flows for fish spawning and migration (DFO, 1998). In 1997, another spill prompted DFO to again charge BC Hydro, despite the fact the agency and the utility had been discussing ways in which BC Hydro operations could cause less damage to fish and fish habitat. Also on this occasion an agreement was reached out of court, to begin environmental flow releases downstream of the Terzaghi dam, set up a habitat restoration and monitoring program, and finalise these solutions through a Water Use Plan (which started in 1999).”

The current drawdown of LaJoie will most likely take water flow levels in the System down to those which precipitated the 1996 Lawsuit by the DFO against BC Hydro.

Finally, for the safety of the community and protection of the environment, Sekw’el’was feels that the BC Hydro needs to address how the upgrades to the Seton facilities. Without addressing these facilities BC Hydro may restrict the ability and timeframe the rehabilitation of the overall System.

The Seton Generating Facilities was completed in the 1950’s and the concrete used in the civil infrastructure is over 60 years old. The general expected lifespan of a concrete dam built between the 1940’s and 1970’s is generally considered to be between 50-100 years. Due to many factors affecting the condition of the Dam it is not possible to give an exact number the years of service remaining in a dam. Environmental conditions such as exposure to freeze/thaw and the presence of AAR (a chemical process causing expansion and cracking) are both known factors that reduce the lifespan of concrete and are both present in the Seton Dam, Canal and Powerhouse. It is highly likely that the structural integrity of the Seton facility will need to be addressed over the next 10 to 25 years which coincides with Bridge and LAJ capital upgrades.

Based upon the available public information and estimates that BC Hydro has provided in the F17-19 RRA, the indicated overall capital cost of restoring Bridge

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5 OPENING A POLICY WINDOW FOR ORGANISATIONAL CHANGE: THE CREATION OF BC HYDRO’S WATER USE PLANNING PROGRAM by LUCIA SCODANIBBIO - A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN PLANNING. The Faculty of Graduate Studies, University of British Columbia Page 74

6 Bridge River Facility Asset Plan (BCUC IR 1.88.6 Attachment 1) and RRA Appendix I & J.
1&2 and LaJoie Dam would be over $1 Billion (no degree of accuracy can be assigned to the numbers provided by BC Hydro). These estimates do not address the costs of addressing the seismic issues at Terzaghi Dame and the seepage issues in the Seton Canal. Completion of the identified capital projects would address the significant business risks that BC Hydro faces, which it has identified at the facilities, including safety (communities, workers and the public), environmental, financial, reputational and reliability risks.

Part 4 – COMPARISION TO SITE C

A. Costs to Build Site C

Since the Site C Project was approved, budgeted cost estimates have increased from $6.6 billion in 2010 to $8.8 billion in 2016 - an increase of $2.2 billion or by 33.3 percent.

Based on the experience at the Muskrat Falls hydroelectric project in Newfoundland and the Keeyask project in Manitoba, there is a very high probability that the $8.8 billion figure will also increase.

Mr. Marc Eliesen, former President and CEO of BC Hydro in his submission to the BCUC on the Site C Site C Inquiry states, “that the cost of Site C has a high probability of increasing from $9 billion to $12 billion—by more than 30 percent.”

When looking at BC Hydro’s 10 year Capital Plan one can see from the chart below that Site C makes up the largest portion of the expenditures on the generation side of BC Hydro.

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7 BC Hydro’s Dam Safety Program and Risk Management Processes - Stephen Rigbey Director, Dam Safety, BC Hydro – presentation to Ministry of Environment and Park, Alberta, April 24, 2017
B. Impact on Sekw’el’was Cayoose and N’Quatqua if Site C Proceeds

Sekw’el’was Cayoose and N’Quatqua have set out in the submission that there are viable alternatives to Site C, including restoration of the System, that can fulfill the capacity and energy needs of British Columbians over the next 20 to 30 years.

If Site C is cancelled then BC Hydro can redirect both capital funding and human resources to the Bridge-Seton Generation System to restore it to full capacity and reliability in a shorter timeframe than is indicated in the current RRA and the 10 year Capital Plan.

In assessing the full restoration of the System it is important that consideration be given to how the system would operate in the future in order to meet the electrical supply needs of BC Hydro and restoration of the ecosystem that has been damaged and destroyed by not maintaining the System.

