

HL ENLH

Peace Valley Environment Association



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C-10

Ms Karen Goodings

December 7<sup>th</sup>, 2009

Chair

Peace River Regional District

9505 – 100<sup>th</sup> Street

FORT ST JOHN, B.C.



Dear Ms Goodings,

Please find enclosed information regarding the proposed Site C dam. BC Hydro's upcoming decision on whether or not to recommend proceeding to the next stage of the project is fast approaching. The following package has been sent to all MLAs and we thought you would also be interested in the information. With the impending recommendation, it is likely that citizens of BC and the media may also turn to you with questions.

We ask that you take a moment to review the following information.

Sincerely,

Tony Atkins, director

Peace Valley Environment Association

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January 14, 2010



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## Site C Accountability

*We ask that you review the impacts of the proposed Site C dam before making a decision regarding the flooding of the Peace River Valley.*

Soon you will be asked to respond to the largest-ever proposed fiscal provincial project, the Site C dam, with projected costs of \$6.6 to \$10 billion. That's an added \$2000+ cost burden for every BC citizen.

This dam is being proposed primarily for energy export to the USA. You will need to be well informed to debate the issues and to field questions forthcoming from the media and from citizens.

The proposed Site C dam will flood over 100 km of major river valley, affecting agriculture and family farms, wildlife and fisheries habitat, heritage, First Nations, tourism and recreation.



## Ombudsman Investigation

- The (stage two) consultation hearings focused on "the best way to construct the dam"; not on whether a dam is wanted or needed or whether there are better alternatives.

- BC Hydro recently was granted \$40 million by the province for PR and consultation on Site C. BC Hydro has access to boardrooms, politicians, corporate jets, engineers, lawyers, the media and more. After local residents asked both the provincial government and BC Hydro for a few funds to "give the other side" there was no response.

- The response to questions asked by residents about the impacts of the dam was that those answers would only be forthcoming after research was completed in round three. But round two was the only consultation stage, so having those "research" answers come after round three, for residents, is pointless.



Continued erosion at Williston reservoir  
40 years after flooding.

## Consider the Impacts

This \$6.6 to \$10 billion\* dollar project will result in:

- destruction of class 1 and 2 agricultural land
- heritage flooded and families displaced
- wildlife and fisheries habitat lost
- First Nations encroached upon
- tourism and valley recreation lost

Why? For energy export.

\* The average cost overrun for large dam projects is just over 50%.  
 (Dams and Development: A New Framework for Decision-Making: The Report of the World Commission on Dams, 2000)

## How would you respond to the following points regarding Site C?

**ON AGRICULTURE:** How would you respond to the fact that Site C would permanently destroy more than seven thousand acres of Class One and Two agricultural land with proven market garden potential, along with more than 100 km of river valley and tributaries? (The current flood reserve is now restricting investment. If lifted, a multi-million dollar market garden industry could be developed in the only viable class one/two land north of Quesnel.)

With climate change there are growing concerns over local food security. Destroying this land would condemn northern residents to import their produce, forever.

**ON JOBS:** Provincially, how could \$6.6 to \$10 billion be used to combat climate change? Imagine the number of jobs that could be created in truly green, low-impact renewable energy production.

As one example of many, Peace Valley climate and soils would support a market garden industry producing hundreds of permanent jobs - the proposed Site C dam would eliminate this potential.

**ON GEOPHYSICAL CONCERNS:** The proposed Site C dam falls into the "High" or "Very High" Consequence Category as defined by the Canadian Dam Association, due to the potential damage downstream in the event of a dam breach and the economic loss as a result of a dam failure.\*

The Peace River valley is characterized by unstable banks, subject to landslides. For the proposed Site C project, BC Hydro's "safeline" extends back 1.5 km or more from the reservoir level at some locations. As a result, the amount of land affected by the proposed Site C dam is greatly underestimated.

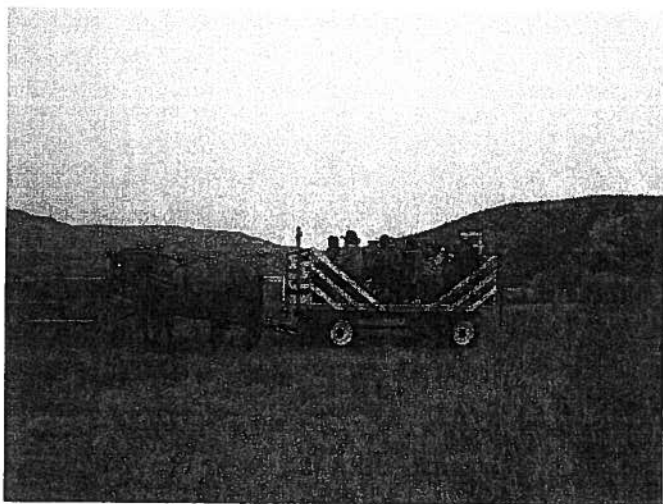
Considering the instability of these banks, BC Hydro has stated they will restrict public access and recreation (boating and fishing) for over a decade.

