Response to Comments on the Site C Clean Energy Project Environmental Impact Statement, January 25, 2013
Submitted by BC Hydro on June 4, 2013

This table contains BC Hydro's responses to comments received during the comment period for the Environmental Impact Statement (EIS). Some of the information requests and comments refer to matters that, in whole or in part, are unrelated to the technical merit of the content or the sufficiency of the EIS. In response to some of these comments, BC Hydro has provided clarification or information with respect to matters that are outside the scope of the environmental assessment. Some of the matters raised, though outside the scope of the environmental assessment, may be relevant to the development of environmental management plans or mitigation. BC Hydro will consider those comments in the development of the environmental management plans and mitigation or during the permitting process, as appropriate. Limiting responses in this way should not be interpreted as agreement or disagreement by BC Hydro with any assertions that may be made in any particular comment or in any document that may be attached or referred to. In reviewing BC Hydro's responses, interested parties should also refer to BC Hydro's cover letter dated April 29, 2013.

Technical Memos have been prepared for subjects that require lengthy responses and for those subjects that arose as themes common to numerous information requests and comments. BC Hydro provides a single response to each of the form letters that have submitted.

IR #	Name/ Organization	Information Request/Comment	Response
form_0004-001	Ken Boon, Clay Peck, Kathleen Peck	The following are my comments on the adequacy of the draft Environment Impact Statement for the Site C Dam Energy Project and suggested additions: 1. The EIS fails to mention the use of 'Net Metering' as an available alternative to this project. BC Hydro has an Interconnections Department to deal with people who wish to grid tie with solar panels, wind turbines, etc., whereby instead of charging batteries, when more power is produced than consumed, the excess power is fed into the BC Hydro grid system and the people receive a credit on their bill. This has the added benefit of engaging people and promoting conservation through demand side management (DSM). This is missed in the EIS and needs to be considered.	Section 5.4 of the EIS describes the potential alternatives to the Project and screened resources. Net Metering is a program and not a technology such as wind or solar. Only technologies that are cost-effective and commercially available with sufficient potential are considered as potential alternatives to the Project. BC Hydro`s current net metering tariff has, to date, resulted in about 1 MW of installed capacity from about 225 projects; therefore, net metering is not an alternative to the Project.
form_0004-002	Ken Boon, Clay Peck, Kathleen Peck	2. Due to the Sept 5, 2012 baseline and small study area, the EIS for the proposed Site C dam is inadequate because it does not capture the true cumulative impacts of the two previous dams and other industrial activity on the Peace River.	Please see the Technical Memo on Cumulative Effects Assessment.
form_0004-003	Ken Boon, Clay Peck, Kathleen Peck	3. BC Hydro is now proposing mitigation measures for impacts of a third dam, while many of the same problems have existed for up to 45 years because of the first two dams, and have not been resolved. The Peace/Williston needs sufficient funding to address the problems from the first two dams similar to what is provided from the Columbia Basin Trust.	The matter raised in this comment lies outside the scope of the environmental assessment.

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form_0004-004	Ken Boon, Clay Peck, Kathleen Peck	4. Historically, BC Hydro has been consistently wrong with their forecasting for future power needs. The EIS needs to demand an independent review by the BCUC of not only the need for Site C, but also the cost effectiveness.	BC Hydro is basing its analysis of the need for the Project on the 2012 mid-level load forecast, consistent with other public utilities. The 2012 Load Forecast was prepared in accordance with the BCUC's Resource Planning Guidelines (provided as Volume 1 Appendix D Part 2), and was developed using the same methodological approach approved by the BCUC in past long-term resource plan proceedings. Please see the Technical Memo on Project Need.
form_0004-005	Ken Boon, Clay Peck, Kathleen Peck	5. Many landowners with land above the actual reservoir will lose more land to the permanent statutory rights-of-way BC Hydro wishes to place on the land. Where the reservoir will be 9330 ha, the statutory rights-of-way will gobble up an additional 9964 ha. Not only will landowners likely lose more land held in a statutory rights-of-way to reservoir erosion activity, but the remaining land will have severe limitations placed on it by BC Hydro. This will result in a reduction of value of any land with a statutory rights-of-way. While BC Hydro says they would compensate landowners for the restricted use of their land, the landowner assumes all the risk associated with the reservoir impact lines, and not BC Hydro. This is a major issue that has not been addressed. What exactly are the details of statutory rights-of-way? What would be the wording of a statutory rights-of-way agreement? Exactly how would BC Hydro determine the amount to compensate landowners for imposing statutory rights-of-way on their land?	BC Hydro is not currently acquiring statutory rights-of-way for the Site C Project. BC Hydro's approach is to compensate property owners based on fair market value. The form of the statutory right-of-way for the land within the reservoir impact lines for the Project is under development. Please see the Technical Memo on Private Property – Project Requirements and Tenure.
form_0004-006	Ken Boon, Clay Peck, Kathleen Peck	6. Lost opportunity. The financial cost for this project is extremely high and will likely go higher with cost over-runs. The EIS must address the lost opportunity of not using the money for other sustainable developments without such a large environmental footprint.	As stated in Volume 1 Appendix F Part 1, the Project cost estimate includes "... an appropriate level of contingency to reflect uncertainty in future conditions." As a result, BC Hydro expects Project costs "… to be within the bounds of the current capital cost estimate in ordinary market conditions." Please see the Technical Memo on Project Costs for a description of the Project cost estimate. Please refer to Section 5 of the EIS and see the Technical Memo on Alternatives to the Project for discussion of the analysis of the Project compared to other resource options.
form_0004-007	Ken Boon, Clay Peck, Kathleen Peck	7. Due to the many negative impacts caused by this project, there will also be a high cost for the proposed mitigation measures. The EIS needs to give the total cost estimates of the proposed mitigation measures individually and as a whole.	BC Hydro's estimate of the cost of mitigation measures is included in the capital cost estimate of $7.9 billion, as described in Volume 1 Appendix F Part 1. The level of detail provided is appropriate for the EIS – the EIS Guidelines do not require BC Hydro to provide an estimate of the cost of individual mitigation items.

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form_0004-008	Ken Boon, Clay Peck, Kathleen Peck	8. What assurance is there that all proposed mitigation measures will take place, and for how long?	In Section 40.16 of the EIS, BC Hydro has proposed that certain conditions be imposed in a decision statement issued under CEAA 2012 and in an environmental assessment certificate issued under BCEAA. Section 6 of CEAA 2012 and section 8 of BCEAA each prohibit BC Hydro from taking particular steps with respect to the Project except in accordance with the conditions in a decision statement and in an environmental assessment certificate, respectively. Under sections 89 - 102 of CEAA 2012 and under sections 33 - 47 of BCEAA, compliance with conditions in a decision statement and an environmental assessment certificate, respectively, can be enforced.
form_0004-009	Ken Boon, Clay Peck, Kathleen Peck	9. Many of the impacts and resulting mitigation proposals of this Project are not sustainable, and do not reach the bar set by the Federal Sustainable Development Strategy (FSDS) as required by the Federal Sustainable Development Act. This has not been acknowledged in the EIS and needs to be.	The purpose of the Federal Sustainable Development Act S.C. 2008, c. 33 is to "… provide the legal framework for developing and implementing a Federal Sustainable Development Strategy that will make environmental decision-making more transparent and accountable to Parliament." The Act does not impose standards that must be met by projects. In the EIS, the benefits the Project would provide to sustainable development are described in Section 7. While the Project is likely to result in some significant adverse effects, those effects are justified by the need for and benefits, including the benefits to sustainable development, of the Project. This conclusion and the bases for it are described in the EIS, allowing the Minister of Environment of Canada to make a decision and issue a decision statement in a transparent, accountable manner.
form_0004-010	Ken Boon, Clay Peck, Kathleen Peck	10. The EIS must include a natural capital analysis to measure the value of the valley, with no flood reserve and no Site C. 11. The EIS must consider the many years of the multiple socio/economic issues due to the flood reserve and constant threat of dam construction on affected landowners. This needs to go back before the establishment of the flood reserve in 1957.	The assessment of potential effects of the Project on environmental, social, economic, heritage and health resources described in the EIS is sufficient and in accordance with the EIS Guidelines. An analysis of natural capital valuation is not required. Please see the Technical Memo on Flood Reserve.
form_0004-011		*This line left intentionally blank for administrative purposes. Comment initially considered as a separate IR was combined with form_0004-010*.	

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form_0004-012	Ken Boon, Clay Peck, Kathleen Peck	12. One area that is totally missed in the EIS is the subject of 'involuntary displacement' of current residents in the valley, many who are multi-generation families on the same land. There is a close attachment to this 'place' that rises above the mere owning of property, and I know that many residents in this valley have varying degrees of that same attachment. In fact, this stretch of valley is a 'special place' for many people who do not live in the valley, but have their own attachment to it for various reasons. This likely cannot be mitigated, but should not therefore be ignored in the EIS, and needs to be addressed.	BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.
form_0004-013	Ken Boon, Clay Peck, Kathleen Peck	13. The Peace River has been granted Heritage River status by the provincial government in 1998. The protection that is granted from this is not compatible or possible with the proposed flooding of the valley. The EIS needs to address this.	British Columbia's Heritage River Program offers recognition, not legal protection, of provincial heritage rivers. The government set out management guidelines for the Peace River which include management of the Peace River "for its multiple uses, ensuring that the operation of the hydroelectric resources appropriately addresses natural, cultural and recreational heritage values." See British Columbia Ministry of Environment (BCMOE) website: http://www.env.gov.bc.ca/bcparks/heritage_rivers_program/ Accessed: April 2013
form_0004-014	Ken Boon, Clay Peck, Kathleen Peck	The EIS needs to cnosider the possibility or cost of decommissioning the dam when it becomes full of silt.	Please see the response to pub_0254-001.
form_0004-015	Ken Boon, Clay Peck, Kathleen Peck	15. The EIS compares the agriculture capability of the existing Class 1 & 2 farmland with its unique microclimate in the valley to the proposed remaining 'improved' farmland. This is like comparing apples to oranges. Good soil above the valley in this area cannot grow corn consistently because of the lack of heat units. The loss of this low elevation farmland in a northern river valley cannot be mitigated, and is not adequately addressed. What is the carbon footprint to try 'improve' farmland to match existing unimproved land? What would be the gain in productivity if the same 'improvements' were applied to the existing unimproved farmland? The EIS needs to address the fact that the best market garden capable farmland in all of northern B.C. will be lost.	The scope of the agriculture assessment is in accordance with the EIS Guidelines (Section 16.2), which required a description of changes to the agricultural land resources base on a local, regional and provincial scale. Appropriate information is provided in the EIS. Please also see the Technical Memo on Agriculture.

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form_0004-016	Ken Boon, Clay Peck, Kathleen Peck	16. While a determination of significance has been made in regards to a few species of birds, the executive summary concludes with "All other species of wildlife are not expected to be significantly affected by the Project as proposed mitigation will be effective or the populations are not at risk." Essentially, this is interpreted to say the following: Many species will be negatively impacted, but measures will be taken to try help them, and where that is not possible, since they are not a species at risk, it doesn't matter anyway. The EIS is inadequate with this conclusion.	The scope of the wildlife resources effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. BC Hydro's analysis has concluded that with careful mitigation, the effects on wildlife can largely be mitigated, A complete list of those measures is provided in Section 14, and further summarized in Section 39.
form_0004-017	Ken Boon, Clay Peck, Kathleen Peck	17. The EIS mentions various proposed mitigation measures to compensate for the loss of habitat to various animals that utilize the giant river bottom cottonwood trees. However, the mere fact that we will lose all the giant river bottom cottonwood trees does not seem important in the EIS. The EIS is inadequate in that it does not acknowledge this loss, or propose any direct mitigation measures for this loss.	The scope of the vegetation and ecological communities effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. The effects assessment takes into account all species of trees in the riparian forest, including cottonwood.
form_0004-018	Ken Boon, Clay Peck, Kathleen Peck	18. Claims made in the EIS about GHG numbers are incomplete. The EIS needs to acknowledge and give a realistic accounting of anticipated GHG amounts from Site C construction, operation, and for all the proposed mitigation measures required for the impacts of Site C.	Section 15 of the EIS describes estimates of GHG associated with construction and operations, and include mitigation measures relevant to each phase of the Project, such as the utilization of fibre, and implementation of fleet management to reduce emissions associated with fuel combustion.
form_0004-019	Ken Boon, Clay Peck, Kathleen Peck	19. The EIS states that methylmercury (MeHg) concentrations in fish may increase for a period of time before returning to pre-Project levels. In light of the continued unsafe high levels in Williston, this is hard to believe, and misleading at best. The cumulative effects of the previous dams on this river obviously play a large role here, and need to be acknowledged.	As described in Section 11.9.3 the time required for fish mercury concentrations in reservoirs such as that proposed for the Project to return to a new baseline following reservoir creation is several (i.e. < 30 y) decades. Given that Williston Reservoir was impounded 45 years ago, fish mercury concentrations are expected to have returned to baseline levels and not expected to influence changes in methylmercury associated with Project. As described in Appendix J Part 1 Mercury Technical Synthesis Report, the most recent survey of fish mercury concentrations in Williston Reservoir fish was in 2001. Concentrations at that time were much less than what was observed in the 1980s. The mercury data collected for the Project and shown in Table 11.9.1 (and in Appendix J Mercury Technical Data Reports) shows that mercury levels downstream of Williston are low.
form_0004-020	Ken Boon, Clay Peck, Kathleen Peck	20. The EIS needs to consider the integrity of the WAC Bennett Dam.	Please see the Technical Memo on Dam Safety.

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form_0004-021	Ken Boon, Clay Peck, Kathleen Peck	21. The instability of the slopes is not adequately addressed. The following is from a 2009 report produced for BC Hydro by Klohn Crippen Berger and SNC Lavelin. "*The uncertainties in predicting both the extent and rate of the shoreline impacts lead to the proposal to adopt an observational approach for periodically reviewing and updating the reservoir impact lines after the reservoir has been filled.*" The EIS needs to address the uncertainty of the impact lines.	Please see the Technical Memo on Reservoir Impact Lines.
form_0004-022	Ken Boon, Clay Peck, Kathleen Peck	22. The EIS executive summary states that the Project's net effect on navigation is considered not significant. Historically, navigation on the river was of extreme importance, and continues now for recreational purposes. It is now possible to launch a boat at Taylor and go upriver to the canyon above Hudson's Hope or take a side trip up the Halfway River or even the Moberly in high water. Or one can launch a canoe at Hudson's Hope and take a trip to the Arctic Ocean. This is the same as it has always been. The value of this need to be acknowledged in the EIS. The EIS also fails to acknowledge the loss of recreational opportunity and safety hazards created by high winds on a reservoir with resulting wave action.	The scope of the navigation assessment is in accordance with the EIS Guidelines and appropriate information is provided in Section 26 of the EIS. Based on Transport Canada thresholds for issue of small craft warning (winds > 20-33 knots and wave heights > 2-3 metres), wave analysis results indicate that conditions that result in issues of a small craft warning would be unlikely. Additionally, the Site C reservoir will include a number of inundated embayments that would provide refuge from rough condition in the main reservoir body. See pub_0989-005 for additional information on the wave analysis.
pub_0001-001	Nelson, Chris	We visited the Peace River area that is scheduled to be flooded and dammed last summer. We were doing a loop of British Columbia and Alberta from our home in California. We were both dismayed that so many archeological, cultural and historical areas are so thoughtlessly going to be flooded. As farmers we were also saddened to see that good farm land, the only good farm land we saw that far north, was going to be disposed of. We've read about the endangered species that will lose their habitat and about the wildlife corridors to be disposed of... We are completely appalled by what we have read that Canada doesn't even need this water, except perhaps to contaminate for low value fracking. What about the cost of this project when Canada's level of poverty is climbing? We just can't see what value this project could possibly have to the province or the country that would make so much destruction feasible? We believe you must consider the no project alternative as none of the critical issues I've brought up here can be mitigated. Once this land is flooded the damage is forever. Please do not approve this Site C project.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project and alternatives to the Project are described in Section 5 of the EIS. The potential for the Project to affect wildlife resources, agriculture, and Heritage Resources is described in Sections 14, 20 and 32 of the EIS respectively. Please also see the following Technical Memos: • Agriculture • Alternatives to the Project • Project Need • Movement of Grizzly Bears and Large Carnivores

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pub_0002-001	Chatten, George	As a user of Hydro Power, A Hunter and a Trapper, Along the Peace River, Which will be a Reservoir for Site C. I cannot foresee any Negative Impact,as far as, wildlife goes. With less changes in water levels it will enhance wildlife habitat. There will be some farmland lost, however, Lonewolf Golf Course in Taylor, B.C. has removed more Class 1 Farmland than Site C will. Water from Williston Lake Reservoir can be used 3 times to produce power. Coal, natural Gas and Nuclear are not green or clean nor renewable energy. The river continues to flow. Continue with the project we need the clean power.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0003-001	BC Wildlife Federation (Bill Bosch)	The BC Wildlife Federation has reviewed BC Hydro's Site C Project Environmental Impact Statement (EIS) and would like to make the following observations on the report with respect to fish, wildlife and their habitats to the Environmental Assessment Office (EAO). The BC Wildlife Federation is currently opposed to the construction of the Site C Dam as the previous impacts of hydroelectric development in the Columbia and Peace watersheds on fish and wildlife and their habitats have not been adequately addressed. An approach and financial commitment to address these impacts needs to be developed before approval of the Site C hydro-electric project. The energy benefits of the construction of Site C are the result of the construction of the WAC Bennett Dam in 1968, which created Williston Reservoir. The Williston Reservoir fills the basin of the Upper Peace River, which backs into the Rocky Mountain Trench just past where the Parsnip and Finlay River meet, flooding a total area of 1,761 km2. The Peace Canyon Dam, which formed the Dinosaur Reservoir (completed in 1976), flooded 23 km of the Peace Canyon downstream of the W.A.C. Bennett Dam and has an area of 8 km2. The utility of Site C from an energy perspective is a result of the earlier decision to dam the Peace and create the Williston Reservoir. The footprint of Site C is relatively small (93 Km2) compared to the Williston Reservoir, but relatively large compared to the Peace Canyon Dam. Both the Peace Canyon Dam and the proposed Site C Dam create run of the river reservoirs that reuse the storage releases from the Williston Reservoir. They have relatively small water level (< 3m) fluctuations but very high water turnover rates.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The letter suggests that: 1) the Environmental Impact Statement (the "EIS") for the Site C Project does not adequately address issues of the historical effectiveness of fish and wildlife mitigation associated with previous hydroelectric development in the Peace watershed, and 2) does not adequately discuss mitigation and compensation developed to offset effects of the Project and other effects on the system as a whole. The effects of previous developments on fish and wildlife in the Peace watersheds are not within the scope of the environmental assessment and, accordingly, are not addressed in the EIS. As specified in the British Columbia/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012), the environmental assessment process for the Project and the scope of factors to be considered in the environmental assessment are outlined in the Environmental Impact Statement Guidelines (referred to as the "EIS guidelines"), as finalized by the federal Minister of the Environment and the Executive Director of British Columbia Environmental Assessment Office. The EIS Guidelines represent the terms of reference for the environmental assessment as directed by the federal and provincial regulatory authorities. Section 8.5.3.1 of the EIS Guidelines specify the required spatial and temporal scope of the assessment in order to reflect the current status of the components of the environment and reflect all projects and activities that have been carried out prior to the Site C Project. This means that the baseline for the assessment includes the current condition of the environment and the net effect of all projects and activities (including fish and wildlife mitigation and compensation programs) that have previously been carried out. The EIS Guidelines required a narrative description of existing hydroelectric facilities on the Peace River, the environmental changes that are associated with previous developments, and the follow-up programs that have been conducted be included in the EIS. That narrative discussion is provided in Volume 2 Section 11.1 of the EIS.

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		The current BC Hydro approach for mitigation in order of priority is as follows: 1) Avoid impacts on environmental values and associated components 2) Minimize impacts on environmental values and associated components 3) Restore on-site environmental values and associated components that have been impacted 4) Offset residual impacts on environmental values and associated components ("offset" means to counteract, or make up for a residual impact on an environmental value and may occur on-site or off-site) The BC Hydro Environmental Assessment categorizes impacts for environmental and other valued components. The assessment of potential effects was conducted for each of the valued components during construction and operational phases for Site C. The opportunity to avoid or minimize impacts and associated environmental values of construction in the WAC Bennett Dam Peace watershed has largely passed whether Site C proceeds or not, however, there is a need to restore and offset the impacts of hydroelectric construction and operations on the entire ecosystem. Key questions not addressed in the Environment Impact Assessment (EIS) of the proposal for Site C are related to mitigation hierarchy and history. These are: • How effective have attempts been to restore on-site and off-site environmental values and associated components impacted from previous projects in the drainage - including Williston and Dinosaur Reservoirs? • Secondly, what new opportunities and approaches have been developed to offset residual impacts on environmental values and associated components of the area affected by Site C and the system as a whole? The EIS indicated it has examined the interests of First Nations. In addition, BC Hydro has consulted with other Treaty 8 First Nations located in B.C. and downstream of the Project. This includes Treaty 8 First Nations in Alberta that are in proximity to the Peace River Watershed, and those in proximity to the Slave River in Alberta and the Northwest Territories. Consultations with Aboriginal groups located away from the project activity zone have focused only on potential downstream impacts with little	Further, BC Hydro understands that British Columbia Wildlife Federation has also initiated dialogue with the provincial government on the issue of the adequacy of the ongoing actions to manage the environmental impacts of previous hydroelectric development in the Columbia and Peace watersheds. We are also aware of the detailed response provided to the BC Wildlife Federation by Minster Lake that addresses this concern in detail (letter from Hon. Minister Terry Lake to Bill Bosch, President, British Columbia Wildlife Federation, February 28, 2013). With respect to new opportunities to offset residual impacts of Site C, the EIS provides a comprehensive listing of the proposed mitigation and follow up measures to mitigate effects of the Project on Fish and Fish Habitat, vegetation and ecological communities, and wildlife resources. Two main categories of mitigation measures are described in the EIS: 1) those measures that will be implemented as standard practice during Project construction and operation in compliance with federal and provincial regulatory requirements, in compliance with existing BC Hydro policy and procedures, and in accordance with the technically feasible, cost-effective, and environmentally sound management of large-scale hydroelectric and infrastructure projects; and 2) those measures that have been developed specifically to avoid or reduce the potential adverse effects of the Project on the Valued Components. Mitigation measures that fall within the first category are described in Volume 5 Section 35 Summary of Environmental Management Plans in the context of the Project's proposed Environmental Management Program. Project-specific measures identified in the EIS that are to be implemented during construction and operation to mitigate potential adverse effects can be found in Table 39.1 (Volume 5 Section 39) of the EIS. A complete list of the follow-up measures is provided in the EIS (Table 39.2 Volume 5 Section 39). Follow-up measures will also be used to evaluate the effectiveness of recommended mitigation measures to avoid or reduce adverse residual effects. Table 39.2 identifies the objectives of each follow-up program and briefly describes follow-up methods (e.g., type of information to be collected, monitoring frequency and duration, reporting requirements).

