

Reprint **Island Tides**

Visit www.islandtides.com for more interesting articles on other BC, national & international topics

Reprint from Volume 26 Number 11

June 12, 2014

Site C Legacy – Wealth Destruction – Dan Potts

Should the Provincial Government of BC decide to proceed with construction of the hydro-electric generation dam at Site C, the lasting legacy will be one of wealth destruction. The huge cost of \$7.9 billion will rob the province of valuable resources that could be used to deliver other needed government services as well as burden the BC economy with debt and high electric power rates that will sap our competitiveness.

Since the construction of the very successful suite of dams on the Peace and Columbia rivers, the electric power supply situation has changed dramatically. The first significant change was the development of active markets in electric power at many locations in North America. BC Hydro established Powerex in 1988 to participate in, and profit from, the opportunities these markets created. The second major change began with the introduction of natural gas-fired combustion turbines in the early 2000s. These low cost, quick to construct facilities reduced the amount of natural gas required to produce electric power by 30%. When first introduced their use was limited because of the volatility of natural gas prices and the expectation of long term shortages and high prices. This situation has changed with the development of the necessary technology to exploit the large reserves of shale gas. The market expectation now is that natural gas will be plentiful at relatively low costs.

North American utilities have capitalized on this situation by installing highly efficient natural gas-fired combustion turbines to cost-effectively supply power during periods of peak demand. Under most circumstances there is a surplus of available generating capacity. Since these facilities are built, paid for, maintained, staffed, and may even be operating at less than full load, the amount of power they produce will increase whenever the market price exceeds the incremental fuel cost. For each megawatt hour of electric power produced approximately 7.0 gigajoules of natural gas is required. At current natural gas prices approximating \$4/gigajoule, the current market price is in the range of \$30/megawatt hour. Actual market data, available over the internet, confirms this reality.

BC Hydro has filed information that the cost of electric power from Site C will be in the range of \$100/megawatt hour. Current market prices are in the range of \$30/megawatt hour. If Site C were now operational, the market value of the power produced would be \$350 million per year less than the cost. In order for

electric power from Site C to be competitive on the market, natural gas prices would have to increase by a factor of three and one-half times. Given the availability of gas in North America, is such an increase a reasonable expectation?

This situation described above assumes the project is built for its estimated cost of \$7.9 billion. There is a significant risk of substantial cost over-runs. There may be additional costs associated with First Nations accommodation. Such developments would further reduce the likelihood that Site C will be cost competitive.

Why doesn't BC Hydro consider natural gas or market purchases as alternative source of electric power? I believe BC Hydro would if they could. Unfortunately using natural gas or the market to supply electric power to BC is prohibited by the *Clean Energy Act* and provincial policy. In addition the Province has dictated the early retirement of Burrard Thermal, with approximately the same amount of firm capacity as Site C. This facility provides valuable capacity backup and supply security. It will be hard to duplicate with remote hydroelectric facilities.

Proceeding to build Site C is the equivalent of turning gold into lead. The cost will seriously hamper the ability of British Columbia to provide needed public services in the areas of health care, education, and transportation infrastructure.

Please, provincial government, recognize the costs, risks, and market reality and postpone proceeding with Site C until there is a reasonable business case indicating its construction will be a benefit to British Columbia.

This situation calls out for an in depth review by a qualified commission (British Columbia Utilities Commission) without the constraints on the use of markets and natural gas to supply the electric power requirements of British Columbia.

Dan Potts has degrees in chemical engineering and business and more than 30-years experience managing capital and energy intensive facilities in the forest industry. ✉

© Island Tides Publishing Ltd. This article may be reproduced with the following attribution, in its entirety, and notification to Island Tides Publishing Ltd.

'This article was published (June 12, 2014) in 'Island Tides', an independent, regional newspaper distributing on the Canadian Gulf Islands, on Vancouver Island and, via the internet, worldwide.'

Island Tides Publishing Ltd, Box 55, Pender Island, BC V0N 2M0 • 1-250-216-2267 • islandtides@islandtides.com • www.islandtides.com

© Island Tides Publishing Ltd. This article may be reproduced with the following attribution, in its entirety, and notification to Island Tides Publishing Ltd.
'This article was published (June 12, 2014) in 'Island Tides', an independent, regional newspaper distributing on the Canadian Gulf Islands, on Vancouver Island and, via the internet, worldwide.'

Island Tides Publishing Ltd, Box 55, Pender Island, BC V0N 2M0 • 1-250-216-2267 • islandtides@islandtides.com • www.islandtides.com

© Island Tides Publishing Ltd. This article may be reproduced with the following attribution, in its entirety, and notification to Island Tides Publishing Ltd.

'This article was published (June 12, 2014) in 'Island Tides', an independent, regional newspaper distributing on the Canadian Gulf Islands, on Vancouver Island and, via the internet, worldwide.'

Island Tides Publishing Ltd, Box 55, Pender Island, BC V0N 2M0 • 1-250-216-2267 • islandtides@islandtides.com • www.islandtides.com