It is foreseeable that, at some point, personal injury or death could be one of the costs.



*"The proposed Site C Dam ... [would] flood some of the finest agricultural land in the province."*

*Geography of British Columbia: People and Landscapes in Transition, McGillivray, UBC Press, 2005.*



*Do Peace residents have the same rights as all BC residents?*

**ON FAMILIES, FARMS AND RANCHES, FIRST NATIONS:** Could you explain to tax-paying, valley families and their communities (some of whom pioneered the area as early as the 1920's) and First Nations why their land, their heritage and their livelihoods are being destroyed for energy export?

It should be clear that:

- people and river valleys should not be exploited
- being handed a cheque and told to leave for the benefit of the government and the south will never be compensation, and
- being brushed aside for those who would parachute in from other jurisdictions to take the specialized, tendered, and union jobs to build "their nest-egg" during construction (then, to leave for good) is not conscionable.

Valley residents see themselves as "collateral damage" for the benefit and gain of those in the south.

\* Peace Cascade Development Prefeasibility Study for a Cascade of Low Consequence Structures as an Alternative to Site C, Klohn Crippen Consultants Ltd. and SNC-Lavalin Inc., January 2003.



**ON GREEN AND CLEAN:** Do you believe large hydro dams are green and clean?

**If the proposed Site C dam is built, consider the following:**

- Arctic grayling will suffer detrimental effects,
- a movement barrier will be created for blue-listed migratory bull trout,
- protective islands, used by moose & deer for calving in the spring, will be flooded,
- methylmercury concentrations will increase in aquatic life, especially large fish,
- thousands of acres of intact forest ecosystem, which acts as a very effective carbon sink, will be destroyed,
- methane (21x more potent as a greenhouse gas than CO<sub>2</sub>) will be emitted from the reservoir,
- average annual land temperatures along the reservoir shoreline will decrease, curtailing plant growth and greatly increasing summer fog and winter ice fog,
- a globally important migration corridor will be weakened, as noted by the Yellowstone to Yukon Conservation Initiative (y2y.net), and these corridors will become increasingly important as the effects of climate change are realized, and
- valley banks (clay and silt) will result in a finite lifetime of the dam due to projected high levels of sedimentation.

**With these combined effects, can Site C really be seen as green or clean?**

**ON ALTERNATIVE BASE-LOAD ENERGY:** Knowing that everyone needs electricity, and appreciating that truly green excess energy could be profitable, explain why the government and BC Hydro have largely ignored geothermal power production, which, as noted by author Gwynne Dyer, "is the closest thing to magic we have."

BC (the only province fortunate enough to be situated on the "Ring of Fire") has a significant base-load of "hot" power available. Hot spots can be tapped using existing oil & gas drilling technology, creating jobs. The cost is similar to a large hydro dam. However, it has very low environmental and social impacts. Geothermal provides long-term base-load energy.

BC has abundant geothermal resources yet they are not being developed. The investment community is interested:

"... in British Columbia the potential exists to generate a significant proportion of the provinces' energy needs from geothermal resources."

In Focus: Sustainable Energy  
World Finance, April-May, 2008.

"Geothermal, or earth energy, is perhaps the most underutilized renewable source of energy. ... the potential of geothermal energy has until now been largely untapped. But the geothermal marketplace is growing fast."

Making Sense of Geothermal Energy  
The Globe and Mail, July 18, 2007.