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		mention of ecosystem impacts. The BC Wildlife Federation believes the cumulative impacts of hydroelectric development on the sustainability of fish and wildlife should be examined through the EAO review that addresses the impacts across the entire area affected. Impacts reviewed on an incremental project by project basis do not address these concerns adequately. The BC Hydro environmental assessment submitted to the EAO provides a rationale to maximize the economic benefits of hydroelectric development in this watershed relative to other types of energy development in the Province. Measures need to be in place to minimize the impacts of operations on the Peace system as a whole, restore onsite (or offsite) environmental values, and offset residual impacts on fish and wildlife. BC Hydro's current environmental assessment attempts to maximize the economic benefits through looking at global benefits while at the same time minimizing environmental costs by restricting the temporal and spatial issues to areas in the immediate vicinity of Site C. British Columbia's communities and environmental values will be shortchanged by this approach, particularly in the north east. Thank you for the opportunity to provide our observations on the Site C Environmental Impact Statement. We appreciate your consideration of our concerns and look forward to further communications with you in this regard.	
pub_0004-001	McBeth, Ruby and Lorne	I have a major concern with the proposed Site C dam. Two dams have been built on the river with minimal problems (see attached quote 1). The first dam did have some of the banks fall in but as it was in a wilderness area there were no major problems. The second dam was built in a canyon with rock sides and so there was not a problem with sloughing. This proposed third dam, however, is not so well situated. The banks are clay. The only thing that keeps them from sliding is the vegetation and even that does not always work. In many places the south banks are too steep for vegetation and so are especially vulnerable. In May of 1973 there was a major slide near the Halfway River entry (see attached quote 2). This was caused by there being a lot of rain. If a dam is built in an area with such unstable banks you can expect major problems in sloughing of the banks. Remove vegetation (as is usual when putting in a dam) and	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Information on the geology, terrain stability, and geotechnical soil conditions within the Project activity zone are outlined in Section 11.2 of the EIS, which describes both current conditions and potential changes as a result of the proposed Project activities. EIS Volume 2 Appendix B, Part 2 Preliminary Reservoir Impact Lines describes the bedrock and surficial geology within the proposed reservoir shoreline area in greater detail. Predicted changes to erosion and slope stability as a result of the creation and operation of the proposed reservoir are described. Reservoir impact lines delineating zones of potential flood, erosion, landslide, and landslide-generated wave hazards are provided. The 1973 Attachie slide was taken account in the studies reported in the above Section and appendix

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		whoosh go the banks. My point is that it is important to consider the fact that the banks are not reliable. To speak of monitoring the situation has no meaning when you have no control over what is going to happen. Anyone can watch (monitor) a bank slide: no one can stop it once it starts. Attached quotes: 1. The bedrock near the W.A.C. Bennett and the Peace Canyon dams is not formed from postglacial lake sediments and is significantly stronger than the bedrock near BC Hydro's most recently proposed dam. Site C would be farther downstream, nearer to the Taylor bridge, and has even less predictable banks. (Peace River Branch of the Professional Engineers and Geoscientists of B. C.). 2. The Banks of the Peace River area consist of shale and fine clay silt, which quickly turn to mud when exposed to water. These characteristics make the banks particularly susceptible to "creep, slumping and sliding" and these eroded sites are obvious all along the river (Government of British Columbia,2). There have been several large slides. For example, in late May, 1973, the Attachie Slide dumped approximately 7 million cubic metres of sediment into the Peace River, blocking it off for several hours (Fletcher et al; as cited by Hungr, 2005, p.100). Quoted in "The Living Peace River Valley" wordpress.com.	of the EIS. Please see the Technical Memo on Reservoir Impact Lines.
pub_0010-001	Muirhead, Ross	Its time to pull back from energy mega-projects and look to lessen Canadians footprint on the environment. We are a critical turning point in history. We collectively either continue along the same path to global warming, greed and over-consumption or slow down and seek alternatives. The Peace River already has 2 dams on it, a 3rd will destroy the ecological integrity of this valley and displace long-time residents and their families. Do they not have a voice in this democracy we call Canada? They should have veto over how they wnat the valley managed since they are its true stewards. Canada needs a good news environmental story. Proecting the Peace River makes so much sense. To approve Site C is the wrong decision, and BC will suffer as a consequence.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.

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pub_0011-001	Greenwell, Jack	It is clear that at present we do not need more power. We have a surplus of expensive private electricity we agreed to buy (at an expensive rate) in the late spring and summer months when the province requires less. Other potential buyers require less electricity at the same time. The province has a big debt because the first thing this Liberal government did when they were elected in 2001 was to cut taxes. Then they were surprised to find there was not enough money to do anything - so service cuts were required because there was no money. Now they want to develop gas by fracking in the north-east part of the province. They say thaty the sale of natural gas will pay down/remove the debt. But to clean natural gas, methane and other pollutants need to be removed. Gas wells usually leak methane into the atmosphere and methane is much better at creating climate change than CO2. To frack, the gas drillers require huge amounts of drinking water as well as sand and toxic chemicals. After drilling the holes and fracturing the shale to release the gas the water and chemicals are removed, as much as possible, and left in a settling pond. Here they are forgotten about and the chemicals contaminate the streams, rivers and lakes. The fresh water of course would be piped from the site c dam. But if it is going to cause so much damage, why spend a lot of money to build the site c dam? Oh yeah, so the gas companies can send gas to the coast to refine it and compress it to create liquified Natural Gas with all the new electricity from the site c dam and then put it on a tanker to take to China. Our timing is bad on this one - Australians are ahead of BC - so why continue to race onward? I still don't know the answer to that one. Do you? In my last letter to you, I talked about the other obvious reasons not wanting to build the site c dam such as the loss of agricultural land and associated jobs, grazing land for wild animals and First Nations claims to the area for which they are expecting meaningful consultation. Dams are also difficult for fish to negotiate. Apart from all of these reasons, the slopes of the walls that surround the new lake are unstable and will frequently slide into the lake and cause damage to the area. Please reconsider your plans for this area.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project and alternatives to the Project are described in Section 5 of the EIS. The potential for the Project to affect fish passage, wildlife resources, and agriculture is described in Sections 12, 14, and 20 of the EIS respectively. Terrain stability is described in Section 11.2 of the EIS. Please also see the following Technical Memos: • Agriculture • Project Need • Reservoir Impact Lines

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pub_0014-001	Croquet, Eryne	*The commentator submitted a letter in the standard form suggested by the Wilderness Committee, and provided additional comments as shown below:* The proposed reservoir will not only flood agricultural land, it will increase slope instability along the shores of the reservoir. The resultant turbidity in the water may prove detrimental to fisheries, aquatic life, recreation in the reservoir, and possibly to power generators. Finally, I believe that there are other means by which BC can increase power generation to meet current and future energy needs. For instance, we can develop safe, reliable, small, power generating infrastructure on mountain streams located closer to our population hubs, we can work on researching and developing new power generating technologies, and we can conserve energy. In short, I oppose the construction of the Site C dam on the Peace River.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Wilderness Committee, located at end of this table. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of, and Alternatives to the Project) - Section 11.8 (Fluvial Geomorphology and Sediment Transport) - Section 12 (Fish and Fish Habitat) - Section 25 (Outdoor Recreation and Tourism) Please also see the following Technical Memos: • Alternatives to the Project • Project Need • Reservoir Impact Lines
pub_0015-001	Hunter, Julie	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* PLEASE NO!!!! We cannot afford this dam economically, nor environmentally, nor enviro-economically.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0022-001	Wedel, Bonnie	My main concern is the loss of so much farmland. We just cannot justify that please don't go ahead with this folly.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The loss of agricultural land associated with the Project and proposed mitigation measures are described in Section 20 of the EIS. Please also see the Technical Memo on Agriculture.
pub_0030-001	Laviolette, John	To those in Political Power, I believe it is unconscionable to propose a dam on the site. Fort St. John is fairly far north. Yet, because the river has carved out an amazing valley with old flood plain table land far below the surrounding land, it is incredibly fertile and agriculturally viable.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project and alternatives to the Project are described in Section 5 of the EIS. The potential for the Project to affect agriculture is described in Section 20 of the EIS.

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		In this modern age there must be alternatives to just wacking communities as happened in Mackenzie just to serve greedy distant interests. I lost my job with the Inland Water Directorate of B.C and Yukon in 1988 for vocally objecting to the way we were not removing an old sediment and flow rate metering station but just asked to bury it. The land owner, it was located on, was a big game hunter with a ranch and was throwing in with the Dam proposal. Normally all the creosote timbers would be removed and properly disposed of. He insisted on using his front end loader and just burying the well site. "Hell he said it'll just be under water". To witness the fertility and richness of the land, far north, so callously treated was enraging. My work cohorts casually laughed on the way back to the hotel that the escarpment land should be scooped up for future lake front property. It took the river millions of years to create this amazing rich growing valley, truly unique, in the north. Sustainable. To wreck it all for a massive, expensive and disasterous project for the greed of a few is extremely piteous. We must work together to create sustainable power sources that don't result in he wholesale destruction of such unique natural resources. Please do not allow a dam to be built where proposed in Fort St. John.!	Please also see the following Technical Memos: • Agriculture • Alternatives to the Project • Project Need
pub_0040-001	Gagne, Birgit	Having spend 2 weeks in that region last year talking with regional farmers, I can attest to the value of the farmland in the area and hence urge you not to proceed with ANY plans of flooding land in the Peace River region.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please also see the Technical Memo on Agriculture.

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pub_0044-001	Dafoe, John	In 1974 I got to travel on Williston Lake Reservoir and experienced a massive log jam in Omineca Reach. At that time the elevated temperatures in the region due to the vast area of the reservoir were not unwelcome, unlike the winds. Two decades on, the Pine Beetle infestation and Global Warming prove that mega project manipulations of landscapes have repercussions over generations. Sandstorms now blow across the lake and surrounding lands from the eroding bluffs on Peace Reach. Forty-five years after flooding Williston Lake has not yet naturalized or stabilised. Lakeshores slump and erode, surrounding forests are still falling into the reservoir and erosion bluffs expose loose silts and sands to wind storms. From Ft. St. John to Hudson's Hope the Peace River Banks are mainly soft benches of unstable clays on top of shales. This is for the entire distance of a proposed 'Site C' reservoir of greater than 60-70 Km. Continual landslides, erosion & slumping is guaranteed here. I am a conservationist and I understand the need for sustainable energy for the future of Canada. I also understand the need for a healthy environment to support Canadians through wild fisheries, hunting and wild-craft gathering. I am aware of the services to humanity that healthy ecosystems provide at least of clean air and water. Site C Dam proposal is never green and compromises these values.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. As described in Section 4.3.2 of the EIS the reservoir would have a length of 83 km. Information on the geology, terrain stability, and geotechnical soil conditions within the Project activity zone are outlined in Section 11.2 of the EIS, which describes both current conditions and potential changes as a result of the proposed Project activities. EIS Volume 2 Appendix B, Part 2 Preliminary Reservoir Impact Lines describes the bedrock and surficial geology within the proposed reservoir shoreline area in greater detail. Predicted changes to erosion and slope stability as a result of the creation and operation of the proposed reservoir are described. Reservoir impact lines delineating zones of potential flood, erosion, landslide, and landslide-generated wave hazards are provided. Please see the Technical Memo on Reservoir Impact Lines.
pub_0045-001	Walsh, James	I worked in Mackenzie Bc in the 1970s after Bennett Dam was installed. The first year of flooding the valley killed 5,000 moose. They walk to where the river was last year and drown in 30 feet of lake. Instinct over powers common sence to a hungry moose. What's left of the herd still migrates up the Mackenzie Valley. Prison for dog killer who wants to take the wrap for killing thousands of moose? Think again when we can't sell the power we have. WC Bennett proposed free power for the residence of BC. What's up!	Thank you for providing your input during the Public Comment Period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Baseline information moose can be found in the EIS in Volume 2, Appendix R, Part 7 Mammals. An assessment of the potential effects the Project may have on moose can be found in Volume 2, Section 14 of the EIS.

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pub_0047-001	Mathany, Erik	As a Canadian Citizen and BC resident I strongly oppose the unneccessary waste of this river valley. Site C Dam is a short term solution with long lasting consequences. This is not a good move for the future of our Province.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.
pub_0048-001	Edwards, Francis	Please, we don't need another dam when there is widespread acknowledgement that many of these dams have been a mistake. The short term gain is not worth the long term cost. We have enough power. If we need more, we'll have to look at other sources, renewable sources that make sense. It is NOT our rivers that need to be dammed, but rather our insatiable consumption of energy. Let's dam that, curb our consumption, dam our appetite.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project and alternatives to the Project are described in Section 5 of the EIS. Please also see the following Technical Memos: -Alternatives to the Project -Project Need
pub_0049-001	Resendes, Barbara	There is absolutely no way that this dam should be built to destroy even MORE of Canada. We don't want it. We don't want the energy going to the oil and gas industry, because those industry giants are taking over whatever they please. We don't want money we don't have spent on the dam. We don't want to lose land and wildlife habitat because of it. Let me see the long-term environmental impact by at least 3-third party assessment agencies not paid off or influenced by oil money, private interest money, or government. We just don't want it.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0050-001	Bacon, Deborah	The destruction and in balance this project would cause to farm land and surrounding land is crazy. Even asking my 6 year old grand son results with why would we do that. Doesn't make sense to him, me or any of my family or grand children. Time to use a common sense attitude.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please also see the Technical Memo on Agriculture.

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pub_0052-001	Pitcher, June	I believe we will have enough power for BC, and that we shouldn't be generating more at Site C to 'fuel' the oil and gas industry. Farmland is more valuable and will always be needed.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. The potential for the Project to affect agriculture is described in Section 20 (Agriculture) of the EIS. Please also see the following Technical Memos: -Project Need -Agriculture
pub_0053-001	Schwarz, Abby	I am a biologist (Ph.D.) specialising in animal behaviour and ecology. The proposed Site C dam would result in loss of habitat for riparian species (e.g. bank-nesting birds, mammals such as beaver), lower water quality for fishes downstream of the dam, and of course loss of prime agricultural land. Furthermore, the use of dams to generate electricity is wasteful and short-sighted. BC Hydro would do far better to devote more funds and time to determine how best to use alternative energy sources.	Thank you for providing your input during the Public Comment Period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Potential effects of the Project on bank-nesting birds are described in the EIS in Volume 2, Section 14 and in Appendix R, Part 4. Potential effects of the Project on beaver are described in the EIS in Volume 2, Section 14 and in Appendix R Part 7. Please see Section 5 of the EIS. Please also see the following Technical Memos: - Project Need - Alternatives to the Project The loss of agricultural land associated with the Project and proposed mitigation measures are described in Section 20 of the EIS.

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pub_0054-001	Whitworth, Jim	*The commentator submitted a letter in the standard form suggested by the Wilderness Committee, and provided additional comments as shown below:* To whom it should concern: I am writing this little note to express my disgust with the Site C dam proposal for these reasons ... 2. The dam will destroy a unique ecosystem that wildlife needs for survival. it cannot be replaced. 3. The project if completed would fail it seems on the financial front because of the cost of the project and the low demand for the electricity generated, in addition to low rates that B.C. Hydro would be forced to accept. The downstream use of the electricity we have been told would be supposedly be sold at a discounted rate to those involved in mining for gas and oil. The consequences of that type of so- called development for both wildlife and, their habitat and water quality would be negative and permanent. I sincerely hope the site C project is not allowed to proceed. The real bottom line is a healthy physical environment and it needs intensive care now, now would be time to start. Please stop this project. We need to protect our home, the earth.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Wilderness Committee, located after this table. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11.5 (Water quality) - Section 14 (Wildlife Resources) Please also see the following Technical Memos: -Project Costs -Project Need - Movement of Grizzly Bears and Large Carnivores
pub_0056-001	Ferguson, Carolyn	The Site C dam is a make work project without much thought or consideration to the value of farmland and land use by native species. Please take care of our valuable resources so that future generations will have access to the natural potential of the area.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential for the Project to affect vegetation and ecological communities, wildlife resources, and Agriculture is described in Sections 13, 14 and 20 of the EIS respectively.
pub_0057-001	Dietz, Frances	I am sure that you have received numerous emails regarding the fallacy of building the Site C Dam and I'm not going to repeat what has already been stated numerous times. This letter merely adds my 'voice' of opposition to a proposal that is not a good one.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0058-001	Pfeifer, Myrna	After all the investigations into this area and the findings through the decades by experts; this project needs to remain DEAD. The untold damage to the environment, flooding of arable-rich agricultural land and elimination of this area as a bread basket for future generations....makes the development of a dam in this region unthinkable. Stop Site C Dam once and for all times.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential for the Project to affect agriculture is described in Section 20 of the EIS. Please also see the Technical Memo on Agriculture.

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pub_0059-001	Fitzmaurice, Marilyn	I am against the construction of this dam. We need to use our existing energy more efficiently and de-centralize energy production. Lets stop constructing gigantic dams that produce electricity far from where the power is needed and focus on small local energy producing units. Our energy future depends on local solutions.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project and alternatives to the Project are described in Section 5 of the EIS. Please also see the following Technical Memos: -Alternatives to the Project -Project Need
pub_0062-001	Last name withheld, Rebecca	I am writing to urge you to prohibit the building of the Site C dam project. It's environmental impacts incuding soil erosion and interruption to wildlife is one thing, but an absolutely unnecessary and selfish development on behalf of BC Hydro. Please consider how strongly many of us feel against this unnecessary project.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential for the Project to affect terrain stability and wildlife resources is described in Sections 11.2 and 14 of the EIS respectively. The need for the Project is described in Section 5 (Need for, Purpose of, and Alternatives to the Project) of the EIS. Please also see the following Technical Memos: - Reservoir Impact Lines - Project Need
pub_0064-001	Gildersleeve, Mike	I am writing you to express my serious concerns about proceeding with Site C dam on the Peace River and I am urging you to reject this proposal. I understand this proposal has been looked at and rejected twice already in the last 30 years. As far as I'm, concerned the argument has not been made successfullly that this project should go ahead. Bc Hydro has been unable to demonstrate that there is the need for this power at this time. We can also do much more in our efforts on conservation and efficiencies when it comes to energy use, It is totally unacceptable in my view that power from Site C be used to power proposed LNG plants in Kitimat. It has been suggested that Site C power would not even be sufficient for one of these LNG plants, and it is not right that we use our public power to subsidize private corportations to make a profit.	The Project has not been rejected twice before. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139). Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The

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			need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The Project is needed whether or not any new LNG projects proceed. Section 5.2.1 of the EIS sets out the assumptions underpinning BC Hydro's energy and capacity load-resource balances, and states with respect to potential LNG demand (referred to as 'load' in the EIS): "The 2012 mid-load forecast presented in this section does not include potential LNG load, which is described in Section 5.2.3" (EIS, page 5-5). Section 5.2.2.2, and in particular tables 5.8 and 5.9, of the EIS set out BC Hydro's energy and capacity load resource balances which do not include potential LNG demand. Section 5.4.2 of the EIS describes the potential alternatives to the Project that BC Hydro considers are not viable, with reasons provided for each alternative reviewed, while section 5.5 provides details of the available alternative resources to the Project and examines these available alternative resources using financial, technical, environmental and economic development attributes. For additional information please see the following Technical Memos: - Project Need - Alternatives to the Project
pub_0064-002	Gildersleeve, Mike	I believe it is unacceptable that this project goes ahead when the impacts on many First Nations in the area will be significant and permanent, in terms of their ability to access their traditional territories as they have for thousands of years. In your EIS report it states that there will be permanent loss of and access to culturally important places for the Blueberry First Nation, Saulteen First Nation, Treaty 8 Tribal Assn (including Doig River First Nation Halfway River First Nation Prophet River and West Moberly First Nation, Duncan First Nation and Horse Lke First Nation. In my view this is a fact that cannot be mitigated or compensated.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. An assessment on the potential effects of the Project on the current use of lands and resources for traditional purposes, including suggested mitigation measures, is included in Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes. An assessment on the potential impacts of the Project on the exercise of asserted or established Aboriginal and treaty rights of Aboriginal groups, including mitigation measures, is included in Volume 5 Section 34 Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements. BC Hydro believes the mitigation measures set out in Sections 19 and 34 will mitigate the effects of the Project on the current use of lands and resources for traditional purposes and on the exercise of asserted or established Aboriginal and treaty rights of Aboriginal groups. In cases where there is an adverse effect following application of mitigation measures, BC Hydro is prepared to address and accommodate the potential for the Project to do so by entering into arrangements set out in Impact Benefit Agreements.

