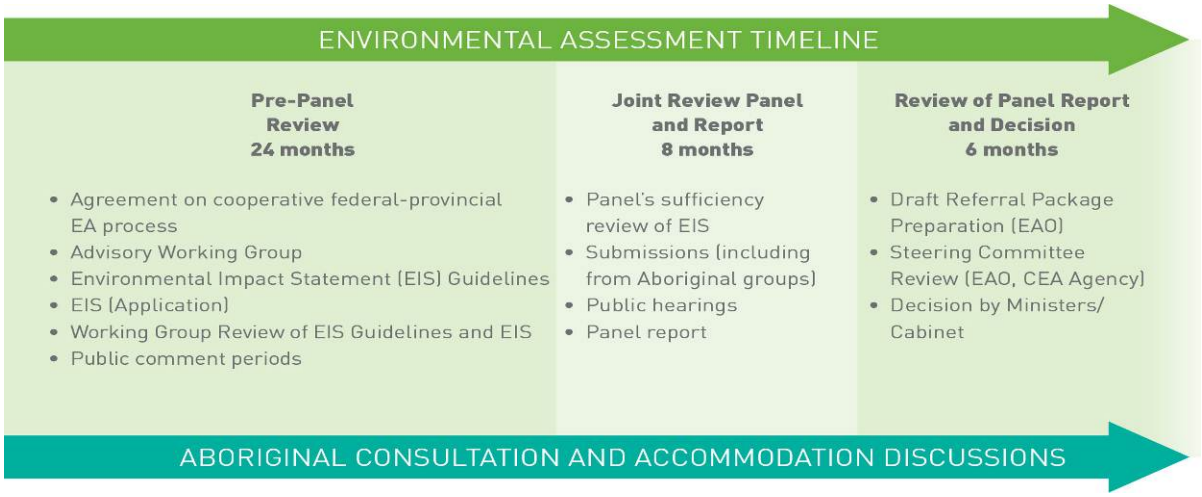
BACKGROUNDER

ENVIRONMENTAL ASSESSMENT FOR SITE C

- The Site C Clean Energy Project is currently undergoing a cooperative environmental assessment by the Canadian Environmental Assessment Agency (CEA Agency) and the British Columbia Environmental Assessment Office (BCEAO), which will include a Joint Review Panel process.
- The Site C project requires environmental certification and other regulatory approvals — including provincial permits and federal authorizations — before it can proceed to construction. In addition, the Crown has a duty to consult and, where appropriate, accommodate Aboriginal groups.
- The environmental assessment process for Site C, established by the federal and provincial regulators, commenced in August 2011 and is anticipated to take approximately three years to complete. The process is outlined in the figure below.



ENVIRONMENTAL IMPACT STATEMENT (EIS)

- BC Hydro has submitted its Environmental Impact Statement for the Site C Clean Energy Project to the CEA Agency and the BCEAO. The EIS was posted to agency websites on January 28, 2013.
- The filing of the EIS initiates an extensive review process, including independent reviews by the government-led Advisory Working Group and an independent Joint Review Panel. The process includes opportunities for public input, including future public hearings under a Joint Review Panel.
- The EIS details the rigorous environmental assessment undertaken for the project. The EIS is comprehensive and is set out in five volumes, comprising 40 sections plus appendices. It includes the project rationale, identifies potential effects and proposes measures to avoid or mitigate these effects. The EIS also describes the benefits Site C would provide for customers, Aboriginal and northern communities and the province as a whole.
- BC Hydro undertook multi-year studies to establish a robust characterization of the baseline environment in the project area. This information was used to identify and assess potential project effects – environmental, social, economic, heritage and health – and to propose comprehensive measures to avoid or mitigate effects.

KEY FINDINGS AND CONCLUSION OF THE EIS

- The substantial work undertaken to date concludes that the effects of the Site C project can largely be mitigated through careful project planning, comprehensive mitigation programs, and ongoing monitoring during construction and operations.
- As with any large infrastructure project, however, there will be some potential effects that cannot be mitigated, some of which may be considered significant. These include effects on some distinct groups of fish, some ecological features and rare plants, habitat for certain migratory birds and the use of culturally important places by certain First Nations for traditional purposes.
- Since 2007, BC Hydro has been consulting with Aboriginal groups, communities and local governments to identify issues of interest and to understand the potential effects of the project. Input from these consultations has informed project planning and design, as well as the proposed mitigation measures.
- BC Hydro has proposed a comprehensive set of measures to avoid or mitigate potential project effects. These measures are detailed in Section 39 of the EIS. Some examples include:
    - Relocating portions of Highway 29 that would be affected by the creation of the reservoir
    - Upgrading roads to accommodate traffic from project construction activities
    - Establishing an agricultural compensation fund to address the loss of agricultural land and enhance agriculture productivity in the region
    - Creating new wildlife habitat
    - Supporting habitat enhancement projects in the region, including working with Aboriginal groups to identify potential sites for relocation of medicinal plants
    - Providing upstream fish passage through a trap and haul facility
    - Building new boat launches and recreation sites
    - Funding community services where appropriate
    - Funding skills training initiatives to increase the skilled workforce required for the project
    - Building 40 new permanent housing units to be used by the project during construction, and provided to the community for affordable housing.
- In addition to the benefits from construction and operation of the project, BC Hydro is committed to negotiating a benefits agreement with Peace region communities and impact benefit agreements with some Aboriginal groups.
- The EIS concludes that while Site C has the potential to result in some residual effects, the project should proceed because it serves the public interest by delivering long term, reliable electricity to meet growing demand and provides a wide range of employment, economic and community benefits.

