
**Peace River Site C Hydro Project
An Option to Help Close B.C.'s Growing Electricity Gap**

As our province's population and economy continue to grow, so does our demand for electricity. We are now consuming more electricity than we generate. In fact, for the past six years, BC Hydro has been a net importer of electricity. We now depend on other jurisdictions to supply between 10 and 15 per cent of our electricity needs. Electricity consumption in B.C. is expected to increase by as much as 45 per cent over the next two decades – creating a significant gap between supply and demand.

BC Hydro is taking a number of steps to address this growing electricity gap so that British Columbians will continue to have a secure, reliable and affordable electricity supply:

Conserving More

BC Hydro is a global leader in conservation, providing Power Smart programs and incentives to help customers use less power. British Columbians are now saving enough electricity each year to meet the annual needs of more than 440,000 homes. BC Hydro is introducing further conservation programs to meet an ambitious target the provincial government has set for British Columbians: to realize 50 per cent of our new energy needs through conservation by 2020.

Buying More

BC Hydro is looking to innovative power projects, such as small hydro, wind power and biomass projects developed by independent power producers to help meet future demand. BC Hydro has contracted for the purchase of approximately 15,000 GWh/year of electricity from independent power producers to date, of which 8,000 GWh/year is now online - enough energy to power approximately 800,000 homes. In addition, three new procurement processes for acquiring power have been launched: a standing offer for clean electricity projects of less than 10 megawatts; a Clean Power Call; and a call for bioenergy projects that generate electricity from under-utilized wood residues, including wood affected by the mountain pine beetle.

Building More

BC Hydro continues to make significant investments to modernize, expand the capacity, efficiency and extend the life of its existing hydroelectricity assets. By modifying, updating and retrofitting existing generation facilities, such as adding a fifth generating unit to the Revelstoke facility, BC Hydro is able to increase efficiency and electricity production with little or no environmental impact.

However, even with all these measures, we will still need additional sources of electricity in British Columbia if demand continues to grow as projected. A mix of energy efficiency and new energy resources will be needed to meet this growing demand. Intermittent, clean sources of energy, such as wind and small hydro will be needed, combined with power projects that can provide a large, dependable supply of electricity 365 days a year.

Site C Evaluation Process

BC Hydro has developed a five-stage approach for evaluating Site C that enables the provincial government to evaluate and decide at key points in the process whether or not to proceed with the project. At the end of each stage, Site C will be evaluated against other resource alternatives available at that time before a decision is made on whether to proceed to the next stage of project evaluation.

The Stage 1 review of project feasibility is now complete. Stage 1 was a review of existing studies and historical information about the Site C project, with a view to determining whether it is in the best interests of BC Hydro customers to move to the next stage of project planning and development. Subsequent stages include:

- Stage 1 Review of Project Feasibility (complete)
- Stage 2 Consultation and Project Definition (current stage)
- Stage 3 Regulatory - Environmental Assessment
- Stage 4 Engineering
- Stage 5 Construction

Stage 1 review concluded that:

- The anticipated gap between electricity supply and demand in 20 years is significant enough to preserve Site C as a potential option;
- No fatal flaws have been identified that render the project infeasible;
- Site C appears to offer enough benefits relative to other options to justify further review; and,
- Consultation with communities, First Nations and stakeholders will provide important information to guide future decisions about Site C relative to other alternatives.

Site C would have a significant up-front capital cost, a long operating life, and low operating costs if built. Early interim project estimates in Stage 1 indicate that Site C could cost between \$5 billion and \$6.6 billion in today's dollars. As a decision on whether to proceed to build the project is still a few years away, any project cost estimates can only be considered to be interim. Cost estimates will be updated at the end of each stage of the process to reflect current information. However, interim estimates are useful for comparing the project to other alternatives under consideration.

The Stage 1 Completion Report is available on BC Hydro's website.

Site C Today – A New Approach

Site C is one option being considered for helping to meet our long-term electricity needs. Site C is a potential third dam and hydroelectric generating station on the Peace River in British Columbia's northeast region. If built, the project would provide a reliable, clean and renewable source of electricity for more than 100 years. It would provide approximately 900 MW of reliable, dependable electricity, providing about eight per cent of BC's existing electricity demands. The project would produce approximately 4,600 GWh a year – enough to power about 460,000 homes. As the third dam on the Peace River, Site C would take advantage of existing water storage upstream at the Bennett and Peace Canyon dams.

A decision on whether the project will move forward to construction is still years away, and much more work and analysis needs to take place before the provincial government can make that decision. Large hydro projects require a long lead time. As such, the provincial government, through the BC Energy Plan, has instructed BC Hydro to begin by consulting with First Nations, communities and the Province of Alberta about Site C.

When Site C was examined as a resource option more than 25 years ago, and again from 1989 to 1991, significant engineering design work was done. However, much of this information is now more than two decades old. Therefore, the project as originally conceived must be updated to reflect current information as well as to incorporate new ideas brought forward by communities, First Nations, regulatory agencies, and stakeholders.

Today's approach to Site C will consider environmental concerns, impacts to land, and opportunities to provide social benefits such as enhancing recreational uses of the proposed reservoir and other lasting community benefits in the region. BC Hydro will be seeking feedback to identify opportunities to benefit First Nations, residents and communities directly affected by the Site C project, should it proceed.

BC Hydro is currently initiating Stage 2, which is expected to take about two years. This stage involves comprehensive consultation, as well as further updating and analysis of environmental, social, technical and economic factors affecting the project.

Stage 2 consultation will begin with a pre-consultation process to seek input into how British Columbians want to be consulted about the project and the topics they wish to discuss.