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pub_0064-003	Gildersleeve, Mike	This Peace River valley is home to over 20 threatened species including grizzly bear, bull trout and many threatened bird species. The Peace region is also one of the most important wildlife corridors in the Yellowstone to Yukon Conservation initiative. We simply cannot afford to lose this critical habitat!	The effects of the Project on threatened species are considered in the EIS. The effects of the Project on Fish and Fish Habitat are found in Section 12. The effects of the Project on wildlife resources are found in Section 14. Please also see the following Technical Memos: - Movement of Grizzly Bears and Large Carnivores - Caribou
pub_0064-004	Gildersleeve, Mike	We cannot afford to lose 3800 hectares of prime agricultural land at a time when we are only producing 52 percent of our own food in BC. We know that our need to produce our own food is only likely to increase as impacts of climate change continue to grow around the world.	The loss of agricultural land associated with the Project and proposed mitigation measures are described in Section 20 of the EIS. Specifically, Section 20.2.2.1.5 describes regional climate change predictions and Section 20.3.11 describes potential Project effects on regional food production and consumption. The EIS concludes that in the long term, the Project would not affect the future ability of the Peace region to be food self-reliant in vegetable crops that are climatically adapted and in dairy, meat, and egg and poultry products (EIS, Section 20.3.11). Please also see the Technical Memo on Agriculture.
pub_0064-005	Gildersleeve, Mike	I am also concerned that both BC Hydro and this government are not on solid financial ground and could be bankrupted by this project. In the past the BC Utilities Commission turned down this project twice before and I urge this government to reinstate BCUC's jurisdiction over this increasingly controversial Site C dam project, which clearly does not have public support nor has the need for it been adequately demonstrated. I am urging you to reject Site C dam once and for all.	Please see the response to pub_0064-001. All methods of meeting need considered in the EIS portfolio analysis will result in financial obligations to BC Hydro. The comparison of financial attributes between the Project and alternative generation options is provided in Section 5.5.4.3, while the effect of the Project on ratepayer costs is provided in Section 7.1.3. As stated in 7.1.3, "… the Project is expected to result in lower long-term costs to ratepayers than alternative resource options." As a result, the Project would result in a lower financial obligation to BC Hydro than the other available alternative resource portfolios considered. Please see the Technical Memo on Project Costs for an additional description of the financing of the Project. The role of the BCUC is described in Section 1.2, page 2 of the EIS Guidelines and Section 7.2.3, page 7-4 of the EIS: • Section 1.2 of the EIS Guidelines, which sets out the purpose of the EIS, states: "The EIS is not intended to constitute a Certificate of Public Convenience and Necessity for the Site C Project. The Site C Project is exempt from the requirement for a Certificate of Public Convenience and Necessity as per section 7 of the B.C. Clean Energy Act";

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			• Section 7.2.3 of the EIS describes the role of the BCUC with respect to the Project, which is to review the costs associated with the Project should it proceed in the context of BC Hydro's revenue requirements: "Costs associated with generation projects are recovered from ratepayers based on the revenue requirements collected by BC Hydro, as regulated by the [BCUC] … The manner of cost recovery is determined by the BCUC …". Section 9.1.2.3.5 describes the public opinion research conducted by BC Hydro. As referenced on page 9-15, the Harris/Decima survey found that "80% of those polled either supported (40%), or could accept under certain circumstances (40%), building Site C to meet future electricity needs, while 15% were opposed". For additional information please see the Technical Memo on Project Costs
pub_0065-001	Smith, Theresa	please say NO to the Site C Dam. My family is concerned about the flooding and loss of agricultural lands. We must maintain our ability to feed our nation. This dam is not the right project to support future generations. We need to be looking at greener energy choices to carry us forward.	The EIS concludes that in the long term, the Project would not affect the future ability of the Peace region to be food self-reliant in vegetable crops that are climatically adapted and in dairy, meat, and egg and poultry products (EIS, Section 20.3.11). Please also see the following Technical Memos: - Agriculture - Alternatives to the Project
pub_0066-001	Moore, Prudence	I am writing to express my opinion that the Site C dam should not go ahead. I believe from what I have read and heard in the media that with the private producers contracts we are committed to we have enough power. Due to global warming and climate change from burning fossil fuels, I believe we should focus on conservation measures rather than further production of power at this point in time. We also have much to develop in the way of renewable sources of power that are the way of the future. As well, I am concerned that the site C dam proposal is problematic for First Nation treaty and land rights, and additionally the flooded area would lose precious farm lands in the north regions of our province. For all these reasons, I think our current position should be NO to the Site C dam proposal.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 20 (Agriculture) - Section 34 (Established or Asserted Aboriginal Rights and Treaty Rights, and Aboriginal Interests and Information) Please also see the following Technical Memos: -Agriculture - Project Need - Alternatives to the Project

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pub_0067-001	London, Clara	SUBJECT: MULE DEER The impact to all wildlife regarding the proposed Site C Dam project are too great. The project should be cancelled because of this. One statement by the proponent - B.C. Hydro - which is false is: Section 2 - Potential Effects 2.1.4 Ungulates Page 231. "...the reservoir area in general were rarely used for birthing..." This statement is not true regarding Mule Deer. The Mule Deer live there in great numbers and birth in the proposed reservoir area and within the proposed slough lines every year in great numbers. The proposed project will greatly affect their birthing area. CONCLUSION : Have this changed because what the proponent is stating is not true. I have lived in Bear Flat all my life and know that they birth in the mentioned area every year. BEST OUTCOME FOR ALL WILDLIFE: CANCEL THE PROPOSED SITE C DAM PROJECT.	Thank you for providing your input during the Public Comment Period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Potential effects of the Project on ungulate reproduction are described in in the EIS in Volume 2 Section 14.3.1.6.4 (Wildlife Resources). As described in the EIS a total of 90 potential birthing sites – 19 within the Peace River valley – were identified and visited between 2010 and 2011. Of the 19 ungulate birthing sites located in the Peace River valley, three were located on islands in the Peace River completely surrounded by flowing water. In general, moose sites were mostly on the plateau, elk favoured valley slopes, and mule deer used the plateau, slopes, and riparian habitats equally.
pub_0068-001	London, Clara	SUBJECT: THE BLACK BEAR NEEDS INCLUDED IN THE EIS. As B.C. Hydro has refused to study the Black Bear in the area of the proposed Site C Dam, there is not adequate inclusion on the Black Bear in the EIS. Black Bear in B.C. Hydro's newly released EIS is mentioned only 4 times. 1 - Saying that Black Bear are present in the Valley. 2 - Saying the Black Bear have been observed in the Valley. 3 - Stating that wolves kill Black Bear. and 4 - Stating that they may become a nuisance regarding improper handling of waste. These four reference are not even close to being enough coverage for a mammal that will be very affected by the proposed project. In contrast, the bat is mentioned 308 times in the EIS. Black Bear deserve more study and inclusion than the bat or any other mammal in the valley. Black Bears and their cubs will be killed inside their winter dens during the planned winter clearing of the valley and the tributaries. B.C. Hydro's refusal to have a mitigation for killing the bears during clearing is unacceptable. B.C. Hydro's TAC Workshop dated Oct. 22/23, 2008. states " Black Bears are known to den in the valley. ... Care should be taken during clearing activities with	Thank you for providing your input during the Public Comment Period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Black bear were considered as a key indicator as per the methodologies in Section 8.3 of the EIS Guidelines. Black bear were not selected as a Key Indicator. Volume 2, Section 14, Table 14.2, page 14-8 of the EIS provides the rationale for why black bear were not selected. Bear-human interactions are described in the EIS under grizzly bear, which has been selected as a key indicator. Please see Section 14.3.3.6.5. The Wildlife Management Plan will contain a Human-Bear Conflict Management Plan which will cover all Project activities including clearing.

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		respect to bear dens." Please see this submission and other facts, submissions, and pictures that I sent in last time under Document #274 and Document #275 as these submissions were extensive and I can't resubmit all of it here. The Valley and the way it exist today is critical to the Black Bear existence. The one area that the proposed project will partially flood and largely destroy is called "Bear Flat". It is named this because the Black Bear have always lived there in great numbers - Please refer to previous Document #274 where there is 4 bear in one picture and 5 bear in another. The Black Bear numbers are great throughout the valley and deserve protection to their habitat and food sources. If they are forced from the valley during the clearing of the trees, their numbers will greatly decline. This is because of loss of food source and more human/bear encounters outside the valley. If the farm land is lost in the valley, their numbers will permanently decline because of loss of food source. If other animal numbers decline because of the proposed project - elk, deer, moose - bear numbers will decline because of loss of food source. CONCLUSION: B.C. Hydro's own notes prove that the Black Bear is vulnerable regarding clearing and den destruction and more human/bear encounters. The Black Bear deserve a multi-year study. The Black Bear deserve to be included in the EIS. THE BEST OUTCOME FOR THE BLACK BEAR : CANCEL THE PROPOSED SITE C PROJECT.	

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pub_0069-001	London, Clara	SUBJECT: There is a need to add the River Otter to the Environmental Impact Statement. The River Otter live in the Peace River and its tributaries. If the proposed Site C Dam project were to be built, their habitat would be greatly affected during construction and when the water of the reservoir starts to back up. The proposed clearing along the river and the tributaries is planned for the winter months and the river otter will be affected greatly by this. Their homes that they dig in the banks will be run over and along with disturbance some otter including many babies will die. River Otter deserve a multi-year study which B.C. Hydro has refused to do. Mitigation for the River Otter has been purposely omitted because many otter will die during the clearing of the trees and there is no mitigation for River Otter disturbance and their babies deaths. CONCLUSION: Add River Otter to the EIS. BEST OUTCOME FOR THE RIVER OTTER: CANCEL THE PROPOSED SITE C PROJECT.	Thank you for providing your input during the Public Comment Period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. As outlined in the Section 12.2.3.7 of the EIS Guidelines beaver and fisher were selected as key indicator species for the furbearer key species group. These species were selected following the methodology in Section 8.3 of the EIS Guidelines. As such, river otter are not described in the EIS. Table 14.2 provides the rationale for why species were not included as key indicators/key indicator species in the EIS.
pub_0070-001	London, Clara	SUBJECT: UNGULATES The impacts to all wildlife regarding the proposed Site C project are too great. The project should be canceled because of this. One impact that B.C. Hydro has sidestepped in their EIS is: Under Section 2 - Potential Effects 2.1.4- Ungulates Page 232 - Effects to moose, elk, and mule deer as far as movement across the proposed reservoir. " ...rarely cross the flowing river in winter. Once the reservoir is solidly frozen it could facilitate more winter crossings" . What is missing is the state between flowing and solidly frozen when it is highly likely that moose, elk, and deer will fall through thin ice and not be able to escape because of thicker ice near the edges of the banks and will drown. Please see that this oversight is corrected and the true deaths are taken into account. Such oversights are unacceptable. Cancel This Project.	Thank you for providing your input during the Public Comment Period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential for mortality to ungulates crossing the reservoir when it is partially frozen was considered in assessing the potential effects of the Project on ungulate mortality in Section 14.3.3.6.4 and 14.5.1.3 of the EIS.

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pub_0071-001	London, Clara	SUBJECT: There is a need to add Landowners to the EIS. The people most affected by the proposed Site C Dam Project - The Landowners - deserve to be included. I am a third generation landowner to own land in the Bear Flat - an area along the Peace River that will be partially flooded and greatly impacted by the proposed project. My grandfather was a farmer on the flats next to the Peace River and along the Cache Creek. My father owned and operated a cattle ranch bordering my Grandfathers property at the top of the Bear Flat Hills. I own property in Bear Flat that was once owned by my Grandfather. I will lose this land to the proposed project. My husband and I own other land that will be impacted. The difficulties of landowners being affected by other dam projects have been well documented in "This Was Our Valley", written about the W.A.C. Bennett Dam and the book "People in the Way" written about the landowners affected by the Arrow Lake Dam on the Columbia. The proposed Site C Dam will destroy generations of families, neighbors, and farms and ranches that took decades to create and build up with blood, sweat, and tears. The fact that peoples homes have to be destroyed for power that is not needed is unacceptable. IN CONCLUSION: LANDOWNERS DESERVE FULL INCLUSION IN THE EIS. THE BEST OUTCOME FOR THE LANDOWNERS: CANCEL THE SITE C PROJECT.	Thank you for providing your input during the public comment period for the Environmental Impact statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. Landowners are addressed in the EIS in Section 9.1.2.3.3 (Consultation Activities) and Section 11.3 (Land Status, Tenure, and Project Requirements). BC Hydro acknowledges that a number of land holdings will be impacted by the Project; however, the majority of the farms identified as being affected by the Project would have only part of their farm area affected, and would be able to continue farm operations, as described in Sections 20.3.5.2 and 20.3.5.3 of the EIS. Please also see the Technical Memo on Private Property – Project Requirements and Tenure, including the section on Property Owner Liaison and Consultation.
pub_0082-001	Vaccaro, Terry	Working in a school we teach our children to respect the environment and all living things. We do this to ensure their future. So please protect this land for the future of all children.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0086-001	Last names withheld, Harvey/Shawn/Kevin	1st concern increased traffic flow slowing down local traffic to and from work as well personal use. 2nd Concern Safety for our families in route to and from home, 3rd concern. Alternate route or road proposed for the traffic for the old fort community. [something safer for our families, schoolbuses traveling through high volume construction traffic]	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Changes to and mitigation for the use of north bank roads associated with the Project are described in Section 31 of the EIS. Further information regarding the development of a Traffic Management Plan is found in Section 35 of the EIS.

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pub_0086-002	Last names withheld, Harvey/Shawn/Kevin	4th Property values of old fort community are most likely to decrease, as well as our private and quiet lifestyles, caused from excess traffic.	BC Hydro will address the potential effects of the construction-related activities, such as increased traffic or noise, through mitigation measures where possible. Once construction-related activities are completed it is anticipated that there will be no additional traffic due to the operation of the Site C dam.
pub_0086-003	Last names withheld, Harvey/Shawn/Kevin	5th concern being noise from construction of roads and equipment while damm is under construction.	The potential for the Project to change noise levels was evaluated using the methods and criteria outlined in the B.C. Oil and Gas Commission (BCOGC) Noise Control Best Practices Guideline, and is described in Section 11.12 of the EIS. The effect of the changes in noise on human health was assessed in Section 33 of the EIS. While without mitigation, exceedances of the BCOGC guidelines at identified receptor locations could potentially affect human health, noise mitigation measures have been developed and are described in Section 33.4.6 of the EIS. No residual effects on human health are anticipated following mitigation.
pub_0086-004	Last names withheld, Harvey/Shawn/Kevin	6th concern. Why has there never been discussions of an alternate road for the old fort community?	Section 4 of the EIS describes the north bank access to the Dam Site Area and the proposed upgrades to the Old Fort Road which include: - realigning a portion of Old Fort Road south of 240 Road - Improving public safety on Old Fort Road north of 240 Road by widening the shoulders or adding a paved path - Potentially improving the Old Fort Road cross-section between 240 Road and the realigned segment, and from the end of the realigned segment to the Howe Pit entrance. Section 31 Volume 4 Appendix B of the EIS describes the anticipated traffic on the north bank roads including Old Fort Road and the proposed measures to mitigate Project effects. Based on the expected increase in traffic volumes and the proposed mitigation measures, an alternate access road is not required for the Project.
pub_0086-005	Last names withheld, Harvey/Shawn/Kevin	7th What are the benifits for the Old Fort community?	Project benefits are described in Section 7 of the EIS, which include long-term improvements to roads on the North Bank in the vicinity of Old Fort, including 240 Road, 269 Road, realignment of Old Fort Road south of 240 Road, widening of shoulders or addition of a path on segments of Old Fort Road. BC Hydro is also continuing discussions with local and regional governments with a view to achieving a benefits agreement for the region, as described in Section 7.3.4 of the EIS.

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pub_0087-001	Name withheld	Only 20 properties affected. How many people. How much heritage & love for the land. These people deserve the respect to maintain their lives! Maybe Site C could be delayed. Maybe the properties could be procured upon the death of occupants. Please think of the people, wildlife and ecology of the Peace River. Thanx. I LOVE THE PEACE RIVER!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0088-001	Langille, Graeme	My concern is that the Site C dam will proceed without an evaluation of the true cost to the environment, and to British Columbians as a result. The loss of viable farmland, scarce in the region, is an absolute waste. Wildlife corridors and habitat, already hemmed in by the extensive resource development in the region, will be further limited.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential for the Project to affect wildlife resources and agriculture is described in Sections 14 and 20 of the EIS respectively. Potential cumulative effects of the Project are described in Section 38 of the EIS. Please also see the following Technical Memos: -Agriculture -Cumulative Effects Assessment - Movement of Grizzly Bears and Large Carnivores
pub_0088-002	Langille, Graeme	Most alarming, however, is the issue of slope stability, acknowledged by BC Hydro itself [1,2]. The clay-lined valley in which the dam is to be built means there is no bedrock to anchor a dam to. Silt deposition from the hills will result in massive erosion and soil loss to the surrounding ecosystems. The undercutting of banks that would result from this erosion allows the conditions necessary for landslides, which, if large enough, may trigger a dam breaching wave.	The dam site geology is described in Section 11.2.2.4 of the EIS. As described in that section, bedrock reaches elevation 470 m on the north bank and elevation 455 on the south bank at the dam site. As described in Section 4.3 of the EIS, the dam, generating station and spillways would be founded on bedrock. As described in Section 37.1.12.3 of the EIS the dam would have sufficient freeboard to prevent overtopping by a landslide generated wave. For more information please see the Technical Memo on Dam Safety.

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pub_0088-003	Langille, Graeme	If our province were in an energy crisis, these aspects may be easier to swallow. But this leads to the most frustrating aspect of this entire project: BC Hydro doesn't need the electricity from this dam for British Columbians. Last year it was made public that the entire electricity yield from the dam will go to Shell, exporting Liquefied Natural Gas (LNG) from Kitimat. An expensive, dangerous dam, paid for by the citizens of British Columbia for use by industry. Attached is an appendix to a letter originally addressed to Peter Kent that covers more of these concerns, especially those geotechnical in nature, in more detail. [1] Peace River Development Site C Project: Review of Upstream Axes [2] Peace River - Site C Hydro Project Reservoir Shoreline Impacts Methodology and Criteria. Report No. P05032A02-10-001 (See EAO submission for 20 page digital attachment, letter to Peter Kent)	The suggestion that the electricity generated by the Project would be solely used by LNG facilities is incorrect. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. Section 5.2 of the EIS contains the need for the Project analysis. Section 5.2.2.2, and in particular tables 5.8 and 5.9, of the EIS set out BC Hydro's energy and capacity load resource balances which do not include potential LNG demand. In response to the cost comparisons provided in the attached letter, the cost of hydroelectric facilities outside BC are not relevant to the evaluation of Alternatives to the Project as these other facilities would not meet the Need for the Project defined in Section 5.2. In addition, it is not illustrative to compare cost estimates between hydroelectric facilities in Canada. There are several potential reasons for variation in costs between facilities, including: - The cost of a hydro facility will depend on a range of factors, including the site conditions and the local labour and commodity markets. - Cost estimates for other facilities range in accuracy depending on the stage of development of the facility. The detailed Project cost estimate is a Class 3 cost estimate, and may be at a higher degree of accuracy compared to other projects. In response to the discussion of geotechnical conditions in the attached letter, please see the Technical Memo on Dam Safety. Please also see the following Technical Memos: - Project Need - Project Costs
pub_0097-001	Harrington, Sue	Please, Be Better Stewards!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0102-001	Matheson, Sue	Dear Ms Jones and Christy Clark: the impact of this proposed dam on people's lives and the environment are clearly long term and very negative while any benefits are short term and short sighted. Once this damage is done it cannot be reversed. Do the right thing and halt this project at once. I say NO to Site C Dam. Continuing on with Site C Dam is simply unacceptable.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0105-001	Last name withheld, Gerry	Do not build the Site C Dam. There is an excess of available power in the area.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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		Save the Peace River Valley	Please see the Technical Memo on Project Need.
pub_0113-001	Bowser, Richard	I am a resident of your nearest neighbor tothe South, The U.S.A. For many years I have watched local officials enrich connected cronies at taxpayer expense. (Here in the U.S.A. our grifting politicians have become rather skilled in the technique of "saving" funds by placing the burdens of"externalized" osts diectly on the taxpayers.) Typically they purchase expensive energy at rates far beyond market pricing which governments cannot afford to use or even give away. This sounds familiar to me. Does it suggest anything to you? In particular BC Hydro is projected to loose $1 billion, at least p-artially because the province already has so manyexpensive contracts with private producers that BC Hydro can't even use it and can only sell it as a loss. I beg you PLEASE do not milk Canadian taxpayers only to boost private profits!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the following Technical Memos: - Project Need - Project Cost
pub_0115-001	Squance, Lynn	I lived in Dawson Creek, south of the Peace River, and regularly went to Fort St John. It is a beautiful drive much of the time, but embankment slides were regularly seen and create problems, especially in the severe winter weather or spring break-up. There is annual flooding as it is in the area because of ice floes. How much worse will it get?	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential for the Project to affect terrain stability and the thermal and ice regime of the Peace River is described in Sections 11.2 and 11.7 of the EIS respectively. Please also see the Technical Memo on Reservoir Impact Lines.
pub_0115-002	Squance, Lynn	Williston Lake was created in 1968 by the building of the W. A. C. Bennett Dam on the upper Peace River, which flooded the aboriginal-territorial home of the Tsay Keh Dene band. How much First Nations Land will be affected this time? Blueberry Reserve is just north of Fort St John but I do not know how far their territorial land goes. There has been enough theft from First Nations.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. An assessment on the potential effects of the Project on the current use of lands and resources for traditional purposes, including suggested mitigation measures, is included in Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes. An assessment on the potential impacts of the Project on the exercise of asserted or established Aboriginal and treaty rights of Aboriginal groups, including mitigation measures, is included in Volume 5 Section 34 Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements. Both of these assessments examine the potential effects of the Project on the Blueberry River First Nation. Volume 5 also includes Appendix A3 which pertains to the Blueberry River First Nation and includes a traditional territory map.

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pub_0115-003	Squance, Lynn	According to the news, BC Hydro has an over abundance of electricity. Why is BC Hydro proposing then to build yet another dam? Industry in the north can use only so much. I certainly hope that the industry is not proposing to start fracking in the area. And then there is the debt that would result rom the construction. I can see it now, my hydro bill will go up.	Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years. All methods of meeting need considered in the EIS portfolio analysis will result in financial obligations to BC Hydro. The comparison of financial attributes between the Project and alternative generation options is provided in Section 5.5.4.3, while the effect of the Project on ratepayer costs is provided in Section 7.1.3. As stated in 7.1.3, "… the Project is expected to result in lower long-term costs to ratepayers than alternative resource options." As a result, the Project would result in a lower financial obligation to BC Hydro than the other portfolios considered. Please see the Technical Memo on Project Costs for an additional description of the financing of the Project.
pub_0115-004	Squance, Lynn	This is a rich agricultural area where, just from the highway, one can see kilometres upon kilometres of yellow canola blossoms and wheat or other grains. How much of that land will be rendered useless? I think this new dam is poorly thought out and should be stopped before it goes any further.	The loss of agricultural land associated with the Project and proposed mitigation measures are described in Section 20 of the EIS. Please also see the Technical Memo on Agriculture.
pub_0119-001	Yorkowitz, Allan	Please decide on the environmentally moral decision to stop the Site C Dam.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0131-001	Willing, Rick	Please do not approve the Site C dam. We should not be building dams for power generation, they are part of a centralized power production model that needs to be phased out in favour of a decentralized model that will be less susceptible to massive failures and huge cost overruns.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please also see the following Technical Memos: - Project Need - Project Cost

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pub_0173-001	Wuthrich, Martin	With the likelyhood of the Site C project on the Peace River, there is a urgency of enviromental stewardship, that at the least, requires the productive topsoil of this area to be transported above the resevoir high water mark. Future generations should not have this precious resource stolen from them. This is some of the best topsoil in the world! Today more than six billion people rely on food grown on just 11% of the global land surface, a scant 3% of the Earth's surface offers inherently fertile soil. This soil that is in the flood zone is part of this highly fertile soil. We have to be enviromental stewards of this precious resource. By 2030 when today's toddlers have toddlers of their own it is estimated that 8.3 billion people will walk the Earth. To feed them, the UN Food and Agriculture Organization estimates, farmers will have to grow almost 30% more grain than we do now. Even as humankind is ratchetting up its demands on soil, we are destroying it faster than ever before, with so called progress. We flood this soil, we are stealing from future generations and making it harder for them to feed themselves. It needs to be a requirement of such a proposed project to save the soil in question!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The loss of agricultural land associated with the Project and proposed mitigation measures are described in Section 20 of the EIS. Specifically, the relocation of suitable quality soil is described in Section 20.3.11.2 of the EIS. Anticipated changes in provincial and Peace Agricultural Region food self-reliance is described in Volume 3, Appendix D, Section 7 of the EIS. The EIS concludes that in the long term, the Project would not affect the future ability of the Peace region to be food self-reliant in vegetable crops that are climatically adapted and in dairy, meat, and egg and poultry products (EIS, Section 20.3.11). Please also see the Technical Memo on Agriculture for further discussion on topsoil removal.
pub_0175-001	Moray, Jeremy	Why are we even contemplating the building of the Site C Dam? All of us know that BC Hydro has been inflicted by the Provincial Government with the enforced purchasing of electricity from the private power contracts thereby giving them very expensive electricity which they can sell only at a loss, not to mention the destruction of the environment caused by these private power exploits. You know, and we know, that BC Hydro will not need anymore electricity well into the future. However, if you are thinking of driving the Americans' air conditioners, or supplying the as yet unproven LPG industry with BC electricity, then I would suggest that you pay more attention to the damage which is being, and will continue to be, done to our environment if you continue on this path of supplying electricity to energy-intensive industries. I'm sure you are bored of hearing about our Grandchildren and how much we are concerned for them, but I do care about mine and I love this wild and wonderful province which I would like to be able to leave for them.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Please see the Technical Memo on Project Need.