An Executive Summary of the EIS for Site C is available online at www.bchydro.com/sitec. The complete EIS can be found at:

Canadian Environmental Assessment Agency: www.ceaa-acee.gc.ca
British Columbia Environmental Assessment Office: www.eao.gov.bc.ca

BUSINESS CASE SUMMARY

BC Hydro has provided a Business Case Summary for the Site C Project which describes the need for and benefits of the project, an analysis of alternative resource options, along with the project cost estimate and procurement approach.

Business Case highlights include:

- B.C.'s long-term electricity needs are forecast to increase by approximately 40 per cent over the next 20 years due to economic expansion and a projected population increase of more than a million people. The potential for load from B.C.'s emerging LNG industry is not included in this forecast and could further increase demand.
- Hydroelectric projects are complex and require a long lead time to plan, design and complete the rigorous environmental assessment process. They also take many years to construct. BC Hydro is advancing the Site C project now to ensure it is available to meet projected customer demand.
- Other provinces in Canada that have hydroelectric potential are also building or proposing hydroelectric generation projects. These provinces include Manitoba, Quebec and Newfoundland.
- Site C is projected to create approximately 10,000 direct jobs during the construction period, and approximately 33,000 total jobs through all stages of development and construction.
- Project construction would contribute an estimated $3.2 billion to provincial gross domestic product.
- The procurement approach for Site C provides for multiple large contracts for major works, smaller contracts for other works and opportunities for small, medium and large businesses and will encourage participation from local and Aboriginal communities.
- BC Hydro is proposing Site C because:
    - As the third project on one river system, Site C would gain efficiencies by using water already stored in upstream reservoirs. As a result, Site C would generate approximately 35 per cent of the electricity produced at the existing W.A.C. Bennett Dam, with only five per cent of the reservoir area.
    - As a dependable and flexible resource, Site C would help to integrate intermittent renewable generation resources such as wind and run-of-river hydro.
    - Site C is a cost-effective resource to help meet B.C.'s future electricity needs compared to other options. It would have an estimated capital cost of $7.9 billion, and it would produce electricity at a cost between $87 and $95 per megawatt hour at the point of interconnection.
    - Site C would produce among the lowest greenhouse gas emissions (GHGs), per gigawatt hour, when compared to other forms of electricity generation. The project would produce significantly less GHGs per gigawatt hour than fossil fuel sources such as natural gas, diesel or coal. Emissions from Site C would fall within the ranges expected for wind, geothermal and solar energy sources.

The Business Case Summary for Site C is available online at www.bchydro.com/sitec.

ABOUT SITE C

- The Site C Clean Energy Project is a proposed third dam and hydroelectric generating station on the Peace River in northeast B.C. Site C would provide 1,100 megawatts (MW) of capacity, and produce about 5,100 gigawatt hours (GWh) of electricity each year — enough energy to power the equivalent of about 450,000 homes per year in B.C.
- Subject to environmental certification, Site C would be a source of clean, reliable and cost-effective power to meet the needs of customers for more than 100 years.

KEY FACTS

Dam and Generating Station

Type:	Earthfill dam
Height:	60 metres above riverbed
Length:	1,050 metres
Energy:	5,100 gigawatt hours/year
Capacity:	1,100 megawatts

Reservoir:

Surface Area:	9,330 hectares
Length:	83 kilometres
Width:	2-3 times the current river (on average)

CANADA'S HYDROELECTRIC POTENTIAL

Other provinces in Canada that have hydroelectric potential are also building or proposing hydroelectric generation projects. Current projects proposed or under construction include:

Newfoundland: Lower Churchill Projects

- Two facilities, at Gull Island and Muskrat Falls in Labrador
- The 824 MW Muskrat Falls project recently was sanctioned by the Newfoundland government, and is expected to begin construction soon

Manitoba: Nelson River Projects

- Three facilities on the Nelson River in Manitoba
- Construction of the 200 MW Wuskwatim project was completed in 2012
- The Environmental Impact Statement for the 695 MW Keeyask was submitted in 2012, with construction anticipated to start in 2014 and completion in 2019
- The 1,485 MW Conawapa project is currently in the planning stages

Quebec: Romaine Hydroelectric Complex

- Series of four facilities on the Romaine River in Quebec, generating a total of 1,550 MW
- The project received environmental certification and began construction in 2009
- The first facility is expected to be complete in 2014; all four facilities are expected to be complete by 2020

PO Box 2218
Vancouver BC V6B 3W2
Toll-free: 1 877 217 0777

Community Consultation Office
9948 100th Avenue
Fort St. John BC V1J 1Y5
Tel: 250 785 3420

Email: sitec@bchydro.com
bchydro.com/sitec

BC hydro
FOR GENERATIONS