

**Association of Consulting Engineering Companies of BC
Site C Clean Energy Project –
Submission to the BC Utilities Commission
August, 2017**

The Association of Consulting Engineering Companies of BC (“ACEC-BC”) is British Columbia's provincial association of engineering consulting firms, and we represent 90 of BC's world-renowned companies which provide engineering and other technology-based intellectual services to private sector and government clients in the built and natural environment in the areas of *Buildings and Structural Engineering; Municipal Engineering; Transportation Engineering; Natural Resources, Energy and Environmental Engineering and Specialized High Tech engineering.*

ACEC-BC firms employ 9,000 people in British Columbia comprised of a workforce of engineers, geoscientists, technicians, technologists and other professional and support staff. The consulting engineering business contributes some \$3.9 billion in annual revenue to the BC economy, 30% of which are earned outside of the Province of BC. These are revenues that would not find their way to the Province of BC if it were not for the excellent reputation of the BC consulting engineering industry.

ACEC-BC member firms are front-line service providers for infrastructure projects in BC. The consulting engineering industry plays a key role in the planning, design, construction, operation and maintenance of public infrastructure. The expertise of member firms allow projects to be completed in a manner that is safe, cost-effective, environmentally responsible and innovative. The contribution of the industry is critical in ensuring that infrastructure expenditures will be successful in achieving the intended economic and social goals.

The association was incorporated as a non-profit society in 1976. It is a member organization of the Association of Consulting Engineering Companies, located in Ottawa that deals with federal government issues. ACEC-BC is active across British Columbia with policymakers in municipalities, regional districts and the provincial government. It coordinates a common industry approach on procurement, contract language and liability issues.

One of our goals is to promote a sustainable consulting engineering industry for our members within the province, so as a result, we do take keen interest in major plans for future capital development such as the Site C project and other major projects.

ACEC-BC actively supports proceeding with the Site C project for a number of reasons:

1. There are a number of major projects that are in the implementation or planning stages that will rely on having access to stable and dependable sources of power
2. Site C provides tremendous opportunities for job creation and regional economic development
3. Site C will provide a diversity of energy production that focuses on clean energy and helps BC achieve its climate change objectives
4. Site C presents an opportunity to build on BC's reputation for expertise in engineering and can contribute to creating a centre of excellence for engineering services.

The Provincial Cabinet has asked the BCUC to look into the following questions:

- a. whether the project is on time and within budget;
- b. the cost to ratepayers of suspending the project;
- c. the cost to ratepayers of terminating the project;
- d. what portfolio of generating projects and demand-side management initiatives could provide similar benefits; and
- e. what are expected peak capacity demand and energy demand.

ACEC-BC is pleased to provide commentary on Questions b, c, d, and e.

b. The cost to ratepayers of suspending the project

Given the amount of work done to date and the schedule to which the project is working, there would be considerable costs associated with demobilizing the work force, securing the extensive construction site, and maintaining the site to ensure environmental safeguards and safety standards are respected. Once the decision to proceed is made, there would be additional costs associated with re-mobilizing the workforce and re-initiating the project. We would assume there are contractual provisions and penalties associated with the project should the owner delay the project.

c. The cost to ratepayers of terminating the project

A major impact of cancelling the project is that the considerable costs incurred to date will not be offset by future revenues, resulting in significant impact on the financial statements of BC Hydro, to the extent it may impact the credit rating of the utility. This will adversely affect the ratepayers of British Columbia

In addition to the costs incurred to date, there would be considerable costs still to be incurred resulting from the issues identified above: demobilizing the work force resulting in job loss and unemployment among skilled workers, securing the extensive construction site, maintaining the site to ensure environmental safeguards and safety standards are respected. Furthermore, there would be considerable costs incurred returning the site to its original state. Given the work done to date, this will be very costly, if at all possible.

Of even more concern to ACEC-BC, the cancellation of Site C after BC Hydro has gone through all the environmental reviews and other regulatory processes and has awarded long term contracts, will send a message to investors that BC is a challenging place in which to invest. Already, BC is perceived by many as a jurisdiction where it is difficult to get major projects through to completion. Cancellation of the Site C project at this stage will only serve to solidify that view.

d. What portfolio of generating projects and demand-side management initiatives could provide similar benefits

Site C will be the third generating station on the Peace River system, utilizing the same water for power generation a third time after GMS and Peace Canyon. Because of its location, Site C will be able to generate significant amounts of power with a relatively small reservoir footprint; the storage capacity and management is done at the Williston Reservoir and Bennett Dam upstream. There are thus significant efficiencies to be gained from Site C that will be lost if the project is terminated.

Site C offers a unique opportunity with benefits that cannot be matched by any other portfolio of generating projects.

e. What are expected peak capacity demand and energy demand

ACEC-BC believes that the demand for clean sustainable energy will increase significantly in the next few years. This belief is predicated on the following:

- BC's robust economy and attractive environment will continue to attract people to BC, increasing demand for electricity for residential, commercial, industrial and institutional buildings.
- Both Ontario and Alberta have committed to replacing existing coal fired power plants.
- There is a growing move to the use of electric vehicles (EV). 2016 was a strong year for EVs in Canada, topping 10,000 units for the first time ever. Overall sales were up 56% over the 2015 numbers. BC showed annual growth of 38%. BC showed a record setting December nearly posting the highest number of EV sales country-wide. EV sales in both BC and Quebec exceeded 1% of all new motor vehicle in late 2016. Against this backdrop, France will end sales of petrol and diesel vehicles by 2040 as part of an ambitious plan to meet its targets under the Paris climate accord. Other governments such as UK and Norway have indicated they are looking at similar action.

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- While seemingly benign, the ever increasing use of the Internet will have a profound impact on energy usage. The amount of energy consumed by the world's data centres – the repositories for billions of gigabytes of information – will treble in the next decade, putting an enormous strain on energy supplies and dealing a hefty blow to efforts to contain global warming, experts say. A new report from the Department of Energy's Lawrence Berkeley National Laboratory notes that data centers use an enormous amount of energy — some 70 billion kilowatt hours per year. That amounts to 1.8% of total American electricity consumption. To generate 70 billion kwh you'd need power plants with a baseload capacity of 8,000 megawatts — equivalent to about 8 big nuclear reactors, or twice the output of all the nation's solar panels.

ACEC-BC remains supportive of the Site C Project and would be pleased to assist in any way. Site C presents an opportunity to build on BC's reputation for expertise in engineering and can contribute to creating a centre of excellence for engineering services.

British Columbia's consulting engineering companies are well placed to play a key role in particular to support generation projects that will address the net increase in load demand over the next 20 years, and beyond. ACEC-BC remains committed as an industry to assisting BC Hydro and the BC government in meeting its goals for prudent energy supply and management, and economic growth and prosperity.

As noted in our opening comments, BC's consulting engineers are recognized as being among the best in the world, as evidenced by the extent to which the industry is engaged in the export market. Site C has the opportunity to showcase the work done by BC engineers.

We appreciate the opportunity to provide our brief comments on the Site C Clean Energy Project. Please do not hesitate to contact the undersigned to discuss any of the above items or if you wish clarification.

Yours truly,



Keith Sashaw
President & Chief Executive Officer
Association of Consulting Engineering Companies of BC