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pub_0176-001	Phillips, Jo	I find it hard to believe that you still think that flooding vast amounts of quickly diminishing good agricultural land and wild natural habitats in order to create more electricity is a grand idea. I appreciate that your government has created a huge debt that you somehow feel it is necessary to try and correct by generating a surplus of electricity that you can sell to other countries. However, selling off vast swatches of relatively undisturbed natural ecosystems (whether it is for generating electricity or for resource extraction) is like trying to pay off the family debt by selling off a few of your children. It is beyond shameful. Please reconsider the Suite C dam.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to of Project) of the EIS. The loss of agricultural land associated with the Project and proposed mitigation are described in Section 20 of the EIS. Please also see the following Technical Memos: - Project Need - Agriculture
pub_0180-001	Bilodeau, Danielle	NO more wasting resources and energy! Get it together and start thinking of ALTERNATIVES to destroying important lands.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the Technical Memo on Project Alternatives.
pub_0184-001	Brereton, Mary	Seeing that Hudson's Hope is bearing the brunt of negative impacts from this project, I would suggest that BC Hydro, when they acquire private land in town, such as Jones Cres or, especially, the western end of Adams Street that borders the Peace River, make these tracts of land into parkland along the banks of the Peace.	Thank you for providing your input during the public comment period for the Environmental Impact statement (EIS) for the Site C Clean Energy Project. Residential lands purchased under the Voluntary Passive Land Acquisition Program in Hudson's Hope will be retained for residential use wherever possible.
pub_0185-001	Last name withheld, Jen	Algae oil for our fuel and sewage to heat up our buildings. Suggestions Algae oil for fuel: Microalgae can be grown in sewage, salt or fresh water and can be grown very quickly compared to terrestrial crops. Algae can be grown anywhere in the world and the mass culture can be performed on non-arable lands like a desert. Algal biomass contains 3 main components: carbohydrates, and lips/natural oils, which is the right kind of oil for producing biodiesel, microalgae focus in the algae-to-biodiesel arena. Algae species can produce hydrogen gas under specialized growth conditions. Algal biomass can be treated byrolysis to generate crude bio-oil. The algae oil can double in size every 24 hr. During the peak growth phase, some microalgae can double every 3 1/2 hrs. The oil yield are: 5,5422.214-2,3783.74 liters/acre (6,283-1,4641 gall./acre) while corn is 18 gall/acre, soybeans 48 gall./acres and palm oil is at 636 gall./acres. For the amount of oil that can be grown,	The EIS Guidelines in Section 4.2 provides that alternatives must be "technically and economically feasible". As described in Section 5.4.1.1 of the EIS, the information for potential alternatives to the Project derives in large part from the 2010 Resource Options Report. Potential alternatives were first screened to determine if they are technically and economically feasible in Section 5.4.2, and in particular Section 5.4.2.1 of the EIS. To be considered in the analysis of potential alternatives BC Hydro considered the following criteria: • Whether resource developers have bid into BC Hydro's past power acquisition processes; • Whether there are any commercial electricity projects in North America. As described in Section 5.4.1.1, the 2010 Resource Options Report-related engagement process consisted of working with people and organizations with technical expertise to gather and review information on Demand Side Management (DSM) and supply-side options in B.C. including focused workshops with third-party consultants, government and industry. In this review algae oil was not

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		there is no need to use farmland and can be harvested about everyday. A typical open pond can produce 5 to 10 grams of biomass (dry basis) per m2 of surface area per day, which translates to 7.4 to 14.8 tons (dry biomass) per acre per year. Some researchers reported that biomass yield can be as high as 50 g/m2 per day, i.e., 74 ton biomass/m2 per year in an open pond. But depending if your using open ponds or enclosed photobioreactors, the yields can be different. But depending if your using open ponds or enclosed photobioreactors, the yields can be different. Open ponds are the oldest and simplest system for mass cultivation of algae. The pond is designed in a raceway configuration, in which a paddle wheel provides circulation and mixing of the algal cells and nutrients such as nitrogen phosphorus and inorganic salts is added in front of the paddle. Depending on the algae species, a variety of waste water sources can be used for the algal culture, such as dairy/swine lagoon effluent and municipal waste water. For some marine types, seawater or water with high salinity can be used. Another type of cultivation is the "enclosed photobioreactors. They are employed to overcome the contamination and evaporation problems. The most widely used photobioreactor is a tubular design, they are aligned with the sun rays, and less than 10cm in diameter to maximize sunlight penetration for more exposed to light for photosynthesis. List of algal fuel producers: Asia (Israel). Europe (Bulgaria, Germany, France, Portugal, Spain, Switzerland, The Netherlands).American (Argentina, Canada, Mexico, USA). Oceania (Austrilia, New Zealand). The USA with the most with 33 algae farms and corporation's that is part of the support of the future green fuel. There are about 2 oil companies supporting algae for our future fuels in the states. Algae oil has been tested on a car that has been driving around the states spreading awareness of the clean fuel. Boeing company has tested the oil on one of their planes, and has been used on a naval ship 100% pure green oil, the oil work great!(Youtube video's of plane and the car using it). The latest news about algae oil, is that in 2 states, they are using algae oil in their fuel stations. When it comes to farming algae in Canada, it can be grown inside by using LED lights, powered by solar and other clean energy sources for energy to help keep the bill down. For the record, no oil company will shut down, no engine would be remodeled, no tanks will be stationed and out of a job, the only thing that would change, is the oil product, and it will create more jobs, jobs that doesn't destroy farms, fishes, creatures	identified as a commercially available resource so it would not meet the criteria described above; therefore, it is not a technically and economically feasible alternative. BC Hydro considers options to implement clean or renewable district energy systems such as that which could be provided by sewage to heat buildings under DSM Option 5, described in Section 5.4.2.3 of the EIS. As described in the EIS, BC Hydro concluded that DSM Option 5 is not a viable alternative to the Project. Please see the Technical Memo on Alternatives to the Project.

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		and our water that we all depend on for survival. Two power plants in the states are using algae to absorbs some CO2 by hooking up the algae tubes to the base, on top of the roof of the building. Sewage to heat buildings: There are places in different parts of the world (like Vancouver for example) are using sewage from power plants to heat up buildings and it is one of those projects that is highly needed that doesn't pollutes our air, ground and water. It is about 60º F. in the winter and 75º in the summer (depends). The heat is extracted from liquid waste only – it is too difficult and expensive to use solid waste for this purpose. Human waste in the sewers is warmer than the ground it typically flows through. In winter, it is about 14-15 degrees; in summer, around 20. As a result, although there are about 80 sewage-powered energy plants in Europe, the two already in B.C. remain the only ones on this continent. Other jurisdictions in Canada and the U.S. are now looking at sewage for power, but Vancouver is the furthest ahead in developing concrete plans. If we keep going causing destruction from oil and gas companies like we are doing now, there would be more and more protests from angry people and other major negative affects, we can't keep going like this and we all know that there are other, better alternatives and its what we all need and most of us are angry that oil and gas companies are supported by government and leader's. It will be great if they help support these projects by giving 2%-5% of their $ to clean energy projects. These 2 alternative ideas should be looked at and not be pushed back in your minds, us it, like I said before, if we don't start supporting clean energies that doesn't cause pollution to our air (lung problems) water and food sources, the protests will get worse. The states are getting worse with drought, and major flooding's in other areas are also causing damage to farms that we depend on for food...please, have a forethought and morals	
pub_0191-001	Last name withheld, Kyle	It is my understanding the this would be the correct way to make comments and concerns about the ecological disaster waiting to happen in regards to the site C project. From what i have understood the land proposed to be flooded in agriculture rich land, also wildlife inhabitted which brings much concern to my attention. Out of the whole world our land only has about 10% agricultural rich land with fertile soil to sustain the growth of foods, according to statistics I researched. In regards with the	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Alternatives to the Project are described in Section 5 of the EIS. The potential for the Project to affect wildlife resources and agriculture is described in Sections 14 and 20 of the EIS respectively. Please also see the following Technical Memos:

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		wildlife living in these areas one must think that the reason they live in these areas is because the soil is rich and fertile and sustains natural food sources for the wildlife. If we were to take away all the berries that bears eat, take away their native home, and move them out by force to another location they would then be deemed a threat to societies and local populations causing them to be tranquilized and relocated or shot dead. That is quite sad when you think about it because we are being the invasive specie at that point and there is nothing to stop us other than ourselves. I used bears as an example because that has happened near by where I live, housing subdivision being built on mountains are displacing not only the bears but also their food sources and causing them to rummage through our garbages and become braver when it comes to human contact. With this bravery come a 'threat' to public safety and it is deemed to be 'taken care of' by the authorities. In regards to the site C project there are many solutions we can use instead of taking away the wildlife land. If the government were to support a country wide system that allows every industrial building, commercial building and residential building to have solar panels on the walls, roofs, fences, sheds, and shops that would create a nation wide surplus. We could also fund the advancement of technology in regards to current turnbines being put into our local fast paced rivers, which BC has many of them. The advancement of the technology is needed due to the risk of tampering with our salmon runs and other ecological factors such as deteriating of the natural filtering process and bacteria growth that encourages the filtering process. But if one were to design the right turnbines they would easily get around those factors and be able to, again, create a country wide surplus. We need not flood good, rich, wildlife filled land more than what we have already done. I realize having a bunch on windmills located all over the country would also create issues in regards to birds, their migratory paterns and fatality rates caused by them. which is why we would then need to have a balance between all three proposals I have just given. If you use only one or 2 it may cause problems, but to create a balance between all 3 systems i believe it would generate the worlds largest surplus of power, and allow us to sell this power to the states for as long as we dont need the extra. Many people like myself have a passion about these issues and would gladly help create blueprints for new designs, though we may not have the funds to build or test them. We also may not have the ecological experience to know right of the start which are going to fail, which is why these government employees get paid in the first place, to make educated decisions. With the collaberation of many of the public designs and ideas we would	-Agriculture -Alternatives to the Project -Hydro-Electric Storage and Dispatchable Capacity - Movement of Grizzly Bears and Large Carnivores

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		then be able to better advance our current technological state and be better off because of it. As i have stated, I personally have no issue with given the thoughts, designs, and theories provided that it is for the better good of our futures. I would and could design many different models for turbines and structurally sound fences, sheds, and other means provided that some don't already exist. If the do indeed exist it brings to mind why we don't use them. The problem lies in money. I recently found out the the city manager of Abbotsford BC made about $240,000-$250,000 a year, meanwhile the prime minister of Canada only makes roughly $350,000. The prime minister's salary is reasonable, but to have individual cities paying out of tax payer monies salaries as high as Abbotsford or other cities is just ludicrous. These monies should be better situated to better means of sustainable living. I for one would think the if they would want to 'manage', or work for the city or province they would do it out of passion for what they are doing. A gentleman told me that we paid this guy that much money so we would attract 'the best'. If he was truly the best he would do a good job for a reasonable price and not be so adamant about how much he is getting paid. The best would want to provide the best, in all aspects. This relates to all forms and all levels of the government. I don't mean to be rude, only speaking the truth.	

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pub_0192-001	Parsons, Nick	It has been said by BC Hydro that Site C would be maintenance free. The word silt "a mixture of rock and soil" is very wearing on the turbines of the W.A.C. Bennett Dam and has been for well over 20 years with high maintenance. With continual welding of the vanes, which drive the turbines, let alone mechanical breakdowns and replacements. Twenty years ago I know for a fact that three of the ten turbines were continually out of service for repair which is equivalent to three-quarters of the proposed output of the Site C Dam. All this silt suspended in the water, compounded by any soil from the guaranteed embankment sloughs in the proposed new lake area of Site C, will cause considerable wear on these new turbines. These comments by BC Hydro of "no maintenance" are so false and misleading to those unknowing of wear caused by soil and silt. Ask any farmer if soil and silt are abrasive - the answer will be "yes". Soil wears out ploughs, cultivators, disc harrows, all earth operated implements and is terribly hard on combine harvesters when harvesting down, "laid", crops. If grain can wear out a combine harvester, which it does, soil and silt are 100 times more abrasive. Even the nature of clean water alone will wear metals. If the waters of a river or lake are cloudy with snow melt or heavy rains, that is silt suspended in the waters. There has been no practical talk on this subject and the impacts which BC Hydro and our Government must know of, but fail to bring to public notice and scrutiny.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The comment about the units in the GM Shrum generating station at Bennett Dam is incorrect. The maintenance work on the turbines is not a result of wear caused by silt; in fact the majority of the original paint is still visible inside the turbines. Suspended sediment in the reservoir is described in EIS Volume 2 Appendix I. The assertion that BC Hydro has said that Site C would be maintenance free is incorrect. EIS Volume 1 Appendix F Project Benefits Supporting Documentation Part 1 Project Cost estimate provides estimates of the annual costs of operations, maintenance and sustaining capital expenditures.

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pub_0194-001	D, Jamilia	It is not hard to write my objection towards the proposed Site C Dam that BC Hydro is planning to build on the Peace River. Having personally lived in Fort St. John, even for a short while, I saw and came to understand not only the beauty, but also the importance of not damming that river anymore than it has been already. The area that will be flooded includes wetlands, (highly important to the biodiversity of our country) traditional Indigenous land, crucial habitat for wildlife, and homes of people that have lived there for generations. I had the great opportunity to help teach school children about the importance of wetlands, when I worked a few years ago at a slough located in the potential floodzone. How can we teach the next generation about the necessity of protecting our environment, if we destroy the very places that make our province, and country, the amazing place that it is. I also talked to many residents in the Peace River area, as well as read reports that included the strong objections that people in that area have to this dam. We do not need more hydroelectric power, as we already have more than enough to sustain our province personally and economically. As well, the area proposed is not appropriate for damming, as the floodzone area has unstable banks around it that will only erode over time. Thank-you for taking the time to read this letter, and I hope you will reconsider the degredation and destruction that is proposed for a part of our beautiful province.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11.2 (Geology, Terrain and Soils) - Section 11.3 (Land Status, Tenure and Project Requirements) - Section 13 (Vegetation and Ecological Communities) - Section 14 (Wildlife Resources) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 20 (Agriculture) - Section 34 (Established or Asserted Aboriginal Rights and Treaty Rights, and Aboriginal Interests and Information) Please also see the following Technical Memos: - Project Need - Alternatives to the Project - Reservoir Impact Lines - Movement of Grizzly Bears and Large Carnivores
pub_0199-001	Mankhof, Erwin	I feel very strongly that the Cite C Dam proposal must be stopped. This province has been incredibly mismanaged and our debt has skyrocketed. Another project like this, and you might as well sell this province to the Chinese! (Which is already happening!)It is sickening to see the debt escalate to the point of stupidity. Is this what you, the government, are leaving our children and grandchildren? More destruction of our environment and more debt!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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pub_0202-001	Name withheld	Flooding a valley will produce lots of methane gas. This is way more dangerous for the environment than the Co2. The instability of the slopes is another concern. Have a look to Europe: they produce a lot of energy with relatively small hydroprojects using modern technology without flooding a valley.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following Sections of the EIS: - Section 5 (Need for, Purpose of the Alternatives to the Project) - Section 11.2 (Geology, Terrain and Soils) - Section 15 (GHG) Please also see the following Technical Memos: -Alternatives to the Project -Greenhouse Gas Emission Merits of the Project -Reservoir Impact Lines
pub_0203-001	Roy, Marcelle	I am strongly opposed to the Site C dam project. I do not want to see 8000 acres of prime agricultural land and wild life habitat destroyed so that we can enable the oil gas and mining industries to continue trashing the planet and thereby greatly increase our GHG emissions and endanger our very survival. Instead let us put this 10 billion towards building infrastructures and manufacturing for renewable sources of energy that will benefit all of us and future generations.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. Alternatives to the Project are described in Section 5 of the EIS. The potential for the Project to affect wildlife resources, greenhouse gases, and agriculture is described in Sections 14, 15, and 20 respectively. Please also see the following Technical Memos: -Agriculture - Alternatives to the Project -Greenhouse Gas Emission Merits of the Project -Project Costs
pub_0211-001	Peck, Deborah	Where does one start? The task of responding to 15,000 pages of research on the impacts of the proposed dam is daunting. The whole project has been carefully researched and meticulously presented in glossy books, binders and folders with photos, drawings and maps to please the eye. Are there any chinks in the impressive armour that allow the cool clear voice of reason to overcome the slick propaganda machine that has been marching relentlessly on to the final death knell of the valley?	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges that the volume of information provided in its filing of the EIS – five volumes, 40 Sections and appendices -- is considerable. The information submitted, however, meets the requirements set out in the EIS Guidelines and is, therefore, comprehensive and substantial. BC Hydro has also developed an Executive Summary, fact sheets and display boards to provide summary

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		I am a lay person with no scientific training and no patience to read through the pages of documents that have passed through our household over the years, culminating in the recent environmental impact statement. I am relieved to say that we only have the executive summary here in the house. The 15,000 pages put out by BC Hydro and their research teams are neatly arranged in volumes in the Hudson's Hope Library. I have to hope that the experts hired by groups opposed to the proposed Site C dam project will make a more reasoned argument than I am able to produce. Last Wednesday I attended one of the open houses held by the environmental assessment agencies. The agencies promised to answer questions on the environmental assessment process. BC Hydro would be there to answer any "technical" questions. There were FOUR people from the environmental agencies and the rest of the room was stuffed full of BC Hydro employees and the usual posters and propaganda. The BC Hydro staff made a valiant effort to conceal their evident ennui with the whole process. The best advice I received was to get a cup of tea - it would help. It did. The environmental assessment agency staff carefully explained that any submitted comments would be public and would be posted on the website. Any comments received would be sent on to BC Hydro for their response. (So the proponent gets another opportunity to massage the message). The three member joint review panel will review all the material. Quite a task! A 15,000 page impact statement from the proponent and then reams of pages of comments from the public along with reasoned arguments from experts hired to help us (those opposed) fight the behemoth BC Hydro's Site C project. The assessment team tried to reassure me that the panel would be supported by the environmental agencies whose task is to review the submissions and make recommendations. A person would have to be quite oblivious to all news reports not to have heard that the environmental agencies have undergone serious cutbacks and are now struggling to cope with manpower and funding shortages. I thank those people who make a sincere effort to reviewall the material, but also recognise that it is another case of David vs Goliath, where BC Hydro's Site C project appears to have easy access to an open cheque book courtesy of the BC taxpayer and an amazing ability to carry massive debt at our (the BC Taxpayer's) long term expense, while the environmental watch dog agencies have had their wings severely clipped. (Can dogs have wings? You see, I'm not a scientist).	information to the public. BC Hydro further acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. The EIS also demonstrates that the potential adverse effects can largely be mitigated through implementation of the Environmental Management Plans and follow-up programs that BC Hydro has proposed. While the Project has the potential to result in some significant residual adverse effects, they are justified by (1) the public interest served by delivering long term, reliable electricity to meet growing demand (2) the employment, economic development, ratepayer, taxpayer, and community benefits that would result (3) the ability of the Project to meet this need for electricity with lower GHG impact than other resource options and (4) because the Project would also take advantage of water already stored in the upstream reservoirs to generate over 35% of the energy generated by BC Hydro's largest facility with only 5% of the reservoir area. Further, BC Hydro is continuing to consult with Aboriginal groups and to seek accommodations where appropriate. BC Hydro has provided multiple opportunities for the public to comment and participate in the environmental process for the Project. Since 2007, the Project team led or participated in more than 500 consultation meetings, presentations, local government meetings, community events or open houses. The environmental assessment process for Site C is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act Please see the following Technical Memos: - Project Need - Cumulative Effects Assessment Thank you for taking the time to provide your comments.

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		One more comment before I stop rambling on and resort to a list that the overworked and under-manned agencies and panel might have time to read. We live in a democracy. That is supposed to be a good thing. However, when it comes to a sparsely populated north country pitched against a power hungry growing urban population, our “one man one vote” is seriously skewed in favour of the urban dweller Here is my list of comments: (if short of time, only read the first one). 1. The proposed Site C dam should NEVER be built. The project should be abandoned and serious planning consideration given to the restoration of the valley lands that have been held by BC Hydro in “flood reserve” since the 1950’s & added to ever since through “passive acquisition”. 2. “Cost effective” electricity. How can one accurately ascertain the cost of destruction of a valley? 3. Can anyone show me another northern valley in BC where the soil, climate and general environment have attracted so much biodiversity over the millennia? 4. When will the power producing proponents realise that a river (even one affected by dams up stream) is still a RIVER and therefore different from a RESERVOIR? I would also like to point out that a RESERVOIR is very different from a LAKE. 5. The executive summary reckons that the area is going to suffer from the cumulative effects of all the other activities presently sanctioned and happening – activities that fuel the economy like forestry, oil and gas extraction and mining. With or without the dam project the area suffers from the cumulative effects of these other activities – so why, oh why do we have to add insult to injury and ruin the beautiful Peace River valley, flooding it to provide a small and temporary solution to our power hungry greed? 6. No amount of mitigation will restore the natural beauty & biodiversity we have been privileged to enjoy in the valley.	

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pub_0213_001	McNaughton, Barbara	I ask that the proposal for building the Site C dam be denied. There are many reasons for this, and one of the biggest reasons in my mind is that if the water is used to support fracking for LNG, the risk of contamination of the waters, the underground streams, the aquifers --- is immense. Our water will be unavailable for any other purpose than this which is so short sighted it is difficult to comprehend. The wildlife, the plant and tree life will be ruined. In addition BC Hydro is in extreme distress already. It will fall to the public to rescue them ---- another HST in the making.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The purpose of the Project does not include retention for other uses. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11.6 (Groundwater Regime) - Section 13 (Vegetation and Ecological Communities) - Section 14 (Wildlife Resources). Please also see the following Technical Memos: - Project Costs - Project Need
pub_0214_001	Parsons, Jane	I attended the Environmental Impact Statement presentation about the proposed Site C Dam, at The Best Western Inn, Dawson Creek, yesterday as a Member of the B.C. Women's Institute who are against the proposed Site C Dam. For the first time I was appalled to see that the flooding caused by the proposed Site C Dam will stretch from the proposed dam site back up the river to Hudson's Hope town. All the devastation and carnage this will cause is horrifying to think about. Added to that all the roads which will have to be built and re-routed causing upheaval of the land. I am against the prime agricultural land being lost forever and now seeing what the total impact of loss will be is beyond comprehension. This is a plan for a man made disaster and an utter disgrace that it should even be contemplated.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential effects of the Project on agriculture and transportation are described in Sections 20 (Agriculture) and 31 (Transportation) in the EIS, respectively.

