

Opinion: Site C: Too risky to rely on one river system for B.C.'s hydro needs

By Ben Parfitt, Special to The Vancouver Sun January 28, 2016

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Peace River just below the W.A.C. Bennett dam.

Photograph by: Derrick Penner , Vancouver Sun

In the face of a prolonged drought, water levels at Lake Mead, the giant reservoir that straddles the Nevada and Arizona borders, are lower than at any point since the Hoover Dam was built in the 1930s.

For residents in California, Nevada, Arizona and northern Mexico, a crisis looms. What alternative drinking water sources are there for millions of people? How many farms may fail? What will replace the “reliable” hydroelectric power that the Hoover and other dams once produced?

You might not expect it, but even here in rainy B.C., we may soon face similar questions.

As BC Hydro continues preparations for Site C — a third major dam on the Peace River and the single-most-expensive megaproject in the province’s history — there are cautionary lessons for us in events south of the border.

The idea that we would put all our eggs in one renewable energy basket at a time when climate change is upon us is, to put it mildly, troubling.

Recently, in the journal *Nature Climate Change*, scientists warned that up to three-quarters of the world’s hydroelectric plants could be vulnerable to reduced water supplies and therefore less power output. That’s what droughts do.

In June, the Hoover Dam's power generators were, in industry parlance, "derated." There simply wasn't the water to spin the dam's turbines full out, so their rated output dropped by nearly one-quarter. It could fall further still.

To suggest that couldn't happen here is hubris.

Should we bet the farm not once but three times on one river system to supply us with the bulk of our projected electricity needs, when at least some of the power supply from those dams could be threatened by future climatic events?

Recently, B.C.'s Minister of Energy and Mines Bill Bennett said Site C "is the best way to acquire new electricity at the lowest price," that construction delays will cost ratepayers, and that civil disobedience or not, the project must proceed.

These are curious claims, considering that all Hydro customers are on the hook for construction costs, costs that could easily go well beyond the currently estimated and astronomical pricetag, given overruns at other major hydroelectric projects around the world.

Not only that, but by BC Hydro's own admission, we don't currently need Site C's power, and won't for decades. Only in the increasingly unlikely event that a liquefied natural gas industry emerges does the scenario change.

Even more troubling than all of the above, Site C's cheerleaders may be seriously overstating the economic rationale for the project.

In May, highly respected U.S. energy economist Robert McCullough released a report commissioned by the Peace Valley Landowners Association that raised numerous questions about the economic case for Site C.

"Using industry standard assumptions, Site C is more than three times as costly as the least expensive option," McCullough said. "Site C fares poorly when compared to cogeneration, wind, landfill and coal gasification."

The Peace River region has great wind power and geothermal potential. Across North America in recent years, wind power projects backed up with firm power supplies have come in at an average of half the cost of the power that would be provided by Site C, McCullough said.

Another disquieting conclusion gleaned from McCullough's work is that because power from a completed Site C dam wouldn't be needed for some time, BC Hydro would likely have to sell significant power at a loss. Simply delaying dam construction by two years could save hydro ratepayers \$200 million.

Such analysis strongly suggests that at the very least we ought to subject the Site C project to a proper independent review.

Bill Bennett and the B.C. government, however, refuse to do so. They have declined to refer it to the province's independent watchdog, the B.C. Utilities Commission, as recommended by a federal-provincial panel that reviewed the Site C project. They also plan to exclude two transmission line extensions close to Site C from BCUC review, even though those projects will add hundreds of millions of dollars to the debt that all hydro users must repay.

In the face of clear evidence that hydroelectric dams are vulnerable to climate change and with all the economic risks that such vulnerabilities imply, why are we triple betting our renewable energy future on a third dam on the Peace River?

It's time for a reputable, independent body to address the question; if not an inquiry by the BCUC in a quasi-judicial capacity, then B.C.'s Auditor General. The public deserves answers — well before dam construction begins.

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