

September 3, 2020  
British Columbia Utilities Commission  
Suite 410, 900 Howe Street,  
Vancouver, BC, V6Z 2N3  
Attn: Marija Tresoglavic, Acting Commission Secretary

Dear Madam:

**Re: British Columbia Hydro and Power Authority Long-Term Resource Plan Filing Date (2021 LTRP) - BCUC Project No. 1599117**

This is the submission of the intervener David Ince, P. Eng. as per the regulatory timetable set out in Order G-205-20.1

In Exhibit A-2, the Commission asked BC Hydro to provide:

- a. “the date by which BC Hydro will file its next long-term resource plan; and
- b. a proposal for an interim filing of BC Hydro’s current planning context that would, in the absence of a recently filed long-term resource plan, aid in the review of BC Hydro applications filed prior to the BCUC review of the next BC Hydro long-term resource plan.”

BC Hydro responded by letter on August 20, 2020; this intervenor understands that BC Hydro is proposing the following schedule:

1. October 2020 – a submission by BC Hydro containing key basic plan inputs, including the initial load/resource balance and price forecasts, that will be used in its Fall 2020 consultations on development of the 2021 LTRP, filed for information,
2. Spring 2021 – a draft BC Hydro Board of Directors - approved LTRP that BC Hydro will have been informed by the 2020 consultations, filed for information, and
3. September 2021 – BC Hydro’s LTRP as approved by the BC Hydro Board, filed with the Commission for review under the Utilities Commission Act.

Consistent with previous planning processes, BC Hydro has already initiated the following three streams of consultation:

1. Consultation with Indigenous Nations that were planned for the spring of 2020, but largely due to Covid-19, have been delayed to the Fall of 2020,
2. Public and customer consultations, set to begin in September 2020, and includes an online survey and virtual regional meetings, and
3. The Technical Advisory Committee (TAC) for the LTRP for which meetings were initiated in March, 2020, and several virtual meetings have already been held on a range of subjects including the effects of the COVID-19 pandemic on the load forecast, electrification scenarios, demand-side management and rate options, generation resource options and distributed energy resources.

This intervenor’s submissions are as follows.

BC Hydro’s most recent LTRP was approved by the Government of B.C. in 2013. This intervenor participated extensively in this submission on behalf of BC Hydro, and understands the complexity, workload, consultation requirements, government ‘buy-in’, and future rate consequences of an implemented Plan. Previous BC Hydro plans have resulted in significant strategic investments, and major implications for the energy future of the province. These include capital costs, rates, and

ultimately economic impacts such as employment, GDP and the direction of entire industries such as LNG and upstream natural gas.

BCUC Order No. G-205-20 states “the lack of a more recent plan impedes the BCUC’s ability to efficiently discharge its regulatory responsibilities in relation to BC Hydro”. This intervenor agrees as to the importance of a timely filing of the 2021 IRP which will inform future regulatory filings for years to come.

This intervenor agrees with BC Hydro in its letter of August 20, that: “the 2021 IRP is likely to be of most significance to any BC Hydro applications to acquire new resources or that otherwise are in regard to BC Hydro’s load-resource balance. For these applications, until the 2021 IRP is filed, BC Hydro believes it is prudent to continue to use the interim market assumption to evaluate the cost effectiveness of projects, programs and acquisitions.” That is, this intervenor believes that BC Hydro’s current long-term market price forecasts, and metrics such as the marginal cost of new energy and capacity, as used in energy acquisitions, renewals, and DSM programs, are reasonable, and should be used regulatory settings until the LTRP is filed one year from now.

One key caveat however is the assumed marginal value of new resources; currently BC Hydro is using a proxy value of approximately \$30/MWh, based on the assumption that incremental electricity brought into the BC Hydro system for the next 10-14 years is surplus to its needs, and that this electricity would be a net export into a market with an average spot market price of about: \$30/MWh. This of course assumes ‘committed’ resources, such as Site C, as included in BC Hydro’s load-resource balance. BC Hydro’s marginal value of capacity is similarly based on its existing load-resource balance, which indicates a net capacity surplus for approximately the next decade. In this context, except in some regionally constrained areas, incremental capacity on the bulk BC Hydro system currently has a value of zero.

These assumptions would substantially change, if for example, new electrification loads were to be realized, which would cause BC Hydro’s marginal value of energy to move away from an export proxy price, to a new domestic long-term levelized resource cost, which would be at least double the market price proxy. Capacity value would also jump, from the current (zero) value to whatever is BC Hydro’s next lowest-cost capacity resource, possibly a mix of renewables and pumped storage. Even the least expensive option: natural-gas fired (SSGT) would carry a capacity cost of in excess of \$100/kW-yr.