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pub_0216_001	Last name withheld, Trent	Question revolves around upstream effects on fish and fish habitat. Its unfortunate arctic grayling and bull trout populations of Moberly River, and Halfway Rivers will be lost. The effects of the resevoir have been modelled to estimate the effects to theses populations. However, I feel the effects of the resevoir will greatly impact all species. It is known fish species in the Peace River utilize various habitats within a particular range of flows (i.e Walleye, tributary confluences). At the open house, i did see a section or find any information that depicts potential changes to meso-habitats (i.e. trib confluence, slow runs, snyes, riffles, side channel sloughs...etc) Will the abundance of fish that prefer these habitat types over others be lost? If certain species of fish prefer specific habitat types, and those habitats are lost, where will the fish go? thank you.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The transformation of the river into a reservoir and effects on fish are described in Section 12.4.2.1 of the EIS and changes to habitats downstream of the dam are described in Section 12.4.2.2 of the EIS. Section 12.6.3 summarizes the significance of the effects of changes in habitat, health and survival and movement on fish. Bull trout populations in the Halfway River will not be lost; however, the portion of the Halfway River Bull trout population that migrates into the Peace River will be affected. As stated in the EIS, the level of effects is uncertain because evidence from other reservoirs in BC and elsewhere have demonstrated that Bull trout can thrive in reservoirs. Changes in the habitats upstream of the dam will occur. In some cases habitats (i.e. tributary confluence, slow runs, snyes, riffles, side channel sloughs) upstream of the dam will be flooded and tributary confluences with the new reservoir will be translocated upstream on the tributaries. In other cases where those habitats are not re-created and fish cannot adapt to the new habitat conditions, they will be negatively affected.

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pub_0218-001	Parsons, Nick and Jane	On the televised programme Peace Country Presents this evening 1st March 2013 Dave Conway of B.C. Hydro stated that once the Peace River Valley is flooded - the remaining land could be irrigated in order for it to make up on food production, which would be lost by the flooded land . This statement just shows the lack of understanding of what will be truly lost by this valley -should it be flooded. To start with the "lake" caused by the back-up from the proposed Site C Dam will be so full of debris from sod, bushes, trees, tree stumps,and I am sorry to say even drowned animals that there is no way water could be syphoned off to operate irrigation equipment. The best land will be drowned anyhow. What will be left is the poorer high ground which has no depth of soil, necessary for growing good vegetables. The best land is closest to the Peace River and under the plans for the proposed Site C, this best land will be flooded and thus lost forever. The land that would be left by the lakeside will too in time erode. Williston Lake is proof of this, where the land has eroded hundreds of feet and is still eroding after 45 years plus debris is still rising. There is much evidence of this if you care to go and see. B.C. Hydro has no responsible way to quantify or mitigate the erosion in this alluvial valley. This is beyond anyone's imagination. Nature is far stronger than mankind and will win every battle put in her path. The Site C proposed dam, is a plan for a man- made disaster.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. EIS, Section 20.3.4.1.2 describes the potential for irrigation improvements using water from the reservoir. The reservoir water would be adequate for irrigation purposes, as water quality within the reservoir is described with respect to drinking water quality guidelines in EIS, Section 33. The results indicate that a number of surface drinking water quality parameters would change as a result of the Project; however, changes would not result in exceedance of drinking water quality guidelines (or of guidelines for recreational water use). Contact with (i.e., through recreational water use) or consumption of water from the Site C reservoir and from downstream tributaries would not pose a health risk, and no effects on human health are anticipated. Volume 1, Appendix A, Vegetation, Clearing and Debris Management Plan, describes the plan for managing floating debris, including minimizing floating debris through advanced removal of shoreline vegetation subject to early erosion. The loss of agricultural land associated with the Project and proposed mitigation measures are described in Section 20 of the EIS. Specifically, Section 20.3.3.1 of the EIS states that approximately 16,240 ha of Class 1 - 5 cultivatable land would remain in the Peace River valley, much of that including land along the Peace River downstream of the Project. The assessment includes the reservoir area and the erosion area. Please also see the following Technical Memos: - Agriculture - Reservoir Impact Lines The geology, terrain, and soils of the Project area are described in Section 11.2 of the EIS. As described in Section 11.2 of the EIS, preliminary reservoir impact lines quantify the area of anticipated erosion.

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pub_0223-001	Beam, Derrick	I am sending this letter in response to the Canadian Environmental Assessment Agency's call for comments regarding B.C. Hydro's Environmental Assessment Submission. I have the following concerns that I hope you will take into consideration when making a decision on whether or not to move further with this process: 1. Allowing any corporate body to conduct their own environmental assessment for a project that they have clearly stated they want to move forward on should immediately negate any of the research that has been conducted for their submission (including "private contractors"). Such an assessment should never have been allowed to move forward, particularly using B.C. Hydro-public funding. Our provincial government removed the governing body (B.C. Utilities Commission) that should be overseeing this type of assessment so that it could be conducted in a true, non-biased and meaningful manner. I feel that because of this, the entire environmental study submission is tainted and invalid.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Pursuant to the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012), the environmental assessment process for Site C is being conducted in a thorough and independent manner. In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. In accordance with these documents, the Minister of Environment of Canada and the Executive Director of the EAO have required BC Hydro to conduct the assessment and submit the EIS.
pub_0223-002	Beam, Derrick	Notwithstanding the above, I also have the following concerns regarding the submission BC Hydro has put forward on their own behalf: 2. Sloughing, Erosion, Silting. The description of sloughing and erosion is simplified in the submission. Basically it appears that it will be accounted for by creating a very large "stability impact line". It appears that because the instability of the banks and possible sloughing isn't truly known, the idea is to claim a whole lot of land as part of the project. I plead with the CEAA to take a quick flight along the banks of the Williston Reservoir. Compare the edges of the lake today to the edges in 1965. It's truly incredible how much of the environment has been destroyed beyond what was flooded. In fact, the fence around BC Hydro's own interpretive center is now right on the edge of the bank.	The proposed Site C reservoir will result in changes to erosion and slope stability at some locations within the reservoir shoreline technical study area. As described in EIS Section 11.2.3 the location and nature of these changes have been predicted through a detailed characterization of the reservoir shoreline geology, inventory and characterization of existing slopes and landslides, groundwater monitoring and modeling, shoreline erosion modeling, and slope stability analyses. Preliminary reservoir impact lines have been prepared to characterize the following hazards around the proposed reservoir: - Potential floods – the Flood Impact Line - Potential erosion – the Erosion Impact Line - Potential landslides – the Stability Impact Line - Potential landslide-generated waves – the Landslide Generated Wave Impact Line This work is described in detail in EIS Volume 2 Appendix B, Part 2 Preliminary Reservoir Impact Lines As described in the Technical memo on Reservoir Impact Lines, the approach used is based on guidelines prepared by the International Commission on Large Dams and provide more information on the expected likelihood and nature of the hazards, and therefore facilitate more flexible land use planning.

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pub_0223-003	Beam, Derrick	In addition to creating a larger footprint over time, the silt in the water will have a negative effect on animal habitats (not to mention the turbines of the dam...but that's not environmental).	The potential effects of suspended sediment on fish and fish habitat during the construction and operation of the Project are described in Volume 2, Section 12 of the EIS.
pub_0223-004	Beam, Derrick	3. A very large part of the environmental assessment included "community consultations" prior to submission. Yes, BC Hydro did "consult" with us. They told us what they are planning on doing, answered questions, and continued on along the path regardless of feedback. I have felt very much as though my input is not important. When the BC Government publicly announces that they want to move forward with a project, then allows the corporation to conduct their own assessment, then only "consults" with small geographic areas around the site...it is difficult to feel that your input is being heard. There should be a third part conducting the research, asking communities for input, and providing real answers to individual concerns.	Please see the response to pub_0465-001.
pub_0223-005	Beam, Derrick	4. What if CEAA says no, but B.C. says yes? No one at the last consultation in Hudson's Hope seemed to know. In my eyes, that calls this whole process into doubt. What kind of power does the CEAA have in this regard?	Under CEAA 2012, if the Minister of Environment of Canada concludes that the Project is likely to result in significant adverse effects and the federal Cabinet concludes that those effects are not justified, the federal government will not be able to issue authorizations for the Project under the Navigable Waters Protection Act or the Fisheries Act.
pub_0223-006	Beam, Derrick	5. I asked folks at the last consultation in Hudson's Hope how Site-c would stand up against possible earthquakes (there's been a couple near the site over 5.0). I was told that it's designed to withstand over 5.0 earthquakes. I asked what about a wave created from the earthquake?...I heard some mumbling.	As described in Section 4 of the EIS the earthquake design ground motion adopted for Site C has an annual exceedance frequency of 1 in 10,000. Section 11.2.5.1 of the EIS describes the regional seismicity and seismic hazard. As described in Section 11.2.5.1, there is a range of possible earthquake magnitudes and distances that contribute to the seismic hazard for the Project and the design is based on magnitudes from M 5.5 to 7.5. As described in Section 37.1, the dam freeboard of 7.6 m is greater than the seismic seiche (wave) which is anticipated to be less than 0.45 m; therefore, the dam would not be overtopped.
pub_0223-007	Beam, Derrick	6. Athabasca Delta: B.C. Hydro is refusing to include the Delta in their study. From what I've read, the CEAA is requiring a "narrative description" of the Bennett Dam's effect on the delta (summarizing existing research). I think this is an excellent start. However, there also need to be some clear projections of what may happen if site c is built. David Conway's simple explanations of "...negligible changes downstream..." are not acceptable. Why are BC Hydro spokesmen informing the public on environmental	As required in Section 9 of the EIS Guidelines, the EIS provides a narrative discussion of existing hydroelectric projects on the Peace River (WAC Bennett Dam and Peace Canyon Dam). The assessment of the potential effects of each of the Project components and physical activities in all phases were based on a comparison of the biophysical and human environments between the predicted future conditions with the Project and the predicted future conditions without the Project.

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		issues? Their own research shows that the mercury levels in the site c reservoir will be high...so obviously the delta will have even high mercury content than it already has (but Mr. Conway did not provide those type of observations). This is one of many examples as to why the whole process is flawed...people are being kept in the dark and not getting an opportunity to be fair participants in the process because we are NOT being informed with the true environmental facts (of course the facts may be there...you just have to dig through pages of information and find them).	Potential changes of the Project on components of water, land and air are described in the Environmental Background Section 11 of the EIS. These predicted changes were used to support the effects assessment on the valued components. The predicted changes to mercury and methylmercury concentrations in water and biota are described in Section 11.9 Methylmercury in the EIS. The potential effects of changes in methylmercury as a result of the Project on human health are described in Section 33 Human Health of the EIS. Please also see the following Technical Memos: - Methylmercury - Peace Athabasca Delta The Project is currently in a cooperative environmental assessment process led by federal and provincial regulatory agencies, which includes a joint review panel. Consultation is part of this process and includes opportunities for input and participation by the public, Aboriginal groups, stakeholders, and communities. Feedback received to date has been considered, along with technical and financial information, in refining Project designs and plans, including engineering and environmental mitigation plans which have been submitted as part of the EIS. An environmental assessment of the Project must be completed and various permits and approvals must be issued before it can proceed to construction. In addition, the Crown has a duty to consult with, and where appropriate, accommodate Aboriginal groups.
pub_0223-008	Beam, Derrick	7. Agricultural Land & Wetlands: Why are we considering destroying the only class A agricultural land in Northern BC? This land also greatly benefits wildlife of all types, and there will be significantly lower numbers if flooded. Not to mention the wetlands. People will talk about the swans that "used to" migrate through the Peace.	The potential effects of the Project on wetlands, wildlife and agriculture are described in sections 13 (Vegetation and Ecological Communities), 14 (Wildlife Resources) and 20 (Agriculture) of the EIS. Please also see the Technical Memo on Agriculture.
pub_0223-009	Beam, Derrick	8. Habitat and the Yukon to Yellowstone corridor: Site c will cut off a major migration route for numerous animals, particularly grizzlies and caribou. This may result in less gene sharing and further affect these species ability to survive. Obviously a great deal of habitat will be destroyed as well.	Please see the Technical Memo on Caribou for information on the Project's effect on wildlife migration. Caribou were not selected as a key indicator group to be assessed in the EIS as they do not occupy habitat in the Peace River valley... The rationale for selection of the key indicator species is described in Volume2, Section 14, Table 14.2. The potential effects of the Project on grizzly bear, which includes consideration of movement, are described in Volume 2, Section 14. Section 14.2.9 describes baseline conditions for large carnivores

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			which includes grizzly bear. Section 14.3.1.6.5 addresses the potential effects of habitat alteration and fragmentation, Section 14.3 2.6.5 addresses the potential effects of disturbance and displacement and Section 14.3.3.6.5 addresses the potential effects of morality.
pub_0223-010	Beam, Derrick	9. Climate Change: I've tried to find some of this information in the assessment, but haven't been able to (so many documents!). However, I've heard that an additional reservoir will likely change the climate in this area. Has there been any studies conducted to explore what this type of change will have on fauna/animal life in the long term.	As described in Volume 2, Section 11.10 Microclimate the potential for changes in microclimate was assessed and the potential for effects on wildlife resources were considered (see Section 14 Wildlife Resources). The creation of the reservoir will not result in changes to microclimate conditions at a distance greater than 1 km from the reservoir. Minor changes to microclimate parameters will occur within 1 km of the reservoir, but the magnitude of change will not result in a change to long term productivity of wildlife resources.
pub_0223-011	Beam, Derrick	10. Fish & Mercury content: The report shows negative impacts on fish, and raised mercury content. We are told that limiting our intake will keep us from damaging our bodies. I'm concerned about the other animals who don't know that.	Mercury is naturally occurring in the Peace River valley and in fish. Appendix 2 Volume J, Part 1 Mercury TDR (Section 2.8) demonstrates that concentrations in fish are not high enough to cause direct harm to fish. The potential risk to fish-eating wildlife was also considered. Results of this assessment demonstrate that there is a negligible increase in health risk associated with mercury to wildlife that would feed on fish from the Site C reservoir. The magnitude of increase in fish mercury concentration is not high enough to increase risks to wildlife species such that changes resulting from the creation of the reservoir are not distinguishable from baseline. Please see the Technical Memo on Methylmercury.
pub_0224-001	Thomson, Bill	Why not install channel dams that only protrude halfway into the river this way the river is not damed	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Alternative Means of Carrying Out the Project are described in Section 6 of the EIS.
pub_0225-001	Wagg, Denny	I wish to express my strong opposition to the construction of the Site C dam. I lived in the Peace River country during the late 1960's to the mid 1970's and I travelled the road linking Hudson Hope and Ft. St. John several times. It is one of the most scenic drives in the province. All this beauty would be lost with the construction of Site C. This dam would flood over 7,000 acres of Class I and Class 2 agricultural land in the lower Peace Valley. This is prime agricultural land. **We are just not making any more of it.** Considering growing concerns about food security, it does not make sense to destroy some of B.C.'s best agricultural land. The Site C dam will force up to 20 families -- many life-long ranchers - to move. Numerour valuable First Nations	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential for the Project to affect fish and wildlife habitat and agriculture are described in Sections 12 (Fish and Fish Habitat), Section 14 (Wildlife Resources), and Section 20 (Agriculture) in the EIS. The potential for the Project to change slope stability is described in Section 11.2 Geology, Terrain and Soils in the EIS. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Please also see the following Technical Memos: - Agriculture

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		heritage sites would also be flooded. Also lost would be critical fish and wildlife habitat. The Lower Peace and its associated ecosystems support a range of wildlife, including threatened populations of bull trout, grizzly bears, wolverines and countless other plants and animals. The area of land lost to the dam's reservoir will also be substantially more due to sloughing. Residents are concerned that the steep and unstable river banks of the Peace river Valley will continuously slide into the reservoir, causing more and more damage each year. One has to only look at the massive amount of sloughing that took place when the reservoir behind the W.A.C. Bennett dam was created in the late 1960's to understand what I am talking about. Although BC Hydro is publicly stating that the Site C Dam would cost $7.9 billion to construct it is widely understood that the dam's construction costs would likely balloon to more than $10 billion due to the unstable ground around the dam and reservoir site. BC Hydro is predicted to lost $1 billion over the next four years, partly because the province has signed so many contracts with private power producers that BC Hydro has a surplus of expensive power that they can't use and can only sell at a loss. BC Hydro's future forecasts of power needs are based on selling electricity to the oil and gas industry, for the production of energy-intensive products like liquefied natural gas (LNG). However, unless the industry is given highly subsidized rates they may not use as much, if any, of the power provided by Site C - leaving BC with an even bigger surplus of expensive energy that we can's use of even give away. In conclusion, the environmental costs associated with the Site C hydro project are just too high. We must make lower impact renewable energy sources -- like solar, wind, geothermal and other technologies -- the basis of our energy future.	- Reservoir Impact Lines - Project Need - Alternatives to the Project

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pub_0226-001	Peace River Environmental Society	The Peace River Environmental Society has reviewed some of the subject matter of the EIS and request that additional detailed information that is not contained in the Site C Environmental Impact Statement (EIS) be made available for our review as soon as possible. We request further data and studies related to the following subjects, 1) Stress and strain related geological studies on the physical and modeled properties of the bedrock in and around the proposed Site C dam location. 2) Seismic related information including seismic maps on the underlying geological formations and faults in and around the area of the proposed project. Particularly subsurface faults and surface lineaments as it relates to structural geology. 3) Studies and information related to the quantification of the potential risk to the proposed dam by local seismic activity or activities that are undertaken in the area by other industries that may have a potential to impact the dam through subsurface activities. 4) Studies on the Hydro technical considerations of a maximum IDF or PMF if an extreme cascading dam failure occurred during a 200 year PMP event.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The answers to the four issues raised are as follows: 1) Please see the Technical Memo on Dam Safety. 2) Section 11.2.5 of the EIS describes the regional seismicity and seismic hazard and includes maps showing the requested information. 3) Section 11.2.5 of the EIS describes the regional seismicity and seismic hazard and includes the effects of petroleum industry related activities that may affect seismicity 4) Floods up to the PMF are described in EIS Section 37.1 (Effects of the Environment on the Project). For the effects of a cascading dam failure please refer to the Technical Memo on Dam Safety. Please also refer to Section 37.2 of the EIS (Potential Accidents and Malfunctions).
pub_0226-002	Peace River Environmental Society	5) The mean annual sediment yield from the Smokey River into the Peace River is 389 Tonnes/yr/km^2. (EIS Volume 4, Appendix I, pg. 14) This represents a significant amount of sediment (and water volume) input into the Peace River system and makes it a large contributor to the river system. We have several concerns and wish to gather more information on, The Fluvial Geomorphology and Sediment Transport report (p14 para 2) suggests that bed material input characteristics into the Peace River have not been markedly influenced by upstream regulation on the Peace River yet does not provide the evidence to support such a conclusion. Also, the baseline conditions of historical erosion and deposition patterns in the Peace River is limited to BC and omits the Smokey River (P34 para 4). We would like to know what the reasoning and research is in the requiring its omission from the EIS when many detailed studies have been undertaken upstream in BC where there are smaller sediment yield's from Peace River tributaries.	Bed material characteristics are described on page 16, Section 2.5 of Volume 2 Appendix I Fluvial Geomorphology and Sediment Transport Technical Data Report (TDR). The description on page 16, paragraph 2 refers specifically to Reach 4 which extends from the Smoky River confluence to the Wolverine River confluence. The statement that bed material characteristics downstream of the Smoky River confluence have not been markedly influenced by upstream regulation on the Peace River is supported by research conducted by Church, as referenced in the same paragraph. Historical erosion and deposition patterns in the Peace River, in particular the changes in active and inactive channel zone areas due to river regulation, are described in Section 3.5 of the TDR. The description is based on work conducted by researchers at the University of British Columbia, as referenced in the TDR. Continuous mapping of channel change was only available for that portion of the river between the proposed Site C Dam and Dunvegan, which includes Reach 1, Reach 2, and part of Reach 3 as described in Section 3.5 of the TDR. This is the reach of river in which the most notable channel changes have been observed. Although detailed information about historic channel change does not extend downstream of the Smoky River, the prediction of the potential influence of Site C on erosion and deposition in the Peace River extends from the proposed Site C dam to Peace Point, Alberta and is described in Section 6 of the TDR.

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pub_0227-001	Freeman, Larry	Of all the stupic, moronic, imbecilic ideas to build site "C" dam! Not that there is anything wrong with building another hydro electric project. Just not site "C" at that location. If the banks fo the reservoir (site "C") were rock I would have no problem with your choice. What are you thinking, mud, dirt is all you have for banks of the reservoir at this location. I worked on the Bennet Dam painting at the intakes. This was towards the end of the project. In this time I was able to watch the water rise up in the reservoir. As the water rose up to the dirt banks on the north side of the reservoir, huge areas of the dirt banks would slide down into the reservoir. The ore the water rose in the reservoir more and more of the dirt banks slid into the lake. I'm not talking about a little slide. I'm talking about a whole hill side shearing from the top of the large hill to the water and sliding into the lake. No go and have a look at the Halfwar river where it empties into the Peace river. Just above the mouth of the Halfway river, the south bank of the Peace River on a wet year slid down into the river blocking off the Peace for most of the day. Now go up to Hudson Hope and look at those dirt banks. They are huge dirt banks right beside the river. As the water rises to the banks these hill will shear and slide into the reservoir, blocking off the river and if it blocks off the river half as high as those banks Hudson Hope will be under water. What are you going to do? Shut down Bennet and Dinosaur dams, if you don't and it slides as bad or worse then I predict Dinosaur Dam could be flooded. Your not going to let that happen are you! If you shut down Bennet and Dinosaur dams, how much is that going to cost in lost revenue? How long will you be able to keep the water back before you have to let it go? How are you going to breach the slides withoug breaching site "C"/ You are going to have slides on both sides of the river all the way down to site "C". Now when all of these slides breach and their mud, trees and debris come down river and lodge up against site "C" dam, this is going to have a beaver dam effect completely blocking off the dam. With the weight of the debris and all the water backed up behind it pushing against the dam, is in all likely hood going to take out the dam. What a hell of a [illegible] of an environmental disaster you are going to have down stream if and when it lets go. Again what are you going to do shut down Bennet and Dinosar Dams? For how long do you think you can hold back the water in Williston lake, six months a year. Then your going to have to let it go. It will take you years to clean up the beaver dam in front of site "C" Dam and you will not have that luxury that amound of time	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Information on the geology, terrain stability, and geotechnical soil conditions within the Project activity zone are outlined in Section 11.2 of the EIS, which describes both current conditions and potential changes as a result of the proposed Project activities. EIS Volume 2 Appendix B, Part 2 Preliminary Reservoir Impact Lines describes the bedrock and surficial geology within the proposed reservoir shoreline area in greater detail. Predicted changes to erosion and slope stability as a result of the creation and operation of the proposed reservoir are described. Reservoir impact lines delineating zones of potential flood, erosion, landslide, and landslide-generated wave hazards are provided. The 1973 Attachie slide was taken account in the studies reported in the above section and appendix of the EIS. EIS Volume 1 Appendix F Project Benefits Supporting Documentation Part 1 Project Cost estimate provides estimates of the annual costs of operations, maintenance and sustaining capital expenditures. Alternatives to the Project are described in EIS Section 5 and please see the Technical Memo on Alternatives to the Project.