As set out in Part 3 Section C the mechanical facilities and conveyance structures of the System continues to decline as does the condition of our
surrounding watersheds and habitat, and resultantly, the fish and wildlife. This System has not been managed in a manner that reflects and upholds BC Hydro’s responsibility to the Province and the ratepayers.

Progressive impacts, unmitigated, will eventually result in irreversible damage to an already stressed and fragile ecosystem. Cumulative effects do not reveal themselves overnight. As damaged environmental conditions become the “new norm” it becomes increasingly difficult to assess the full extent of the impacts on our territory starting from the first year the Bridge-Seton System was allowed to deteriorate with inadequate maintenance and sustaining capital spending by BC Hydro. As is generally known, the multi-year reproductive nature of anadromous fish also make it difficult to determine the severity of temporal impacts, until it’s too late.

If the Province decides to proceed with Site C after the review is completed then it will casts significant doubt on whether it will honour its commitments to the implementation of the United Nations Declaration on the Rights of Indigenous Peoples and Calls to Action of the Truth and Reconciliation Commission.

The St’at’imc Way of Life is defined by, and dependent on, the unique and fragile cultural fishing areas and spawning habitat within the territory’s rivers and lakes; but through BC Hydro’s mismanagement of the Bridge-Seton System our Way of Life is being destroyed.

Mr. O’Riley, who is now President of BC Hydro, spoke to the impacts, consequences and risks to BC Hydro, the environment, First Nations and ratepayers in the 2009/10 RRA\(^8\) when he referred to restoring the John Hart facility on Vancouver Island and an oil spill at Ruskin (facility under major renovation and renewal):

**MR. O’RILEY:** A: Well, I think we’ve talked a lot in the past about how we manage the business of B.C. Hydro and we’re not like an investor-owned utility that all we care about is our income and our shareholder earnings. So, we have -- we consider very broadly the impacts on the shareholder, on the ratepayer, on other stakeholders in communities that are impacted by these assets. For example, the John Hart, the concern with John Hart is actually less of are liability issue, less of a dollar issue, it’s more of an environmental issue. Because we have the risk of shutting off the flows to one of the best salmon rivers in the province. It’s a very, very significant risk for us. So, there is a very broad concern in B.C. Hydro about managing the risks that flow from these assets. Some of them are financial. Some of them flow through the deferral account. Some of them are externalities that we impose on society.

A recent example that had negligible financial consequences, in September, we had an oil spill at Ruskin and, but for the grace of God, it could have been an absolute disaster. We lost – it turned out we lost 100 litres of oil at a time of year when there wasn't really any impact on the salmon. It could have been 2,000 litres of oil at a time of year when there were fish in the river, either the eggs and the smolts or the returning salmon. So that's – and that's the risk that goes with having an 80-year-old plant that you're trying to hold together with tape and twine, essentially, until we get the thing replaced.

So that's a risk that doesn't, on the face of it, necessarily flow through the financial statements or the deferral accounts, but it's a risk we take very, very seriously as a company. So, we're not just motivated by the dollars that go to the shareholder, we're motivated broadly by the impacts that we impose.

The same set of circumstances has existed on the Bridge Seton system for many years and it is causing irreparable damage, while BC Hydro continues to hold the system together “with tape and twine”.

C. Impact on Ratepayers

Even without Site C, BC Hydro is financially stressed. Ratepayers will face higher rates in order to address the debt that BC Hydro is already carrying. These costs to ratepayers can be mitigated by choosing a set of lower-cost viable alternatives that use existing BC Hydro assets and obligations to BC Hydro to provide additional capacity and energy.

By not undertaking Site C, ratepayers can see capital investment being made to the System that will bring back the full capacity, energy and reliability of the System. By undertaking these investments on an accelerated basis, BC Hydro will reduce the level of environmental damage and the risks to human safety.

Part 5 – Conclusions

We ask that the BCUC consider the following in assessing whether the Site C project should be cancelled and the benefits that would result from the restoration of existing assets that are owned by BC Hydro:

1. Continuation of Site C will impose unsustainable costs on ratepayers, including First Nation communities throughout British Columbia;
2. BC Hydro has existing assets throughout the province that can be repaired and upgraded to provide viable economic alternatives at similar or less costs than power from Site C;
3. The Bridge-Seton Generation System is one of the viable alternatives to Site C;
4. If Site C proceeds and accelerated investments are not made in the System then the St’at’imc people will continue to experience on-going destruction of the ecosystem that they rely upon for fisheries, wildlife habitat, and cultural use.