Opinion: Renewables cheaper, more dependable than Site C

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Renewables have declined in price so dramatically that Site C can no longer compete. DAVID ZALUBOWSKI / AP

Last week, Prof. Mark Jaccard penned a passionate defence (http://vancouversun.com/opinion/op-ed/opinion-would-we-use-site-cs-electricity) of Site C in

order to meet environmental standards in 2050. His aims are honest. His environmental goals are imperative. Sadly, his utility planning skills may not be up to the task.

The problem with Site C is not that it is a hydroelectric project. The problem with Site C lies in the economics. When Site C was proposed, fossil fuel prices were high. The cost of renewables were twice what they are now. Loads were not increasing terribly rapidly (load growth has been flat in B.C. for the past decade), but the forecasts were very optimistic. It is not an exaggeration to say that everything has changed. Site C is relatively costly compared to the alternatives and very costly compared to the wholesale market. It is in our power to do far more and spend far less.

Prof. Jaccard is especially enthusiastic about the storage at Site C. However, data from B.C. Hydro indicates that Site C's storage is only 4/1,000ths of the neighbouring Williston Reservoir. This is an interesting question. As B.C. Hydro stated in their submission, "(t)he project reservoir ... does not have sufficient storage volumes to provide seasonal shaping of generation." Are we buying Site C for just the small amount of storage at this one plant? Before we do so, we need to check whether our ability to integrate renewables is stretching our current storage ability.

The Deloitte reports released last week were requested by the B.C. Utilities Commission for their review of Site C. I would recommend that Prof. Jaccard read them carefully before he endorses one terribly expensive and uncertain solution when other, cheaper, and more dependable solutions are available.

First, Deloitte noted that B.C. Hydro load forecasts tend to be biased high — biased by as much as 30 per cent over the long term. Second, Deloitte assembled an alternative resource portfolio from renewables — primarily wind and geothermal — that met all of the goals of the current B.C. plans at a lower cost. Third, their report researched the significant delay and cost overruns that Site C seems to be hurtling toward.

B.C. and its two southern cousins, Washington and Oregon, share a similar climate, economy, and culture. However, Oregon and Washington have 10 times as much wind generation as B.C. Oregon and Washington are deeply integrated with their neighbouring states and provinces with treaties and

contracts that integrate hydro operations. The largest wholesale market hub in the world serves both B.C. and the U.S. Pacific Northwest.

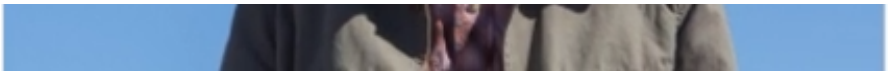
Wholesale electricity prices at the mid-Columbia market hub are currently at their lowest level in history, and are declining over the next few years as more cost-effective — zero emissions — renewables come on line.

The correct answer is to meet Prof. Jaccard's goals — which I share — but to meet them with less expensive, more easily built, and more agile resources. If Site C was the only answer, we should certainly pursue the project. That day has passed. Renewables have declined in price so dramatically that Site C — even considering already sunk costs and the expenses of termination — can no longer compete.

There are other significant advantages to renewables. Wind resources are agile. As I drove north toward Seattle the other day I passed a Burlington Northern freight train with hundreds of turbine blades being delivered to a new wind farm in Washington State. This did not require a decade of construction — less than one will do.

So, Prof. Jaccard, accept the good news. We will reduce emissions and deliver a healthier planet — and we can do it more cheaply and more reliably with more modern technologies than Site C.

Robert McCullough is an international energy expert in Portland, Ore. He is currently advising the Peace Valley Landowners Association for the BCUC's Site C inquiry.



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Alex MacKinnon · Field Engineer at Hatch Mott MacDonald

This is honestly embarassing of Mr. McCullough. Looking at so much as a map defeats his lead arguement.

Site C benefits from the storage of Williston. If you have one reservoir that goes straight into the second reservoir, then behold it works like ONE BIGGER RESERVOIR. Site C in effect has a bigger reservoir that the Bennett Dam. There is just a tap that has to be opened to use it...

What the heck does agile mean as a technical term? Perhaps you meant deployable? Who cares? Apparently we don't need the power right away. Who cares if it a bit less time to build a wind turbine and storage?

Also, by definiton hydroelectric is renewable. You make this sound like its a coal plant.

Jaccard has given energy policy in this province more thought and insight than just about anybody, and has been known to speak at great length at how small power projects make a lot of sense. But

unlike you, he has clearly done some analysis which and come to a reasonable conclusion on Site C.

Like · Reply · 13 hrs

Jeff King

sounds like you must be making a buck off this multi-billion dollar fiasco

Like · Reply · 4 hrs

Blair King · Langley, British Columbia

Notice how McCullough is careful to ignore all the features that differ between Oregon, Washington and BC, specifically the features that matter to bulilding renewables. Our renewable wind resource is mostly on the coast and on ridgelines in the Peace well away from inastructure. No trains are going to get turbine blades up there it wil be helicopters. The pads will have to be built using temporary roads at millions of dollars a pop. As for the transmission lines, don't get me started. Perhaps the PVLA might have brought in a local expert to do their work...although they might not have liked what experts familiar with the region would have had to say.

Like · Reply · Sep 20, 2017 11:58am

Rick Koechl · St. Michael's College (U of T)

I would add that Site C is also "well away from infrastructure".....no transmission line there yet either.....

Like · Reply · 1 · 17 hrs

Rick Koechl · St. Michael's College (U of T)

Mr Mccullough has this one correct.....Mr. Jaccard did not. Period

Like · Reply · 1 · Sep 20, 2017 10:56am

Anton van Walraven

Stop the construction on ill concieved Site C project immediately!

Like · Reply · 3 · Sep 20, 2017 9:04am

Martin Cavin

Ratepayers don't have bottomless pockets. Under Hydro's 10 year rate plan 2014 to 2024, rates will rise 46% while Hydro's debt will increase from $16 billion to $24 billion - if Site C is on budget. Not sustainable. Site C is not affordable, despite Hydro stating the contrary ad nauseam.

Jaccard has argued that most renewable power is not dispatachable. But the power BC is entitled to, but not using, under the Columbia River treaty IS dispatachable. The Liberals wouldn't let Hydro use this power because it's not generated in BC, so it's being sold for 1/3 the cost of Site C's power. This can be changed with the stroke of a pen. It's clean renewable power that's generated from BC water and about equal to Site C's output. It's time to end this madness and look at options that are

(HTTP://WWW.POSTMEDIA.COM)