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		and when site "C" goes look out down stream. South Taylor's gone, the bridges are gong. Look out Alberta here comes a fool's folly! By the time we are done paying for all the damage in B.C. alone to say nothing of the damage in Alberta. I will have been dead and gone a long, long time!!! Even if the site "C" doesn't breach, the mud that will be washed down-stream from the banks of the reservoir sluffing in will cause the Peace River to be inundated wtih silt. Look out environmental disaster here we come. This will be felt all the way to the Arctic ocean! There won't be anymore fishing in the Peace River. The silt will kill off the fish and silt over their spawning beds! Goodbye to drinking water for anyone who relies on the Peace for a source. What are they going to do truck it in. I live in Taylor when the spring run off would muddy the Peace River and the town water was always cloudy until the river cleanned up! Is B.C. Hydro going to pay for the water hauling? I don't think so. It will be the B.C. tax payers paying for all the new water systems down stream of site "C" includding Alberta. B.C. is going to be broke for a long time anyway you look at it is a recipe for disaster!!! Another thought; all that silt and sand along with the water pressure going down into site "C" turbines will cut concret and steel like butter. Goodluck to your dam lasting very long. The maintenance on this dam will be very high. If we took the 7 billion dollars for site "C" and put it into renewable energies in B.C. we would lead Canada in the direction we shoule be going, not more environmentally damaging projects we don't need. Wake up!	
pub_0228-001	Rudakavitch, Mike	Information request from Mike Rudakavitch submitted to the Canadian Environmental Assessment Agency (CEAR document # 644) on February 26, 2013. The submission consists of 6 photographs with handwritten captions as follows: 1. Ice crossing at Ft. Vermilion 1967 spring. Crossing stull useable for pedestrians only. 2. Ice crossing, Ft. Vermilion - ice has started to move and river water is rising rapidly . 1967. Ice has started to break up. 3. Ice at Ft. Vermilion 1967. Ice is strong and breaking up into large pieces - the making of ice jams. 4. Ice breakup at Ft. Vermilion 1967. Large ice floes - the component of ice jams. 5. Ice breakup at Ft. Vermilion 1967. 6. Ice breakup at Ft. Vermilion 1968. The year after Bennett. The beginning of the	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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		"rotten ice" syndrome.	
pub_0229-001	Hadland, Arthur A.	Please find additional information regarding proposed Site C reservoir stability and safety in the enclosed hard copies. I would like to add the comments that the following keys points are being glossed over or marginalized by the proponent {BC Hydro): 1. Provincial energy needs assessment 2. Economic (business case) for energy growth 3. Alternative energy sources 4. Reservoir stability and public safety *please see below 5. A 100 year agricultural needs evaluation 6. Historical significance of valley for all communities 7. Future wildlife sustainability 8. Cumulative effects back to 1957 Would the committee also please refer to and consider the details surrounding the failure of the Teton in Idaho (1976: 11 fatalities + 13,000 head of cattle) and the 1963 failure of Vajont Dam in Italy (estimates of the dead range from 1,900 to 2,500). The 1975 failure of the Banqiao Reservoir Dam and other dams in Henan Province, China caused more casualties than any other dam failure in history: an estimated 171,000 people. The potential for failure of proposed Site C is in all probability is just as likely as these examples. To date the investigation process by the proponents has lacked balance and stewardship. It is faulty. In the interest of ensuring public safety and protecting the environment, I do hope and trust that there will be honesty and integrity in the	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The specific comments are addressed as follows: 1. Please refer to EIS Section 5 (Need for, Purpose of, and Alternatives to the Project) and Volume 1 Appendix D (Need for and Alternatives to the Project Supporting Documentation). 2. Please refer to EIS Section 5 (Need for, Purpose of, and Alternatives to the Project) and Section 7 Project Benefits. 3. Please refer to EIS Section 5 (Need for, Purpose of, and Alternatives to the Project) and Volume 1 Appendix D (Need for and Alternatives to the Project Supporting Documentation). 4. Please refer to Section 11.2 of the EIS (Geology, Terrain, and Soils) and Volume 2 Appendix B (Geology, Terrain and Soil Reports; Parts 1 and 2). 5. Please refer to Section 20.3.11.2 of the EIS (Agriculture, Effects Assessment - Food Production and Consumption). The Peace Region population may grow to approximately 210,000 people in 2112, or about triple what it is today. An estimated 1,510 ha of vegetable production would be required to meet 100% self-reliance for vegetables capable of being grown in the region for a population of that size. There would be an estimated 6,606 ha of high utility, unimproved Class 1 and 2 land and an additional 3,172 ha of Class 3 land, within the Peace River valley that would not be affected by the Project available for growing these crops. Self-reliance in dairy, meat and egg and poultry products does not require higher capability farmland to support production; as such, the Project is not anticipated to be a determinant in achieving high levels of food self-reliance in these commodities. 6. Please refer to Section 32 of the EIS (Heritage Resources) and Volume 4 Appendix C (Heritage Resource Assessment Report) and Section 19 Current Use of Lands and Resources for Traditional

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		Assessment Review Process ~~~ Arthur Hadland also submitted the following documents with his comments: * Catto, N.R. 1991. Quaternary Geology and Landforms of the Eastern Peace River Region, British Columbia. NTS94A/1,2,7,8. Mineral Resources Division, Geological Survey Branch, British Columbia Ministry of Energy, Mines and Petroleum Resources. * *Opinion from the Peace* authored by Arthur A. Hadland, May 12, 2012, expressing concern about the soil stability of the proposed reservoir * First Nations Declaration in support of saving the remainder of the Peace River * Letter from the office of the Director, Electoral Area 'C' to the Honourable James Moore, Minister of Canadian Heritage, dated December 5, 2011, recognizing and requesting the preservation of the unique historical character of the Peace River. * a review of the collapse of the Peace River Bridge. 1957. * excerpt from the 1962 *Natural Resource Forum* (page 96)	Purposes. The appendix provides a detailed ethnohistorical summary of Aboriginal peoples' occupation and use of northeastern and British Columbia in the early contact/historical period as a means to interpret the archaeological record and assess significance of archaeological resources within the Local Assessment Area. It also provides a detailed discussion of the post-contact historical period including documentary research, stakeholder interviews and field investigations. The stakeholder interviews provide an understanding of what historical resources are valued and why they are important to local community members. The heritage assessment also reviewed the traditional land use studies (TLUS) undertaken by several Aboriginal groups located near the local assessment area, for information relevant to understanding the archaeological and historical assessment results. The assessment on the Current Use of Lands and Resources for Traditional Purposes considered changes to cultural and traditional uses of the land to take into account use of and access to culturally important places and valued landscapes within the Peace River Valley by Aboriginal groups. 7. Please refer to Section 14 of the EIS (Wildlife Resources) and Volume 2 Appendix R (Terrestrial Vegetation and Wildlife Report). 8. Please refer to Section 10.5 of the EIS (Cumulative Effects Assessment). Please also see the following Technical Memos: - Alternatives to the Project - Project Need - Cumulative Effects Assessment - Reservoir Impact Lines The assertion that the quoted failures indicate the probability of failure of the Site C dam is unfounded. As described in Section 3 of the EIS, BC Hydro has an established international Technical Advisory Board that has provided technical advice on the Project engineering and design. The members of the Site C Technical Advisory Board are globally recognized for their technical knowledge and experience with the design of hydroelectric projects around the world. As described in Section 4 of the EIS: - The earthfill dam, RCC buttress, power intakes, spillway headworks and associated training walls, which would impound the reservoir, would be designed and constructed to international and Canadian standards to withstand normal loads as well as loads resulting from extreme floods and earthquakes. - BC Hydro has adopted the highest Canadian Dam Association classification for Site C, which results in the highest standard for the inflow design flood and earthquake design ground motion.

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			The ability of the dam, generating station and spillways to withstand extreme weather, earthquakes and floods is described in Section 37 of the EIS. Please see the Technical memo on Dam Safety.
pub_0230-001	Bandcroft, Janine	i'm writing to register my opposition, as a tax paying bc resident, to any further development of the site c dam project.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0231-001	Shaw, Peter	Site C is a project of the one per cent. Over the life span of its perhaps one hundred years a few greedy foreign companies will profit. We who live here in the Peace will gain a silty lake with collapsing mud banks. We will lose values such as farm land, historic sites and valuable wildlife habitat, and of course the natural beauty of the place which money grubbers are blind to. Campbell said the electricity from Site C would be used for future domestic power needs(houses) but Clark came clean and admitted it was to be used for the natural gas industry. I say go find another river like the Fraser, or are you worried about the backlash from the many thousands of southern BC protesters? Hydro's Conway often uses the word mitigate with regards to the many evils this project would generate. That's a nice band aid word which probably fools most the uninformed and apathetic. I feel that the environmental review is a sham, and this project is going ahead no matter what. We little people are not going to be heard, and even writing this is a waste of my time, but I still say... NO SITE C!!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential for the Project to affect agriculture, historic sites and wildlife are described in Sections 20 (Agriculture), 32 (Heritage Resources) and 14 (Wildlife Resources) of the EIS, respectively. While the Project has the potential to result in significant adverse effects, they are justified by the need for (Section 5 of the EIS), and benefits of (Section 7 of the EIS), the Project. Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. Please also see the Technical Memo on Project Need The environmental assessment process for Site C is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada “Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project” (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act.

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pub_0234-001	Stanford, Eliza	Having read through the executive summary of the proposed Site C project, I have some comments to offer the review panel. What does it mean when it is stated "a determination of significance has been made"? There are so many of these determinations throughout the executive summary that I hope that the project as a whole is deemed to be a "determination of significance" and it is therefore turned down. On pages 58 – 60 under Agriculture, there is nothing in the impact statement to highlight historical food production in the valley. The Peace River valley used to be a major producer of potatoes and supplied all the potatoes for the residents of the area including Fort St. John. When BC Hydro started buying up land and holding it, it also set in motion a kind of "arrested development" of the whole valley. No farmer wanted to invest any more in their farms as all that investment would be for naught should BC Hydro get the go ahead to flood the valley. Land values were stifled due to the uncertainty. Projects such as fencing, irrigation, fruit tree plantings are all long term investments that could help the Peace Valley become the Okanagan of the north. I would like to see BC Hydro include a historical reference and future potential for the Peace Valley so that people can see what it was and what it could be, should the valley be allowed to realize its full agricultural potential. When BC Hydro says they can "mitigate" the loss of agricultural land, two of their solutions stand out. The first is that they propose to move the good soil to another location. Where would they move it to? Every location that is farmable in this region is already under cultivation. Moving soil from one place to another does not necessarily make the other location suddenly a class one field when the elevation is different; it is no longer in the micro climate of a river valley; and it has been contaminated with the heavy trucks driving all over it in order to move it. Also with heavy trucks burning fossil fuels have been used to move the soil and this adds to an already enormous carbon footprint in the potential construction. Admittedly BC Hydro states they cannot measure the GHG emissions for the construction of the Project (page 35). The second is the loss of the valley micro climate which can support a greater variety of crops including food crops. There would be a catastrophic loss of 3,433 acres of class 1-3 lands in the valley. There is no mitigation	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The Executive Summary provides a 2 page summary of the complete agricultural effects assessment which can be found in EIS Section 20, and which is further supported by Volume 3 Appendix D Agricultural Assessment Supporting Documentation. The questions raised about the assessment methodology are described in the EIS: approach to determination of significance is in Section 10.4.2.3 of the EIS. Please see the Technical Memo on Flood Reserve. The agricultural potential of the lands affected by the Project is described in Section 20 of the EIS. Specifically, Section 20.2 provides a description of baseline conditions including agricultural land capability, suitability, and utility. The assessment considered the capability of the land to grow crops suitable to the land capability for agriculture, and was not limited by past or present cultivation or use, and treats land currently undeveloped for agriculture as equivalent to land currently being used for agricultural purposes. The assessment considers the future potential for likely agricultural production on the land in consideration of foregone agricultural use and economic activity. The EIS identifies that not all usable agricultural land is currently under cultivation. More land is available for cultivation, and existing cultivated lands could produce other crops. Farmers make business decisions about whether or not to bring land under cultivation, and about which crops to grow. Therefore, an assessment of historical or current crop mix or land use is not used to Project potential future land use. Potential effects of the Project on regional food production and consumption are described in Section 20.3.11 of the EIS. The consideration of the potential current or future use of land for agriculture, including the foregone agricultural economic activity, land capability for agriculture, and crop suitability, presents information that is unconstrained by land ownership or tenure. Please also see the Technical Memo on Agriculture.

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		that can compensate for this, despite BC Hydro saying they will create an agricultural compensation fund. What does that mean? Just throwing more money at the Project will not truly compensate for the loss of this farm land. We are in a global climate crisis right now, where farm land around the world is suffering due to climate change, and we should not be flooding valuable farm land in the northern part of our country, farm land that has the potential to provide a great deal of food for our area residents so we are not so dependant on trucking, shipping and flying food (with the associated carbon footprint) from other regions in North America. On page 60 BC Hydro says that "a determination of significance has not been made" for the agricultural loss but they could not be more wrong and I object to this conclusion. It is very significant.	
pub_0234-002	Stanford, Eliza	Not only would the lands in the lower levels of the Peace River valley be flooded but also all the tributaries, the main ones being the Halfway River, the Moberly River and the Pine River not to mention all the smaller creeks which would be devastated. All the lower levels of these rivers are critical migratory routes for wildlife and are important calving areas for ungulates, nesting habitat for birds including bald eagles, and spawning habitat for many species of fish (On page 44 BC Hydro says the Project "may" result in habitat loss. The loss would be certain, not a probability.) BC Hydro acknowledges the impact of this and has concluded it as a "determination of significance", but I would like the phrase CATASTROPHIC LOSS to be included, as that is what it is. It is an irreversible and absolute loss of this critical habitat in the Yellowstone to Yukon corridor. The Y2Y is a recognized corridor from the southern United States all the way up to the Yukon but nowhere does BC Hydro mention this proposed interruption and fragmentation of the Yellowstone to Yukon corridor.	Volume 2, Section 14: Wildlife Resources addresses the potential effects of the Project on wildlife. Potential effects to migratory routes and calving areas for ungulates, nesting habitat for birds including Bald Eagles are described in Section 14. For clarity, the dam is located upstream of the Pine River; therefore, the Pine River will not be flooded. Please see the Technical Memo on Caribou.

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pub_0234-003	Stanford, Eliza	My final issue is with that of the cumulative effects (page 35). BC Hydro has recognized that the cumulative effects are significant, even without the Project. This region is experiencing unprecedented growth and environmental impacts from a variety of gas related activities, not to mention the existence of 2 dams on the river. Why would anyone want to come and live here (and stay here) if everywhere they turn there is some degradation of the land, both minor and major, enough truck traffic on the roads to scare even the most veteran of drivers, a continual dust issue in the City of Fort St. John even without the Project, and no more environmental beauty within close proximity of the City? Fort St. John will just become one big work camp with some people getting to live in houses and others in trailers. Enough is enough. .	The environmental assessment process is designed to consider the cumulative effects of the Project in conjunction with other projects whose residual effects overlap in time and space. Please see the Technical Memo on Cumulative Effects Assessment. The anticipated residual effects to vegetation and ecological communities, to wildlife resources and to GHG emissions from other future projects and activities combined are considered significant, even without the Project. The cumulative effect with the Project on vegetation and ecological communities, wildlife resources and GHG emission is also considered to be significant. Cumulative effects are not considered to be significant for any of the other valued components that were assessed and described in the EIS. The potential effects of the Project on transportation are described in Section 31 of the EIS. The potential changes in dust as a result of the Project are described in Section 11.11 (Air Quality) of the EIS. The potential effects of the Project on Visual Resources are described in Section 27 (Visual Resources) in the EIS. Worker accommodation and housing are described in Section 4.3.6 (Worker Accommodation) and Section 27 (Housing) in the EIS.
pub_0234-004	Stanford, Eliza	Ps I noticed that the boat launch, initiated and funded by BC Hydro is 35% over budget due to the “challenging conditions” If the boat launch is challenging, how can we know that a dam will be easy? 35% adds another $2.8 billion onto the already hefty price tag of $8 billion	As stated in Volume 1 Appendix F Part 1, the Project cost estimate includes "... an appropriate level of contingency to reflect uncertainty in future conditions." As a result, BC Hydro expects Project costs “… to be within the bounds of the current capital cost estimate in ordinary market conditions.” Ordinary market conditions refer to reasonably expected variability in cost drivers that would be included in contingency amounts. This would reflect variability in items such as (but not limited to) labour costs, commodity prices, quantities, and schedule. Ordinary market conditions would not include extreme variability in these factors, such as due to a market disruption. Please see the Technical Memo on Project Costs for a description of the Project cost estimate.
pub_0236-001	Peace Valley Environmental Association	Please accept these comments centered on agriculture impacts of the Site C project for BC Hydro’s 2013 Site C EIS on the: (I) Executive Summary (p. 1-38) and (II) Executive Summary Part 2: Summary of valued Components (p. 40-84). (III) Full report: agriculture The Summaries (I & II) are likely viewed by a much larger audience than the full report, so they are likely to have much more influence over the public’s understanding of BC Hydro’s environmental findings and response. They are quite deficient in meaningful information, and are very misleading. I have commented on	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The executive summary of the EIS lists the valued components in the same order as they are found in the Environmental Impact Statement Guidelines, issued to BC Hydro by the Minister of Environment of Canada and the Executive Director of the EAO. This order is consistent with the order of presentation of the “five pillars” of environment assessment under BCEAA (see, for example, BCEAA, Section 6(1)(a)) and was adopted in the full Environmental Impact Statement and in its Executive Summary. The order in which the VCs are presented does not denote any prioritization or

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		the two Summary sections regarding those deficiencies and other problems. Further on, comments targeting the full report point out a number items or topics, not found in the Summaries, which are highly problematic as well, if not missing. Executive Summary: BC Hydro Response Document (p. 1-38) Comments here are focused on 'agriculture' from BC Hydro's Summary on "Valued Components" (p. 29) and are as follow. First, of the twenty-two valued components listed on page 29 (not in alphabetical order, or apparently in any organized order), agriculture appears in the number nine position, suggesting that the first eight components are more valuable. That is, impacts from the project apply, in order, to fish habitat, ecological communities, wildlife, greenhouse gases, local government revenue, labor market, economic development and traditional purposes. These appear, on face value, more important than impacts on agriculture. Surely, BC Hydro has not listed these in order of priority. But if it has not, then why has it not? Why are these components in apparently random order? The implication here is either that agriculture, as a component is not regarded by BC Hydro as particularly significant, or that any and all of the components are weighted equally. Agriculture is likely one of the top components in terms of its value to the region and the communities (see below).	characterization of their relative importance.
pub_0236-002	Peace Valley Environmental Association	Second, and more to the point, in the 38 pages of the document, comment on agriculture is limited to only two sentences. The first sentence says that agriculture is an important component of the Peace economy. This sentence, relating to the entire region, is meaningless, as it does not address valley production loss. The second sentence indicates that BC Hydro has assessed the project as it is related to four agricultural interactions (farm operations, agricultural economy, food production and consumption). The impact of local weather changes created by the pending reservoir on local growing conditions is not mentioned at all. Nowhere in the Summary document is the term climate change used. On page 29, reference is made in a sentence to illustrate the fact that there is a "potential" for green house gases, which are "believed" to be related to changes in climate, to be emitted. (my quotes) This kind of statement marginalizes the impact of climate on the local region. And, there is no comment about the importance of the valley and its	The Executive Summary (Part 2) provides a two page summary of the complete agricultural effects assessment, which can be found in EIS Section 20, and which is further supported by Volume 3 Appendix D Agricultural Assessment Supporting Documentation. The effects of potential microclimate changes due to reservoir formation are described under farmer operations in Section 20.3.3.1 of the EIS. Regional climate change projections developed by PCIC and anticipated effects on agricultural capability are described in Section 20.2.2.1.5 of the EIS. Anticipated changes in provincial and Peace Agricultural Region food self-reliance in relation to climate change is described in Volume 3, Appendix D, Section 7.1.2.3 and 7.2.1.3 of the EIS. Please also see the Technical Memo on Agriculture.

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		potential agricultural products in light of a changing climate (see below).	
pub_0236-003	Peace Valley Environmental Association	Summary of valued Components (part 2, p. 40-84) The publication, Climate Action Initiative's BC Agriculture & Food, has a report, "BC Agriculture Climate Change Action Plan 2010-2013", which addresses BC's climate future. It quotes (p.12), from the Intergovernmental Panel On Climate that BC can, in the future, expect: · *Increasing climate variation and more extreme weather events with an increase in the associated damage costs,* ·*Shrinking of glaciers with many expected to disappear within 100 years resulting in serious impacts on water availability and hydrology,* · *Reduction of snow accumulations, particularly at lower elevations,* ·*Warming by 27°C by 2080, impacting sea levels, precipitation patterns and ecosystems,* · *Increasing frequency and severity of wildfires, and* ·*Increasing frequency and severity of pest, disease and invasive plant outbreaks.* *"These changes are likely to have consequences for food production through impacts to health and quality of crops, pasture, forests and livestock. The biophysical changes are anticipated to result in socioeconomic impacts, which could also be felt in BC, even if the more dramatic changes to climate are occurring elsewhere.* *Potential impacts include: declines in yield and production, fluctuations in world market prices for food, changes in geographic distribution of trade regimes, and an increasing number of people at risk of hunger."* Clearly, under such conditions, BC must be prepared to establish and keep its food sustainability. The BC Peace valley contains BC's second greatest land area of top quality potential class 1-3 agricultural land. Market garden vegetables and fruit including apples, cherries, cantaloupe, tomatoes, cucumbers, cabbage, potatoes, pumpkins and corn can currently be grown in the valley. Further, and critically, the climate change plan referred to above (p. 13), indicates: *Less than 5 percent of land in BC is suitable for agriculture, which was one of the primary reasons for the development of the Agricultural Land Reserve between 1974 and 1976.iii However, land continues to be removed from the Reserve and 86 percent of the land excluded since 2002 has been in regions with the highest concentration of prime farm land.*	Regional climate change projections developed by Pacific Climate Impacts Consortium (PCIC) and anticipated effects on agricultural capability are described in Section 20.2.2.1.5 of the EIS. Anticipated changes in provincial and Peace Agricultural Region food self-reliance in relation to climate change are described in Volume 3, Appendix D, Section 7.1.2.3 and 7.2.1.3 of the EIS. Please also see the Technical Memo on Agriculture.