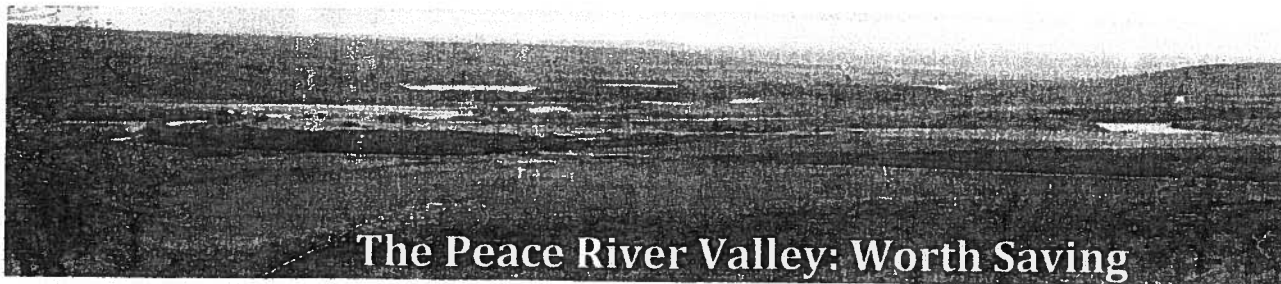
**Why is this government not looking at geothermal?**

**ON INTERMITTENT ENERGY SOURCES, WIND:** Bear Mountain wind-farm near Dawson Creek, a \$200 million wind-farm, produces 102 MW while the proposed Site C dam could produce 900 MW at a cost of \$6.6 to \$10 billion. Site C would give 9x the power but it would cost up to 50x as much per MW as wind and would have devastating environmental costs. Does Site C really make sense?

**Look at the alternatives before deciding to sacrifice another river valley.**

**PLEASE BECOME FURTHER INFORMED ON SITE C. LET'S KEEP THE PEACE.**

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## The Peace River Valley: Worth Saving

The Peace Valley is the only valley that breaches the Rocky Mountains and thus acts as a conduit to bring warm Pacific air eastward. The resulting microclimate gives the valley unique ecological value within BC.

- Agriculture...** the Peace River Valley has the best agricultural land in Northern BC, with the only class 1 soil north of Quesnel. Prime agricultural lands are irreplaceable (Class 1 soils comprise only 0.2% of the total land mass of BC and 1.3% for Class 2).<sup>1</sup> It provides the North with the capacity to grow its own produce which is important in a time when the 100 mile diet is emphasized. With climate change, when farmland is declining and food security is a growing concern, it doesn't make sense to flood thousands of acres of class one and two soils. Nor does it make sense to needlessly add greenhouse gases to the environment by trucking increasing amounts of food perpetually from the south.
- Climate change...** the Peace Valley as a natural ecosystem provides a mitigating effect on climate change through carbon dioxide absorption and oxygen production. The northern boreal forests act as a very effective carbon sink. It is also more resilient to the effects of climate change as an intact ecosystem, absorbing the impacts more effectively. The mature forests are better able to withstand and adapt to changing temperatures, changing weather patterns and new pests. Conversely, large dams increase climate change due to large amounts of carbon, stored in trees and other plants, being released when the reservoir is flooded and the plants rot. In addition to CO<sub>2</sub> being produced, the trapped decaying vegetation in the flooded valleys result in the release of methane gas into the atmosphere. The GWP (global warming potential) of methane gas is known to be 21 times greater than that of CO<sub>2</sub>.
- Migration corridor...** the Peace River Valley is the pinch point of the Yellowstone to Yukon (y2y.net) wildlife migration corridor. As the narrowest part of this globally important north-south corridor, it is critical to preserve its integrity in order to maintain connectivity and thus biodiversity. The valley is also significant in that it provides the only low elevation east-west corridor through the Rockies. In addition, the river valley provides connectivity for the Grizzly, which requires large areas of intact habitat. This wildlife corridor will become increasingly important as the climate changes as connectivity is essential in order to support the anticipated northern migration.
- Wildlife...** The Peace Valley is home to a very abundant and diverse wildlife population, including several red- and blue-listed species, due to its unique microclimate. Its fertile, warmer northern banks provide important wintering habitat for the area's wildlife. The valley also provides nesting and migratory stopover habitat for hundreds of bird species. The protective islands are critical ungulate birthing habitat. Fisher, which are blue-listed, use the large balsam poplars in the river valley for birthing and rearing young. Site C would create a movement barrier for blue-listed migratory bull trout. There has been a fishing advisory for bull trout at Williston reservoir for many years due to elevated methylmercury levels following the construction of the W.A.C. Bennett dam. We cannot afford another reservoir with further increases in methylmercury levels. We should not be putting the various species and people further at risk.
- Heritage sites...** There are vast numbers of archaeological and historic sites within the Peace Valley. BC Hydro's studies have indicated that 177 known heritage sites could be affected by the project, of which 16 are historic in origin.<sup>2</sup> The four kinds of heritage sites that BC Hydro has identified are as follows: historic sites from the fur trading and gold rush era, prehistoric sites dating back as far as 10,500 years, paleontological and fossil bearing sites, and traditional social and religious sites of particular importance to First Nations.

