

From: [RogerBryenton](#)
To: [Commission Secretary BCUC:EX](#)
Cc: [RogerBryenton](#)
Subject: "Additional Costs for Site C" - supplemental submission to BCUC. F6-3
Date: Wednesday, August 30, 2017 8:17:13 AM
Attachments: [ADDITIONAL-COSTS.docx](#)

Dear BCUC

I am submitting supplemental information regarding the "Costs" of the Site C dam, those costs associated with flooding the valley, and losing the agricultural and forestry resources as a results of the flooding. I believe that this will be F 6 - 3.

This information is being submitted as part of the Site C Inquiry, by myself, as I cannot find another party or parties submitting such costs, which I believe are an important factor in determining the real "cost" of Site C. If flooding a presently productive or future productive valley results in a loss of income, it does not really matter whether it is current or future, it must be accounted for. The numbers I have used reflect what I consider to be "reasonable estimates", and as such are useful to inform BCUC in determination of Site C "costs".

In reviewing the Joint Review Panel report, there were no figures for intensive agricultural potential, nor for forestry. However, the David Suzuki Foundation did determine a value for "natural capital" in their study, "Peace Dividend".

I hope that my numbers will encourage BCUC and or others to more accurately assess the true potential for agriculture and forestry values in your investigations and report.

Thank you, Sincerely,
Roger Bryenton, P. Eng (former), MBA
Energy Systems Consultant, Suzuki and SPEC Elder [REDACTED]

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August 29, 2017

Mr. Patrick Wruck,
BCUC Commission Secretary
Vancouver, BC.

RE: SITE C INQUIRY

Dear Mr. Wruck,

I wish to add a supplemental section to my filing, by Roger Bryenton, to provide an “engineering estimate” of the value of the Peace River Valley for agricultural and forestry production. The loss of the Peace River Valley due to flooding from the Site C project will be a “cost” to the project, which others may not have identified. The value of agriculture and forestry is estimated to be between \$161 and \$251 million per year.

When compared to the “benefit” of the sale of electricity from Site C, for the first years when it is not needed domestically, which at Mid-Columbia prices in the order of \$30/MWh, the 5,100 GWh would provide about \$153 million annually.

The conclusion is that the loss of the valley from flooding is at least, or potentially far greater than, the value of electricity sales, and there is no economic justification to building Site C, as detailed below.

ADDITIONAL “COSTS” OF THE SITE C PROJECT DUE TO FLOODING AND LOSS
OF AGRICULTURE AND FORESTRY, AND COMPARISON TO “INCOME” FROM SITE C POWER SALES

Many estimates of the “cost” of Site C allude to but do not specifically include the “lost” costs associated with reservoir flooding:

- a. The lost potential of agriculture, horticulture and farming
 - b. The lost potential of forestry, lumber and secondary wood production
 - c. The “value” of the natural capital as identified by the Suzuki Foundation’s study, “Peace Dividend”
 - d. The “value” of the land to be flooded.
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- a. The Value of Agriculture - the cost of flooding and destruction of existing and future agricultural production must be included in the “cost” of Site C. The JRP and BC Hydro alluded to minimal existing production in the order of \$200,000 per year. This entirely ignores the potential of the valley, which can be approached in 3 ways:
 - i) Future intensive farming. A preliminary estimate can be made from Dr. Wendy Holm’s analysis that “1 million people can be fed”. Assuming a 4 month growing season, with “farm produce” purchases at \$10/week per person during that season, including early and late crops such as lettuces and radishes, potatoes, squashes, beets, and other root vegetables. The farm gate total would be 16 weeks x 1 million x \$10 = \$160 million/year, a far greater amount than “existing” farm production would indicate.
 - ii) A second estimate has been provided by Mr. Randy Hadland, (personal communication) assuming intensive blueberry production, with farm gate revenue of \$250 million/ year.

- b. Value of Forestry. An estimate of the value of the forestry resource includes the value of harvested trees from 2641 ha (JRP Table 2, page 59), was made based upon West Fraser's mill which is presently paying approximately \$100/log. At 100 trees/ha (30m spacing) this would be $2,641 \times 100 \times \$100 = \$26$ million. West Fraser's lumber selling price will be approximately double, for a value of \$ 52 million. With a 60 year rotation this would be just under \$ one million /year in vale, or additional cost to Site C. In addition there is potential secondary manufacturing of wood products – log homes, furniture and other value added products, particularly for export.
A second calculation using 2641 ha, and \$7.7 billion income/year with an annual cut area of 200,000 ha results in $\$38,500/\text{ha} \times 2641 = \101 million potential lost income initially or “cost” of Site C. Over a 60 year rotation this would result in approximately \$1.4 million per year in additional “cost”.
(https://www.bccpa.ca/CpaBc/media/CPABC/News_Events_Publications/Publications/Industry_Update/industry_update_fall_2015.pdf)
- c. Value of “Natural Capital” as identified by the “Peace Dividend” was determined to be \$3400/ha/year. Given that 6300 ha will be flooded, the cost of flooding would entail losing this ability, and adding \$21.4 million per year.
- d. “Land Value” – Personal communication, Aug 29, 2017 with Gwen Johansson of Hudson's Hope stated that the District had recently purchased Crown land at \$10,000/ha. An estimate of the value of the flooded area would thus be \$64.7 million.

REVENUE FROM AGRICULTURE AND FORESTRY

Total revenue = Ag'l \$160 to 250million + Forest 1 million = \$161 to \$251 million per year.

REVENUE FROM SITE C POWER SALES

The estimated revenue from power sales from Site C, which will be entirely surplus to domestic BC power needs for many years and will be sold at Mid-Columbia rates of approximately \$30/MWh, for 5,100 GWh/yr would be \$153 million/year.

CONCLUSION

Comparing the greater potential value of agriculture and forestry at \$161 to \$251 million/year, it is readily seen that flooding the Peace River valley is clearly not a beneficial financial decision.