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		Some research predicts BC will experience increasing agricultural capability and a broader range of suitable crops. However, it is likely that climate change will increase uncertainty and the costs associated with weather damage for BC's agricultural operations.	
pub_0236-004	Peace Valley Environmental Association	In light of these assessments, removing Peace River land from the Agricultural Land Reserve and flooding, it makes no sense for maintaining food sustainability. In fact, the report further states (p. 14): *It is estimated that about between 40 and 50% of the food consumed in the province is imported and a significant percentage comes from California which has recently been experiencing severe drought conditions As climate change impacts are felt in other jurisdictions, heavy reliance on imported food may become increasingly problematic and costly.* *Despite the importance of maintaining a viable agriculture sector, to date the issue of agricultural adaptation to climate change has received little attention in BC. There is a critical need to determine how best to support the industry with climate change adaptation and how to increase food security in the face of a changing climate.* If BC is now importing half of its food from problematic areas over long international distance, which requires ever-increasing fossil fuel costs for transport, it begs the question why the province would willingly destroy such a valued resource. Produce (food), is something we cannot do without. On the other hand, hydroelectric capability for this case can be replaced by other alternate forms of energy. It takes about six hundred years for nature to create one centimeter of soil. BC Hydro has indicated that most of the class one, two and three valley bottom soil will be permanently flooded as the cost of removing it is too high. Soil is not replaceable. The Peace valley is the only viable market garden area present north of Quesnel and it is, if developed, capable of feeding the entire northern half of the province. Comments on page 53 of Hydro's Summary refer to "Valued Components". These notations highlight soil and climactic capability, presumably for the present, but they do not appear to look at the value of such a resource, twenty to one hundred years in the future (the lifetime of the dam). Comments pertain to the likelihood of future cultivation, but they do not note that entrepreneurs' will not invest as long as there is a flood reserve on the river. That is, investment may not be viable until changing	Historical food self-reliance in British Columbia is described in Section 20.2.9.1 of the EIS with potential Project effects on regional food production and consumption described in Section 20.3.11. Anticipated changes in provincial and Peace Agricultural Region food self-reliance in relation to climate change are described in Volume 3, Appendix D, Section 7.1.2.3 and 7.2.1.3 of the EIS. The potential change in agricultural economic activity resulting from the loss of agricultural land is described in Section 20.3.9 of the EIS. High capability agricultural lands remaining in the Peace River valley are summarized in Section 20.3.3.1 of the EIS, with approximately 16,240 ha of Class 1 - 5 cultivatable land would remain in the Peace River valley, much of that including land along the Peace River downstream of the Project suitable for vegetable production or market gardens. No land downstream of the Project area is within an Order-In-Council reserve ("flood reserve"). The agricultural compensation proposed to mitigate foregone agricultural economic activity due to the loss of agricultural land is described in Section 20.3.10.1.1 of the EIS. The recommended agriculture monitoring and follow-up programs are described in Section 20.7 of the EIS. Please also see the following Technical Memos: - Agriculture - Flood Reserve - Project Need Finally, the Project is being proposed to meet the future needs of BC Hydro's domestic customers, including residential, commercial and industrial users. The reference to 460,000 homes is used for illustrative purposes only. The use of "homes" is a way of measuring the amount of generation from the Project. The calculation is based on the 5100 GWh of average annual energy divided by the average energy use of a residential customer.

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		climate conditions and the resultant necessity of BC food sustainability in the future make it necessary. The "Agricultural Compensation Fund" suggested by BC Hydro, as a form of mitigation, cannot, forever compensate for an inability to grow food when there is no other source of food. BC Hydro states on page 59 of their document that they see "No changes anticipated to regional food self-reliance." But, most market garden vegetable and fruit crops cannot be grown on the banks of the Peace or further back on the high land. It is the soil, water, and particularly the aspect and heat retention ability of the valley, which allows for such food production. BC Hydro has indicted (p 60) that it will monitor crop and stored feed damage, crop drying, crop production and livestock damage for five years after the reservoir is filled. Why bother. To what end. Once the valley is filled with water, it is dead forever. The last comment in this section of the report states: "The mitigation measures described above would mitigate the Project effects on agricultural production and agricultural economies." The biggest weasel word in the world of sustainability, steward-ship or ecology, is the world mitigation. It is a meaningless word meant to appease. It means very little. It means doing something or doing almost nothing and should be replaced with words or phrases, which describe actual changes. BC Hydro continuously puts forward the point that Site C will produce enough electricity to power 460,000 homes. Never, is the fact the power is not needed for residential homes, expressed. **In the end, the people of northern BC will need the agricultural resource of the Peace, more critically than an industry for an LNG plant will need the power of a site C.**	

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pub_0236-005	Peace Valley Environmental Association	**EIS Full Document Response to Section 20: Agriculture.** To be meaningful, the following response comments are best viewed concurrently along side the actual document lines indicated, to remain in context. Responses, which pertain to climate change, are not referenced during commentary for particular sections below, but the final paragraphs outline some referenced, pertinent climate situations. **Page 20.13: (20.2.3)** Agricultural Suitability of Lands are defined here in terms of being a "function of climate, soil capability, and crop needs, but, there is no consideration of the economic viability of producing specifically market garden crops. Reference should be provided to indicate where, in the document, such information is provided. In addressing what is "suitable", Hydro's comments seem to imply impacts only for the present. They do not indicate that this analysis pertains to the future, twenty to a hundred years or more, ahead. If they do, then they should say so and apply expected or projected conditions for those times (see below). In the future, different populations and different climatic conditions (here and elsewhere) will create the necessity for this area to supply its own food (see references below). Insofar as grains can be grown on the upper benches and highlands, market garden vegetables and fruit cannot. I**t is in our future, when the greatest losses of farmland will be felt.** BC Hydro does not address, here, the fact of climate change both world wide and locally, or the implications of that change on the demand for food, the difficulty of transport of that food from long distances or the changes to the growing seasons in the Peace valley in the future.	Agricultural suitability refers to the physical suitability of different crops, or groups of crops, to be grown in different land classes, now or in the future, and is a function of climate, soil capability, and crop needs as described in Section 20.2.3 of the EIS. The EIS presents land capability for agriculture, and suitability, as they provide a view on the potential for crop production that is unconstrained by current or forecast agricultural economic business conditions. The current cropping and livestock use of valley farms is presented in Table 20.7 of the EIS, which provides a view of the current economic viability of crops in this area. The potential change in agricultural activity resulting from the loss of agricultural land is described in Section 20.3.9 of the EIS. Section 20.3.11 of the EIS describes the future potential regional demand over the next 100 years for food grown in the region. The EIS concludes that in the long term, the Project would not affect the future ability of the Peace region to be food self-reliant in vegetable crops that are climatically adapted and in dairy, meat, and egg and poultry products (EIS, Section 20.3.11). Please also see the Technical Memo on Agriculture.
pub_0236-006	Peace Valley Environmental Association	Page 20.14 The document states: "For areas within and near the reservoir, soil characteristics generally do not limit the suitability of most crops, and crop suitability is primarily dependent on climate." Notwithstanding global and continental climate change, the climate of land adjacent to a reservoir will be affected, which will affect crops grown close to the water line. The effect will most likely be adverse due to fog, which will limit sunlight and create longer lasting cooler temperatures leading to less growing capability.	Potential changes to crop production on individual farm operations in relation to predicted Project related changes in microclimate are described in Section 20.3.6 of the EIS.

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pub_0236-007	Peace Valley Environmental Association	Page 20.15 (Table 20.6) Although the preamble for this table states that only some examples crops are included, it would be prudent to include a major staple of most foods, corn (which is not mentioned). Corn cannot be grown reliably anywhere in the Peace except in the valley bottom. Corn was decimated this past year in the mid-west of the USA as a result of record-breaking drought. Fruit orchards of apples and cherries of northern variety are also not explored.	Table 20.6 presents the range of crops that can be grown in areas of different land capability classes, including corn.
pub_0236-008	Peace Valley Environmental Association	Page 20.15 In addition to addressing the concept of agricultural suitability, BC Hydro has commented on agricultural utility (line 6). *Areas within the Project activity zone were assigned an agricultural utility rating to reflect the likelihood of future agricultural use. In accordance with the EIS Guidelines, agricultural utility was classified based on the physical capability (soil and climate) and on potential constraints to agricultural use…* And on Page 20.16 (line 18) *If created, this protected area would include land within the Project activity zone, including the majority of the south bank lands and islands that are within the proposed reservoir 20 area. If the protected area is established, agricultural land use would be expected to be limited to existing grazing tenures or some expanded grazing use. It is unlikely that any cultivated agriculture would occur within the protected area. For these reasons, lands within the proposed protected area were assigned a low to nil utility rating.* The problem with this conclusion is that that it is a political one in that it pertains only to existing zoning, which is always subject to change. Zoning can be politically reversed if the need arises, for instance, in light of the future necessity of using the land for agricultural purposes. If the land is flooded because it was deemed low utility for the present, that decision simply cannot be reversed in the future. To state (see bold print) “it is unlikely..” is subjective and solely in BC Hydro’s interest to says so; certainly it is not in the interest of future generations who will live in the Peace region and look to the valley as its primary food provider. Such political statements should not be part of the terms of reference. Another example of subjective politicized comment occurs on page 20.17 (line 6) *. Islands and tributaries were assigned a low to nil rating on the basis of limited access.*	The EIS includes agricultural utility ratings and associated likelihood of affected agricultural lands being used for agricultural production in the future as per the EIS Guidelines. The ratings are based on land capability ratings, as well as constraints to agricultural use (factors considered included location, access, parcel size, land ownership or tenure, and land use plans or designations). Apart from the recommendations of Land and Resource Management Plans, likely future agricultural use was assumed not to be restricted by tenure. Agricultural utility methodology is described in Section 20.2.4.1 of the EIS, and assigned utility ratings are mapped in Figure 20.4, Maps 1 through 16. Please also see the Technical Memo on Agriculture.

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		Again, this is politically subjective, and pertains only to the present. Access can change in the future and may do so out of need. Present and current practice is not an argument for classifying class one and two soil in viable growing areas. It appears that land which is not currently cultivated, is not considered by BC Hydro as important agriculturally now, or in the future. Basing such arbitrary decisions on the here and now only, is counter productive.	
pub_0236-009	Peace Valley Environmental Association	Page 20.18 Comments on interviews of landowners, which includes potential use (current and future plans) of farmland. *Information sought during the interviews with owners and operators included the following: (line 13) Current and future land use. (line 15) Historical and potential trends in agricultural land use. (line 21)* Planning by landowners for the development of future crops (type and volume) or by potential future land investors and landowners would be influenced by whether or not a flood reserve remains on the river and its valley. In the future, investors, current and new, would be more likely to develop market garden crops if there was not the specter of flooding hanging over the valley farms. This report does appear to comment on this potential, which could be very significant.	The EIS presents land capability for agriculture and crop suitability, which provide information that is unconstrained by land ownership or tenure, or by current or forecast agricultural economic business conditions, and treats land currently undeveloped for agriculture as equivalent to land currently being used for agricultural purposes. As described in Section 20.2.7.1 of the EIS, Information sought during the interviews with farm operators included current and future land use as well as historical and potential trends in agricultural land use. This information was used to define and evaluate on-farm effects. The agricultural capability of the lands lost to the Project is described in Section 20.3.3.1 of the EIS. The agricultural utility of these lands are described in Section 20.3.3.2. Please also see the following Technical Memos: • Agriculture • Flood Reserve
pub_0236-010	Peace Valley Environmental Association	Page. 20.20 compares the decrease in number of farms in the Peace, indicating the drop is greater relative to other parts of the province. *Overall, the number of farms decreased 12% in the Peace Agricultural Region between 2001 and 2011, compared to a decline of about 3% in B.C. as a whole. (line 18)* BC Hydro did not mention that the decrease in the number of farms was influenced by the fact that BC Hydro bought up many of those farms, if not most of the land residing in the flood reserve. This kind of ethically questionable spin-by-omission is not helpful in making good forecasts or good decisions and creates a sense of distrust. And on line 17 the comment: *Peace Agricultural Region farms comprise 8% of the farms in the province.* Apparently the number of farms in the province are more important than size of farms which Hydro professes are four times larger than the provincial average. If so,	The Agricultural Operations Baseline presents the number of farms operating within the agricultural economics Local Assessment Area, the Peace Agricultural Region, which is an area encompassing the Peace River Regional District and the Northern Rockies Regional Municipality, together comprising an area of about 20 million hectares. Census farms are defined operationally in the Census, consisting of all lands operated by a single operating entity, regardless of ownership. Most farm parcels purchased by BC Hydro continue to form part of an operating farm unit, and therefore continue to be associated with the farm data provided by the farm operator to Statistics Canada. BC Hydro's purchases of properties from an individual farm operator was largely within the Peace River Valley, and would only have resulted in a reduction in the number of farms reported for the region if the parcel is no longer being farmed, and if the previous farm operator ceased all operations on any other parcels not owned by BC Hydro. The baseline agricultural land use, agricultural sector, and agricultural economic activity data included

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		then, why? Further, the list of farm land-use, (line 11-16) which indicates for the entire Peace region, that only 32% of land is devoted to agriculture, is misleading. And lines 32-38 state: *In the Peace Agricultural Region, 77% of the farms specialize in hay (43%), beef (16%), horses (12%), or livestock combinations (6%). The Peace Agricultural Region alone represents 20% of B.C.'s hay farms and 10% of its beef farms. About 11% of Peace Agricultural Region farms are oilseed (5%), wheat (1%), and other grain farm types (5%). Other types of farms include sheep, apiculture, fruit, berries and nuts, poultry and eggs, vegetables, and potatoes, with each representing less than 1% of the total farms in the region (Statistics Canada 2012a).* This comment, which points out that less than 1% of the Peace region is devoted to market garden produce, suggests that growing such produce is marginal, at best. Since virtually all market garden produce can only be grown in the Peace valley, comparing such a venture to the rest of the region is misleading. The very fact that such ventures can only occur in the valley, make the valley critical to market garden production and food sustainability in the Peace. That BC Hydro has bought up most former market garden sites and does not use the land for this purpose is not a reflection of the potential for such sites and is not an argument or piece of evidence in support of the project. The negative spin placed on market garden capabilities in the Peace valley is, to put it mildly, disgusting. This habit of making continuous comparisons to the entire region, when the critical market garden land in discussion is found only in the Peace valley, biases any objectivity of the importance of this resource. Most assuredly, the bottomland of the Peace should not be used for hay, canola, most grain crops or livestock. It should be set aside and used predominantly for market garden vegetable and fruit crops. Most of the comments on pages 20-22 to 20-24, which refer to marketing, employment and economic returns, have little to do with the Peace valley or the impact of the dam. For instance the comment from lines 1-3 on page 20-23 state: "A few farmers' markets selling local honey, fruits, and vegetables are in operation in the region, and some vendors also sell processed food products such as baking and preserves." Comments like this, and in fact this entire section, appear to be set up to make the importance of the agricultural potential of the valley seem very	in Sections 20.2.7.2 - 20.2.8.3 of the EIS is a summary of Statistic Canada Peace Agricultural Region data for the local assessment area defined in Section 20.1.5.1 of the EIS. Additional supporting agricultural data for the LAA was received through interviews with owners and operators, relevant agricultural associations, representatives of agriculturally related industries, and representatives of government agencies as described in Section 20.2 of the EIS. Section 20.3.3.1 of the EIS states that approximately 16,240 ha of Class 1 - 5 cultivatable land would remain in the Peace River valley, much of that including land along the Peace River downstream of the Project suitable for vegetable production. Please also see the following Technical Memos: • Agriculture • Flood Reserve • Private Property – Project Requirements and Tenure

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		unimportant. It is not, as indicated below. Further, this entire agricultural section seems intentionally designed to make farming in the Peace, incidental, and marginal or insignificant. Again, it is not. And in the future, barring flooding, it will be the market garden capabilities that ensure continued survival of the Peace area residents.	
pub_0236-011	Peace Valley Environmental Association	20.2.8.3 This page outlines economic returns for the Peace region. It is a mystery as to why the entire Peace region is cited here. Why comment on the region? It is the Peace valley, which is in question. Not targeting the Peace Valley specifically, fails to delineate returns or potential returns for agriculture affected by the project in the valley. There is no account taken of the potential for and estimated cost returns for large-scale market garden operations, now or in the future. When peak oil arrives and climate change affects North American breadbaskets, local market gardens here would have the ability to generate many millions of dollars of produce, annually. Even the concept of such market garden and orchard ventures has apparently been completely dismissed in this report. The British Columbia Quarterly (Spring, 2009) no. 161, p.103 notes that in the 1970s, the Peace River Branch of the Institute of Agrologists, presented a summary report to the BC Cabinet. Insofar as Site one dam and the W A C Bennet dam were already in the works on the Peace, the report indicated that " further damming the Peace River would forever remove any possibility of market garden self sufficiency in the region".	Section 20.3.11 of the EIS describes the future potential regional demand over the next 100 years for food grown in the region. The EIS concludes that in the long term, the Project would not affect the future ability of the Peace region to be food self-reliant in vegetable crops that are climatically adapted and in dairy, meat, egg and poultry products (EIS, Section 20.3.11). Please also see the Technical memo on Agriculture.
pub_0236-012	Peace Valley Environmental Association	20.2.9.1 Historical Food Self-Reliance. The past trends over time of food production and self-sufficiency in BC will have little or no bearing on what happens in the future, because of never-before experienced impacts of increasing global population expected to reach over 9 billion people by the year 2050. Additionally, loss of conventional fossil fuel, higher fuel prices, and changes in the ability to produce food due to climate change will compromise local self-sufficiency. If this section is designed to provide some kind of reassurance or an argument against the necessity of maintaining the ability of the valley to produce food, then it is mistaken.	Anticipated changes in provincial and Peace Agricultural Region food self-reliance in relation to climate change are described in Volume 3, Appendix D, Section 7.1.2.3 and 7.2.1.3 of the EIS. The EIS concludes that in the long term, the Project would not affect the future ability of the Peace region to be food self-reliant in vegetable crops that are climatically adapted and in dairy, meat, and egg and poultry products (EIS, Section 20.3.11). Please also see the Technical Memo on Agriculture.

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pub_0236-013	Peace Valley Environmental Association	Page 20.25: 20.2.92 Food Self-Reliance in the Peace Agricultural Region BC Hydro's commentary on what appears to be political spin, here, point out that vegetables in the region account for 5% of the regional consumption of crops. Such a statement makes it sound like vegetable/fruit produce is not important for economic return or as a viable necessity. It does not mention that BC Hydro has bought up most of the market garden land, leaving it produce-unproductive. Insofar as most produce is trucked or flown in to the communities now, the report does not indicate that such conditions may not be certain in the future and that the bottom, class one to five land, may be absolutely invaluable in the future. Further, to compare volume by consumption of the vegetables produced in the region to the total of all crops does not provide for reasonable or logical comparison. Of course, grains, hay and canola, which are grown on the up-lands of the region will be both produced and consumed in greater amounts. They cannot substitute for or replace varieties of vegetables. Page 20.35-20.41 I**n terms of credit and dismay, on page 20.26, line 11 notes that: "Overall, regional food self-reliance has not been examined in detail."** This pretty well says it all. Future self-reliance needs to be examined in detail, extensively and thoroughly before any consideration of valley bottomland destruction can be considered. This report has not addressed that concern.	Food self-reliance in the Peace Agricultural Region is described in Section 20.2.9.2 of the EIS. The characterization of current regional self-reliance in the Peace Agricultural Regional is determined through a comparison of total production and consumption using sources outlined in Volume 3, Appendix D, Section 7 of the EIS. Regional food self-reliance has been examined in the detail that existing data on regional food production and consumption allows - this is presented in Volume 3, Appendix D, Section 7 of the EIS. The EIS concludes that in the long term, the Project would not affect the future ability of the Peace region to be food self-reliant in vegetable crops that are climatically adapted and in dairy, meat, and egg and poultry products (EIS, Section 20.3.11).
pub_0236-014	Peace Valley Environmental Association	Page 20.54 Agricultural land in the project Activity Zone. Noting table 20.29: What would 1,666 ha of class 1-5 land (high to moderate yield), have been worth in the Frazer valley in the year 1850, then 1950, then in 2030? It would have become increasingly and, (likely) geometrically, valuable. The same would hold true of those classes of land in the Peace valley. These top class soils with their valley bottom climate and south facing aspect, may, in the future, have the potential to be literally worth their weight in gold. You can grow food in the soil. Gold may, at some point in time, become, useless.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please also see the Technical Memo on Agriculture.

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pub_0236-015	Peace Valley Environmental Association	Page 20.56/57/58 Table 20.31 Two scenarios set out by BC Hydro indicate that future vegetable production could be increased by 100 ha or 200 ha by year 100 out of the 5,143 ha available. This assumes (line 2) a constant rate of current growth. This assumption seems to be based on the idea that no changes will occur in the future to alter the rate of change. Again, peak oil, climate change and changing world demographics will all have impacts creating the need for vegetable crops to increase in number and size. The report scenarios, here, are arbitrary and subjective, and are therefore meaningless, misguided and likely harmful. Why develop a present case only scenario, which restricts vegetable growth to a mere 100 or 200 ha when thousands of ha are available? Page 20.58, lines 2-7 indicate that over the first 100 years, trade for agricultural products are assumed to improve by 0.5% per annum relative to the price of other products. But circumstances change. These assumptions are tenuous as best. Who can make such specific predictions for time frames on the order of 100 years? The price of corn in the USA rose 25% in 2012 because of the massive and sustained mid-west drought. Using the analysis set out on in this section, to predict USA corn prices, would have ended in an entirely inaccurate forecast of the reality. Rating the Peace growing region in such a way, based on non-predictable long-term market forecasts, becomes increasingly arbitrary as the time lengthens. **Further, using economic forecasting to determine the necessity for and availability of food, is still only one measure of the value of the product. In the future, it will probably not be the best measure.**	The EIS Guidelines require BC Hydro to assess future land use and economic activity that may be foregone due to the Project. The method for estimating the quantity and nature of future agricultural, and for estimating the associated value of foregone agricultural economic activity due to the Project, is described in Section 20.3.8 and volume 3, Appendix D, Section 6 of the EIS. In addition to economic forecasting the assessment also considers how much land would be required to grow crops to support regional food consumption for an increasing population over 100 years, in Section 20.3.11 of the EIS. See also Agriculture Technical memo.
pub_0236-016	Peace Valley Environmental Association	Climate change Research material centered on the effects of climate change and impacts on food and agriculture are many. This response to the EIS has not set out a research format with APA citations, but information presented below is supported by scientific research from a number of academic and research institutes. This multimillion dollar BC Hydro report, should have investigated the potential for future climate change impacts on food production and related it to the potential and necessity of producing specialty foods in the Peace valley. Here are some pertinent points, which have bearing on a number of points made previously. Research Institutions noted: - National Climate Assessment Development Advisory Committee: Federal Advisory Committee Draft Climate Assessment Report: U.S. Global Change Research Program,	BC Hydro considered the results of studies undertaken by the University of Victoria's Pacific Climate Impacts Consortium (PCIC) who have led a variety of studies related to climate change scenarios in British Columbia, including a projection of regional climate change scenarios for the Peace watershed in British Columbia. The results of this study, specifically relevant to the Peace region, were used to consider the anticipated changes in future Peace Region climatic and land capability for agriculture, as presented in Section 20.2.2.1.5 and outlined in detail in Volume 3, Appendix D, Section 3.3. Anticipated changes in provincial and Peace Region food self-reliance in relation to climate change is described in Volume 3, Appendix D, Section 7.1.2.3 and 7.2.1.3 of the EIS. Please also see the Technical Memo on Agriculture.

