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## **Site C Dam approval, part one: economic questions - Natalie Dunsmuir**

**T**he Site C Dam, a proposed hydroelectric project located on the Peace River near Fort St John, was approved for construction by the BC Provincial Cabinet on December 16. But the \$8.8 billion project has met with opposition from local political leaders, residents, and economists. BCHydro estimates that it would provide 1,100 megawatts (MW) of capacity, and produce around 5,100 gigawatt hours (GWh) of electricity each year. However, questions are being raised about the need for and economics of the dam.

### **Is Site C Needed?**

According to BCHydro's estimates, energy demand in BC will grow by 40% over the next 20 years, leaving the province short of power. The 'Load Forecast' that is introduced in BCHydro's August 2013 Integrated Resource Plan (IRP), factors in such variables as electric vehicles and residential growth, but also takes into account expansion in mining, oil and gas activities, and liquified natural gas (LNG).

BCHydro's current estimate 'suggests the LNG industry could need in the range of 800 to 6,600 GWh/year (100 to 800 MW), with an expected LNG load of approximately 3,000 GWh/year'. Furthermore, the IRP reads 'BCHydro and the BC Government have been working with LNG proponents on options for meeting all or some of the energy needs of proposed LNG plants with power from the BCHydro system.'

### **A Subsidy For LNG & Mining?**

The estimated increases in the Load Forecast caused by proposed LNG terminals and growth in the resource extraction industry have led some to believe that the Site C Dam is not being planned to help supply energy to British Columbians, but to power LNG and mining. Since BCHydro's industrial power rate is considerably lower than the cost of the Site C Dam, this could represent a giant subsidy for the extractive industries.

### **BCUC Left Out**

The provincial environmental review recommended that the need for the Site C Dam be investigated by the BC Utilities Commission, concluding that 'the proponent has not fully demonstrated the need for the project on the timetable set forth.' BCUC, however, was barred from any such review under Gordon Campbells' legislation, and Christy Clark's government has stuck to that position. Under the mounting pressure to conserve energy, some trends have shown that our energy

demand is actually stabilizing, and that there is therefore no need to increase power production in such a dramatic way.

### **A Skyrocketing Budget**

If we ignore the question of whether or not Site C is needed and assume that a 40% increase in power demand is ahead of us, we are brought to another issue. Would a large-scale hydro project be the way to go? The Site C dam is expected to be the most expensive public project in the history of BC. It was estimated to cost \$7.9 billion in 2011, but that cost has since grown by nearly a billion and shows no signs of halting its ascent. BCHydro has a somewhat shaky track record when it comes to cost estimates. The budget for the Northwest Transmission Line, completed this July, skyrocketed from an initial \$404 million to \$561 million, before ending with a cost of \$736 million. The International Commission on Dams estimates that the cost of dams is on average 50% over budget.

### **Alternative Power Sources**

Alternatives to Site C have been suggested as more economic ways to generate the 'needed' power. A combination of geothermal, wind, gas turbines, and existing dams could work to produce the energy at a cheaper cost. In November, the Canadian Geothermal Energy Association released a report which stated that geothermal has the potential to generate similar amounts of power to Site C while costing less and having a smaller environmental footprint.

Construction also commenced recently on the Meikle Wind Energy Project, which will utilize 61 wind turbines to provide 185 megawatts of capacity.

Minister of Energy and Mines Bill Bennett was quoted in October as saying that there were three options for generating 'needed' power: Site C, wind energy from independent producers, or natural gas. Natural gas, the Minister explained, would be marginally cheaper but would require a change in BC's *Clean Energy Act*, which states that 93% of BC's energy needs to be cleanly produced.

### **Site C Timeline**

The construction of Site C is planned to begin this summer—though the six legal challenges aimed at it might slow progress down—and finish in 2024. Its completion date falls short of the timeframe for BCHydro's estimated 40% increase in power demand, and the environmental review panel for the Site C dam

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stated that the province's energy supply is not likely to be maxed out until 2028. If this is the case, the energy that is produced by the dam may not be needed during the first years of its operation, and BC Hydro may actually lose money on the project during that time. Some people have suggested that the dam construction could be put off for another five years with no ill effects or future power shortages. So why then is the BC government pushing for the construction to begin this summer?

### **BC's Credit Rating**

The BC Liberal government has previously made it clear that its priority is on maintaining BC's triple-A credit rating and managing debt. By the end of the current fiscal year, however, the rising debt total is expected to reach nearly \$64 billion.

Adding the weight of the Site C to this sum might prove to be disastrous for BC's credit rating.

Credit rating organizations look at all of the province's borrowing, including Crown corporations, to evaluate its credit. The rating acts as an evaluation of a borrower's ability to pay interest and repay principal. The worse the rating gets, the higher the interest the province has to pay on *all* of its borrowing. There is concern Site C's \$8.8 billion price tag may add to BC's already heavy debt load and damage the province's rating.

*In the next part of this article, we will look at environmental effects of Site C, violations to First Nation treaty rights, and the possibility of seismic activity created by the dam. ☞*