Therefore, BC Hydro’s key assumptions are somewhat self-referential, in that electrification and other strategic initiatives affect the load-resource balance, which affects the new resource marginal value, which then affects its preferred energy and capacity portfolio.

Overall, this intervenor agrees with a two-step filing, as proposed by BC Hydro in its letter of August 20, 2020.

BC Hydro proposes an October 2020 release of the default inputs that BC Hydro will be using for the fall consultations, including the initial load-resource balance, a market price forecast and BC Hydro’s discount rate. Although sooner is better than later, this intervenor sees the following as necessary:

- The load-resource balance must reflect the effect of the pandemic on the industrial sector, maintaining consistency with BC Hydro’s current load forecasting approach of a customer-by-customer assessment. This will require high-level expert economic and market assessments of individual industrial sectors in BC, in particular, oil and gas, mining, forestry, and pulp and paper. Major project assumptions should also be included, such as oil and gas related pipeline expansions in the Peace region, expansions to Trans Mountain, coastal LNG, and potential

growth or attrition in major pulp and paper facilities. These reports should be available to intervenors and the Commission.

- The load resource balance should embed the effects of recent economic reports and modeling that includes the long-term effects of the pandemic. Since BC Hydro's load forecasts for the commercial and residential sectors are highly dependent on econometric analysis and inputs (such as GDP, population growth, housing starts, employment and government spending), the presented load forecast must include these impacts, and key econometric reports and analysis used in the creation of the load forecast should be made available to intervenors and the Commission.
- The load-resource balance should include broad-based economic scenarios, based on the degree of economic recovery (if any) from Covid-19. The lessons from the 2008-09 'Great Recession', and the associated flattening of economic growth and energy consumption across the developed world are highly relevant.
- The load-resource balance should not include speculative projects or initiatives based on as-yet legislated policies.
- The load-resource balance must include the effects of rate changes, and rate-induced elasticity. BC Hydro's recent admissions of load declines in the commercial and industrial sectors portend long-term rate increases. In addition, broad-based electrification and GHG reduction initiatives if funded by ratepayers, could lead to the paradoxical outcome of load growth spawned through policy goals, the cost of which would increase rates to the point where electricity demand shrinks to the point of new resources requirements being tempered. BC Hydro's resource planning processes have always required feedback loops, more so if major policy goals are embedded into the LTRP.

This intervenor very much understands the logistics and workload involved in producing BC Hydro's load-resource balance, and respectfully suggests that an October filing for the initial key inputs, as proposed by BC Hydro, is premature. The minimal requirement for a usable load forecast is incorporation of realistic pandemic-induced econometric information into the new load forecast, and plausible and possible scenarios centered on the long-term consequences of the pandemic.

With respect to the second phase of the IRP, BC Hydro in its August 20, 2020 letter, indicates a spring 2021 issuance, which would include a "draft IRP" incorporating input from the fall consultations, as per the above outline. This draft would not be BC Hydro's 2021 IRP; but that a (presumably later) BC Hydro Board-approved LTRP will be filed pursuant to section 44.1 of the UCA. BC Hydro states that this 'draft' issuance "can be expected to provide a reasonable and useful if preliminary picture of BC Hydro's plan to meet its obligations to serve its customers over its 20-year planning horizon."

This intervenor respectfully submits that the 'draft' nature of this issuance would be problematic to the Commission, if it is put into the position of having to approve capital expenditures or new energy supply contracts or renewals under the UCA.

However, as indicated by BC Hydro in its filing of August 20, 2020:

"It is important to note that between now and September 2021, BC Hydro expects to submit only a small number of applications that would be utilizing this assumption: namely, the renewal of a small (less than 1 MW) short-term period Electricity Purchase Agreement in the integrated area and two applications related to capital projects at John Hart (a safety related project) and Bridge River (a reliability related project), neither of which are addressing increased load. With regard to demand-side measures (DSM), BC Hydro expects a one-year DSM expenditure schedule request to accompany its Fiscal 2022 Revenue

Requirements Application in December 2020 and expects that DSM expenditure schedule requests for subsequent fiscal years would accompany the 2021 IRP filing.”

Therefore, if an ‘approved’ LTRP filing does not produce near-term consequences with respect to the approval and implementation of BC Hydro initiatives and expenditures, this intervenor encourages BC Hydro to submit a schedule and a LTRP end-product that is not rushed. To reiterate, this necessarily includes a full recognition of the primary and secondary effects of the current pandemic. It also must incorporate the outcome of the Clean Energy Act Amendment Act (Bill 17), and incorporate approved government legislation pertaining to electrification, DSM and climate change.

A handwritten signature in cursive script that reads "D. Ince". The letters are fluid and connected, with a prominent capital 'D' at the beginning.

David Ince, P. Eng.