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- **First Nations...** First Nations have a vast history in the Peace Valley. They rely on the abundance of wildlife in the valley for their traditional use. According to BC Hydro, "First Nations were concerned about permanent disruption and change to their resource based economy, culture and way of life."<sup>2</sup> According to a member of the West Moberly First Nations "The Peace River has been home to my ancestors for thousands of years. It has provided us with abundance in many ways. It was the travel route for many First Nations people. It is still providing the habitat for the animals we rely on to maintain our culture. Most of the First Nations people that live in the area still rely on moose and elk as the primary source of meat for their families. Many people fish in the Peace River. Site C could have a devastating effect on our people and could destroy our way of life, and for what. So that we can sell power to California or continue to grossly mismanage energy use within our own province."<sup>3</sup>
- **Tourism and recreation...** the inherent beauty of the Peace Valley gives it enormous appeal and tourism potential. This year Central Mountain Air's In-flight Magazine had a feature article on the Paddle for the Peace event in the August/September issue and last year's British Columbia Magazine ran an article on the Peace featuring the photography of well-known Vancouver photographer Graham Osborne. The recreational value of the river is exceptional and widely recognized. It is stated within a report by the former Parks and Outdoor Recreation Division of the Ministry of Lands, Parks and Housing that "building the dam will result in a reduction of river recreation opportunities and create a less attractive scenic and recreation resource."<sup>4</sup> There would be very little access for recreation, if any, during the 7 years of construction and the estimated 3-5 years to follow, allowing for slope stabilization.<sup>5</sup> This minimum of 10 years without any significant access is a very conservative estimate based on the best-case scenario. One should keep in mind that the shoreline around Williston reservoir has still not stabilized after 40 years.
- **Economic folly...** BC has been a net exporter of energy 7 out of the last 11 years.<sup>6</sup> Now the provincial government is openly admitting that they are building for export as witnessed by the throne speech. It is misguided to destroy BC river valleys to satisfy the energy demands of the United States. The proposed Site C dam would cost taxpayers 7 to 10 billion dollars. It would irreversibly destroy all of the vast benefits of the Peace Valley in order to sell power to the US for the finite lifetime of the dam. Considering climate change and growing food shortages, it doesn't make sense to flood BC's prime agricultural land for energy export. We should be protecting the Peace River Valley and all it has to offer.
- **Social impacts...** there will be an influx of workers which will stress the community infrastructure (schools, hospitals, etc.). At the pre-consultation meetings, BC Hydro representatives stated there would only be approximately 25 permanent jobs,<sup>7</sup> not all of them necessarily near Fort St. John. Since the majority of the jobs will be very short-term, just during the construction phase, BC Hydro has plans for out-of-town camps to accommodate 1250-1350 workers.<sup>8</sup> The large number of transient workers could bring about a whole host of additional problems such as increased drug use, additional health concerns, and increases in violence and crime rates. BC Hydro has not publicly released the results of any studies on this subject. It seemed to have caught them off-guard during Stage 1 when it was raised by concerned citizens.<sup>9</sup>

1. Geography of British Columbia: People and Landscapes in Transition, 2<sup>nd</sup> ed., UBC Press, Vancouver, BC, by B. McGillivray, pg 197.
2. Peace River Site C Hydro Project Feasibility Review: Stage 1 Completion Report, December 2007, pg 52, pg 58.
3. Comment in Peace River regional district rejects BC Hydro's Site C mega-project bid, Vancouver Sun by Scott Simpson, Aug 19<sup>th</sup>, 2009.
4. The Proposed Site C Dam: The Economic Value of General Recreation, Dec. 1981, by the former Parks and Outdoor Recreation Division of the Ministry of Lands, Parks and Housing.
5. Site C Project Definition Consultation, Round 1, Fort St. John – Open House – June 14, 2008, pg. 10.
6. BC's Trade in Electricity, BC Stats, Statistics Canada.
7. Site C Pre-Consultation, Village of Pouce Coupe - Small Group Meeting – January 24, 2008, pg. 5, and Vancouver Island Economic Alliance - Small Group Meeting – February 7, 2008, pg. 4.
8. Project Definition Consultation, Discussion Guide and Feedback Form, Round 1: May/June 2008, pg 18.
9. Project Definition Consultation – Round 2, Hudson's Hope Open House, November 19, 2008 - Page 5.

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January 14, 2010