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		January, 2013 - Fifth Assessment Report: A synthesis of over 800 Authors for: Intergovernmental Panel on Climate Change, 2013 Draft report. - Explaining Extreme Events of 2011 From a Climate Perspective, May 2012, UK Met Office Hadley Centre, United Kingdom, National Oceanic and Atmospheric Administration Office, Silver Spring Maryland - Global Environmental Change (2012) Bryce et al. indicate that climate scientists are biased toward overly cautious estimates, erring on the side of less rather than more alarming predictions. - United Nations Environmental Program Report, 2007 Dery and Brown, indicates that northern snow cover is declining faster than expected. - NASA: National Aeronautics and Space Administration Climate Change Division (see James Hanson). - Climate Change, Agriculture and Food Security Research Program Current and Future Climate Impact Considerations: • Build-up of greenhouse gases in the atmosphere has already caused America's average temperature to rise by 1.5 ˚F since 1895. With continued increases in emissions, U.S. temperatures are projected to increase 5-10˚F by the end of the century. Rising temperatures have implications for human health, drought, storm intensity, and species and ecosystem health, among others. • The United States will experience, every two to three years, what is now a once-in-20-year heat wave by the end of the century. •The average high temperature is projected to increase by 3 F to 6 F 2080-2100 in the continental United States. • Global atmospheric CO2 concentrations have increased over 40% above pre-industrial levels. • The number of tons that global greenhouse gas emissions have been rising per year over the last decade is 0.9 billion tons. • There has been an increase of 74% in the amount of precipitation associated with very heavy, extreme precipitation events in the Northeast between 1958 and 2010. For every degree C of temperature rise, there is a 7% increase in atmospheric moisture. Models suggest that on a warming planet, most areas will experience greater drought, but when precipitation occurs, it will be extreme. Atmospheric rivers containing up to 15x the volume of water of the Mississippi river could be released	

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		within a few weeks over some areas and create , in particular, devastating effects along the western coast of the USA and Canada. • There has been a $ 5 billion loss associated with impacted livestock and crops during the 2011 drought in Texas. • There has been a 40% decrease in minimum Arctic sea ice extent since satellite records began in 1978. • There has been a 63% decrease in total winter ice coverage in the Great Lakes since the early 1970s. • Anywhere from 5 to 20 percent of land area in the United States could be subject to ecosystem changes by 2100 as a result of climate change. • Honey bees have advanced their arrival in the spring by 10 days average in the northeastern United States over the past 130 years; • Plants and animals have migrated an average of 10.5 miles per decade to higher latitudes to find suitable habitats; • A record 9.2 million acres were burned in the United States during the 2012 wildfire season • Scientists from NOAA, the U.K.'s Met Office, and other institutions showed that the conditions leading to the 2011 Texas drought are 20 times more likely to occur now than in the 1960s as a result of rising greenhouse gas emissions and associated climatic changes. • North Atlantic oscillations have become more frequent and more unstable, likely enhanced by the record low arctic ice pack and resultant lack of albedo effect. This effect, which increases sudden event stratospheric warming, which in turn, destabilizes the polar vortex jet stream, is responsible for sending cold waves of arctic air down the Atlantic seaboard as seen with hurricane Sandy and other major eastern seaboard snowstorms as seen in 2012 an 2013.	

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pub_0236-017	Peace Valley Environmental Association	Conclusion: Our changing climate will affect all of North America's ability to grow food. The Peace Valley will need its valley. GIVEN THIS ANALYSIS, HOW IS IT THAT BC HYDRO HAS FAILED TO IDENTIFY AND COMMENT ON THE INFORMATION I HAVE CRITIQUED IN THESE SUMMARIES AND IN THE FULL DOCUMENT? THE SUMMARIES, IN PARTICULAR, ARE THE PRIMARY ACCESS MATERIAL, WHICH WILL INFLUENCE MOST OF THE GENERAL PUBLIC, RATE PAYERS AND TAX PAYERS. THE SUMMARY REPORTS DO A DIS-SERVICE TO THESE GROUPS. IN MY OPINION, THE FACT THAT BC HYDRO WOULD RELEASE THIS MULTI-MILLION DOLLAR, THREE YEAR REPORT, AND NOT ADDRESS THE NOTED OMMISSIONS, WHILE INCORPORATING, AT TIMES, WHAT APPEAR TO BE POLITICAL OPINIONS WITH ARBITRARILY IMBEDDED ASSUMPTIONS, SEEMS TO ME TO BE BLATENTLY IGNORANT, IF NOT MANIPULATIVE. THIS IS PARTICULARLY CONCERNING, CONSIDERING THE LONG-TERM HARSH CONSEQUENCES TO THE PEOPLE OF THE REGION OF ELIMIINATING FOREVER, THEIR ONLY MAJOR SOURCE FOR DEVELOPING OR ACQUIRING CRITICALLY REQUIRED, LOCALLY GROWN PRODUCE.	Please see the responses to pub_0236-001 through pub_0236-016, and also see the Technical Memo on Agriculture.

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pub_0237-001	Veiner, Bert and Ruth	We appreciate the opportunity, once again, to discuss the importance of valuable food production. Government studies show that with the changing climate, cost of transportation on both fuel and environment , and the value of food lost in long transport, the importance of local food production becomes even more vital. The biggest concern for future generations is going to be availability of food. Why should the Peace River Valley, the best food producing area in Northern British Columbia, be flooded and destroyed forever. Our future generations need this land to produce food not to have this valuable area flooded for power generation for short time benefit. The historic value in terms of First Nations history and artefacts, the importance of migration corridors, clean water, and the very essence of the Peace River Country are all at high risk. The risks outweigh by far the benefit of a short term project of no value to the local people, or to the people of B.C. In terms of power need there are many alternative ways which would not destroy valuable food producing lands or destroy rivers that were and are valuable migratory routes and recreational areas. There are many modern, less costly, methods of generating power which would not destroy valuable productive lands.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 20 Agriculture of the EIS - Section 32 Heritage Resources of the EIS - Section 14 Wildlife Resources of the EIS Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. Please also see the following Technical Memos: - Alternatives to the Project - Movement of Grizzly Bears and Large Carnivores
pub_0239-001	Name withheld	Access for private land owners during construction and later. have not been contacted by either B C Hydro or the Review board. We have attended several open houses & received different opinions from various Representatives. We want to be assured that their will be access to private landowners.	Thank you for providing your input during the public comment period for the Environmental Impact statement (EIS) for the Site C Clean Energy Project. If your land is not required for the Project, apart from some temporary and short-term disruptions (where property owners would be notified in advance of the disruption), access to private property will be maintained throughout construction and operation of the Project

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pub_0240-001	Name withheld	Hello, As a BC resident I would like to express my opposition to the Site C dam project. The serious negative impacts to the environment, farmland, wildlife, forests, vegetation, the Peace River itself and degradation to First Nations way of life is too great to comprehend. This project should be refused entirely. Energy conservation and green alternatives are enough to meet demand which BC Hydro has already admitted to. This project is more about providing power to the fossil fuel industry than it is about generating power for average citizens. 8 billion dollars could be saved instead of spending it on site C. Hydro is already massively in debt so why burden future generations of British Columbians to a life of financial insecurity and the potential increase in poverty. This debt will have to be paid either in taxes or electricity costs which is something most British Columbians would object to. Thank you	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project and alternatives to the Project are described in Section 5 (Need for, Purpose of, and Alternatives to the Project) of the EIS. Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The potential for the Project to affect vegetation and wildlife is described in Sections 13 (Vegetation and Ecological Communities) and 14 (Wildlife Resources) of the EIS, respectively. The potential for the Project to affect agriculture and Aboriginal way of life is described in Sections 20 (Agriculture), Section 19 (Current Use of Lands and Resources for Traditional Purposes) and 34 (Asserted or Established Aboriginal Rights and Treaty Rights and Aboriginal Interest and Information Requirements) of the EIS, respectively. Please also see the following Technical Memos: - Project Need - Agriculture

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pub_0241-001	Name withheld	The points listed below are the negative effects of the Side C Project on to the Peace River Valley, the surrounding cities and towns and the Peace River Region as a whole and the province of British Columbia. Most of the concerns are based on common knowledge and observations made while living in the Region for 15 years. Environmental The province of British Columbia is committed to be carbon neutral. The construction of the Dam, and the resulting flooding of the valley would not be within line of BC's carbon neutrality. - Removal of the existing vegetation and trees in the valley would take away valuable CO2 storage capacity. - Flooding would release methane gas, created by decomposition of organics under water, out of the newly created reservoir. Methane gas is known to be greenhouse gas that is worse than CO2. - During the construction phase, millions of liters of Diesel and gasoline fuel would be used in the construction equipment, trucks and other vehicles. This would release more CO2 , NOX and Sulphur oxides created by the fuel combustion. All these gases are known greenhouse gases. - The creating of the fuel needed itself would release large amounts of greenhouses gases, if the oil extraction and refining process necessary for the fuel is considered in the greenhouse gas emissions of the proposed project.	The net emissions of the Project, over the minimum operating life of the Project are far closer to carbon neutral for the energy generated than other sources of energy production, as described in Section 15 of the EIS and in Volume 2 Appendix S Greenhouse Gases Technical Report. This analysis takes into account the removal of vegetation from the reservoir, emissions from the reservoir during operations (including methane), emissions from fuel, materials and other sources during construction. The energy produced by Site C produces less GHG emissions compared to fossil fuel combustion sources of electricity. Emissions from the Project would be comparable to those from renewable sources such as wind. For context, as has been demonstrated in several studies referenced in Section 15 of EIS and in Volume 2 Appendix S Greenhouse Gases Technical Report, deep cold-water temperate reservoirs produce very little methane as a result of impoundment. This is quite different from tropical reservoirs that are known to produce much larger amounts of methane.
pub_0241-002	Name withheld	The current river valley is a known wintering ground for moos, deer and elk and many other animal and bird species. Large scale habit loss in an area that already faces habitat pressure from oil, gas and forestry and mining is not acceptable. The river valley also forms part of a migration corridor for animals connecting the different habit areas throughout the region. Loss of that migration pass would have large scale negative effects on entire populations that are connected by that pass. It is important that the connection to species population across North Western Canada and potentially into the Northern continental US is understood completely.	Volume 2, Section 14 and Appendix R of the EIS describes potential effects of the Project on moose, deer, elk and birds. Please also see the Technical Memo on Caribou.

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pub_0241-003	Name withheld	The Peace River valley geology consists largely of clay and silt soils that are highly susceptible to landslides and erosion. The construction of the reservoir would raise the water level in the soils, increasing the likely hood of large slides into the reservoir. The constant changing water level in the reservoir causes erosion to the banks. The result of slides and erosion is large amounts of soil particle being suspended in the water, unstable shorelines and the potential for tidal waves caused by water being displaced by large landslides (Archimedes Principle, Vajont Dam Disaster). The soils in the water would change the water quality and possible leach harmful heavy metals into the water and ecosystem. The effect can be observed in Williston Lake and other hydroelectric reservoirs all over the world. The lake effect created by the reservoir can have impacts on the localised weather patterns. The changing from a river system habitat to a Lake Habit will exterminate river habitat preferring fish and aquatic species.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Information on the geology, terrain stability, and geotechnical soil conditions within the Project activity zone are outlined in Section 11.2 of the EIS, which describes both current conditions and potential changes as a result of the proposed Project activities. EIS Volume 2 Appendix B, Part 2 Preliminary Reservoir Impact Lines describes the bedrock and surficial geology within the proposed reservoir shoreline area in greater detail. Predicted changes to erosion and slope stability as a result of the creation and operation of the proposed reservoir are described. Reservoir impact lines delineating zones of potential flood, erosion, landslide, and landslide-generated wave hazards are provided. The effects of potential landslide generated waves on the dam are described in Section 37 of the EIS. The potential for the Project to change localized weather patterns are described in Section 11.10 (Microclimate) and Volume 2 Appendix K (Microclimate Technical Data Report) of the EIS. The potential for the Project to affect fish habitat and species composition is described in Section 12 (Fish and Fish Habitat), Volume 2 Appendix O (Fish and Fish Habitat Technical Data Report), and Volume 2 Appendix P (Aquatic Productivity Reports) of the EIS. As described in the Technical memo on Reservoir Impact Lines, the approach used is based on guidelines prepared by the International Commission on Large Dams and provide more information on the expected likelihood and nature of the hazards, and therefore facilitate more flexible land use planning.

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pub_0241-004	Name withheld	Economic The Province is committed to balancing the provincial budget and reducing dept. Construction a 9Billion dollar project and securing BC Hydro is no in alignment with that goal. The region currently is currently experiencing an economic boom brought on by oil and gas exploration, which has driven prices on housing, food, fuel and everything else up. Further increase of boom activity will and drive prices further up and therefor project cost. Housing prices are astronomical in the area, the influx of transient workers will make housing further hard to find and even expensive. The providing of temporary work will create economic benefit for the short term, but no long lasting jobs for the region and the province.	The Project capital cost estimate is $7.9 billion, as described in Volume 1 Appendix F Part 1 (Project Cost Estimate). All methods of meeting need considered in the EIS portfolio analysis will result in financial obligations to BC Hydro. The comparison of financial attributes between the Project and alternative generation options is provided in Section 5.5.4.3, while the effect of the Project on ratepayer costs is provided in Section 7.1.3. As stated in 7.1.3, "… the Project is expected to result in lower long-term costs to ratepayers than alternative resource options." As a result, the Project would result in a lower financial obligation to BC Hydro than the other available alternative resource portfolios considered. Please see the Technical Memo on Project Costs for a description of the financing of the Project. The Project's impact on the labour market and housing valued components are described in Section 17 and 29 of the EIS. BC Hydro has proposed to provide camp accommodation for all Project workers if required, which would alleviate any unwanted pressure on the local housing market.
pub_0241-005	Name withheld	Social The proposed construction of a camp and introduction of 5000 transient workers into the region will increase pressure on social services of the region, introduce more crime and drive up pressure on services provided by the regional cities, that are still trying to cope with the oil and gas introduced population increase. The dam project debate has divided the community significantly. The river is a source of recreation, flooding the valley would mean loss of river.	Population changes associated with Site C and their potential impacts on community services and infrastructure are described in Section 28 and 30 of the EIS. During the peak year of construction there would be an estimated 1,372 workers residing in on-site camp accommodations. The regional population forecast, even without the Project, is for substantial growth over the next 20 years. The effect of the Project would be to advance this expected population growth by two to three years. Following construction the population is expected to return to near base case conditions. Changes in outdoor recreation use levels and regional tourism visitor centers are described in Section 25.4.4 of the EIS.
pub_0241-006	Name withheld	Health The leaching of heavy metals from the soils and decomposing plant material into the water will have negative environmental impacts on the fish and downstream. Those impacts are well documented through studies conducted on other dam projects. The influx of 5000 workers, as published by BC Hydro, will put more pressure on the local healthcare system. Currently the region has nowhere near enough healthcare providers or the capabilities to provide adequate standards of care. The large amount of wasteful slash burning that would be conducted during the project would decrease the air quality.	The potential effects of the Project on Community Infrastructure and Services and proposed mitigation are described in Section 30 of the EIS. Please see the following Technical Memos: - Methylmercury - Workforce and Population Estimates During Construction

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pub_0241-007	Name withheld	Heritage The river valley was once home to First Nation settlements; those sites would be lost if flooded. The Peace Valley landscape is what defines this region, the river defines it. Further destroying that valley will eradicate the local identities. It is important that future generation get to experience the landscape as we did, it is irresponsible to future generations to keep repeating the same mistakes over and over again.	Section 32.3.3 of the EIS states that "Should the Project proceed, a detailed heritage site mitigation strategy would be required based on the results of the heritage resources assessment and upon completion of detailed design" and that the "goal of the proposed mitigation strategy would be to reduce adverse Project effects on heritage sites and to provide a positive Project effect by recovering data which adds to the knowledge base of palaeontology, local prehistory, and human use of the LAA over time."
pub_0242-001	Hadland, Arthur A.	Public safety is an issue surrounding the proposed Site C reservoir. The need to address and ensure public safety has become a priority at all levels of Canadian government. A September 2009 Klohn Crippen Berger and SNC Lavelin report produced for BC Hydro draws this factor to the fore within the pondage of the proposed Site C project. Quote… *"The uncertainties in predicting both the extent and rate of the shoreline impacts lead to the proposal to adopt an observational approach for periodically reviewing and updating the reservoir impact lines after the reservoir has been filled."* http://www.bchydro.com/energy_in_bc/projects/site_c/document_centre/stage_2_reports.html This professional opinion needs to be examined in detail regarding the safety of human activities surrounding and within the proposed reservoir. It has not been addressed as of the writing of this commentary. This outstanding safety concern is further reinforced by the report commissioned by the Honorable Jack Weisgerber, Minister of Energy, Mines and Petroleum Resources in 1991. This report prepared by the Geological Survey Branch of British Columbia (Quaternary Geology and Landforms of Eastern Peace River Region, British Columbia, by N.R. Catto 1991). This report was made without reference to the proposed flooding of the Lower Peace River Valley; rather it was commissioned to examine aggregate exploitation within the lower Peace River region. This report is brought to the attention of the reader regarding reservoir safety concerns. These concerns are highlighted in this 1991 report by the following excerpted observations. 1. "*Mass movements, including rotational and translation glacial slides and a variety of sediment gravity flows, commonly occur along all the major streams.*"…..Page 2 2. "*The high concentrations of montmorillonite and bentonite in the strata, however,*	Section 9.2.1 of the EIS Guidelines outlines the information to be included in the EIS on the characterization and classification of the reservoir shoreline including: • Predicted changes to shoreline erosion and slope stability due to the Project • A series of reservoir impact lines to delineate areas where limitations on residential land use or other measures may be required to manage public safety. The proposed Site C reservoir will result in changes to erosion and slope stability at some locations within the reservoir shoreline technical study area. As described in EIS Section 11.2.3 the location and nature of these changes have been predicted through a detailed characterization of the reservoir shoreline geology, inventory and characterization of existing slopes and landslides, groundwater monitoring and modeling, shoreline erosion modeling, and slope stability analyses. Preliminary reservoir impact lines have been prepared to characterize the following hazards around the proposed reservoir: - Potential floods – the Flood Impact Line - Potential erosion – the Erosion Impact Line - Potential landslides – the Stability Impact Line - Potential landslide-generated waves – the Landslide Generated Wave Impact Line This work is described in detail in EIS Volume 2 Appendix B, Part 2 Preliminary Reservoir Impact Lines As described in the Technical Memo on Reservoir Impact Lines, the approach used is based on guidelines prepared by the International Commission on Large Dams and provide more information on the expected likelihood and nature of the hazards, and therefore facilitate more flexible land use planning. The Technical Memo also describes the impact lines approach including the historical safeline, 1983 BCUC recommendations, the Stage 2 public consultation on the impact lines, the management of public safety around and on the reservoir, potential for reservoir infilling, and monitoring.

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		together with their poorly consolidated nature, greatly increases susceptibility of these rocks to slope failure following fluvial (or arthropogenic) undercutting or overloading."…..Page 2 3. "*The clays are generally plastic, susceptible to sediment gravity flow if disturbed, and contain a high proportion of material derived from the local Cretaceous bedrock*."…..Page 5 4. "*Mass movements in the region can be induced by the fluvial undercutting, natural overloading of the slopes (e.g. by debris flow from above), loss of internal cohesion due to sudden saturation (as was common during June, 1990), or by human activity. Evidence of past colluviation in the region is extensive (Bobrowsky et al. 1991), and extreme caution is required in any effort to exploit or utilize river valley slopes*."…..Page 10 5. "*Thus, all of the major terrain slopes present in the eastern Peace River Region are subject to slope failure. Extreme caution should therefore be observed in any effort to exploit or utilize river valley slopes*."…..Page 15 6. "*Valley slopes throughout the region are subject to slope failure and colluviation, and the development of these sites should be minimized*."…..Page 17 summary excerpt These six cautionary quotes were made researching the potential for exploration or exploitation of aggregate sites in the eastern Peace River area. These same quotes are directly pertinent to the public safety within and surrounding the proposed Site C reservoir. To date this major issue has been ignored, minimized and/or marginalized by the proponent (BC Hydro and Power Authority) and their contractors. As ministers responsible for public safety it is your role to investigate, report, and form your respective opinions on the measures that will be taken to ensure public safety or to recommend that the proposed project is too risky in terms of ensuring public safety to be undertaken.	Please also see the Technical Memo on Dam Safety.

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pub_0243-001	Keith, Margaret	I attended BC Hydro's presentation on Environmental Impact Statement regarding Site C Dam in Dawson Creek on February 28, 2013. I could see the magnitude of the negative impact such a proposal will have on many residents, the wildlife, and the environment alongside the proposed dam and in the Peace area of BC. The proposed Site C dam would involve flooding 83 kilometers of river much of which includes steep banks and the plan is to clear the trees before the area is flooded. Therefore, significant slides on the unstable banks of the clay-lined Peace River can be expected. This will cause more debris and sediment to enter the river, destroy fish habitat and cause more timber to enter the river, making it unsafe for boating.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Details on reservoir clearing are found in the Vegetation, Clearing, and Debris Management Plan, Volume 1 Appendix A. The stability of reservoir slopes and sediment transport are described in Section 11.2 (Geology, Terrain, and Soils) and Volume 2 Appendix B Geology, Terrain Stability and Soil Reports (Parts 1 and 2) and Section 11.8 (Fluvial Geomorphology and Sediment Transport Regime) of the EIS, respectively. The potential for the Project to affect fish habitat and safe boating is described in Sections 14 (Fish and Fish Habitat) and 26 (Navigation) of the EIS, respectively.
pub_0243-002	Keith, Margaret	So BC Hydro's plans to increase recreational water activates in the area of the reservoir will not be realized. In fact, the opportunity for my family to once again canoe down the Pine River from East Pine to Taylor Landing would be lost if Site C goes ahead.	The Pine River confluence with the Peace River is located approximately 16km downstream of the proposed Site C dam site. The construction of the dam will not affect the ability to canoe down the Pine River.
pub_0243-003	Keith, Margaret	The proposed flooded land is 5,550 hectares. A huge amount of land that is currently available to wildlife. The Yellowstone to Yukon Conservation Initiative has studied the proposed flooded area and they work hard to conserve the wildlife and vegetation in this corridor that stretches from Yellowstone National Park to the Yukon. The proposed dam would greatly interfere with migration of some animals and birds and affect the habitat of many more species.	As stated in Section 20.3.1.3 of the EIS, the reservoir surface area would comprise approximately 4,523 hectares of the current land area. The potential for the Project to affect wildlife and wildlife habitat is described in Sections 13 (Vegetation and Ecological Communities) and 14 (Wildlife Resources) of the EIS, respectively, as well as Volume 2 Appendix R (Terrestrial Vegetation and Wildlife Report). Please also see the Technical Memo on Caribou.
pub_0243-004	Keith, Margaret	The South and North Peace areas from the BC border to Chetwynd and Hudson's Hope are already experiencing unprecedented activity due to oil and gas and mining exploration, and transportation of goods and staff to and from these activities and related pipelines and proposed pipelines and water pipelines. Any plans to build Site C within the next 15 years would clash with these other developments and cause stress on already unsafe transportation routes in the area.	The potential for the Project to affect transportation routes in the area is described in Section 31 (Transportation) of the EIS, as well as in Volume 4 Appendix B (Traffic Analysis Report). A summary of the cumulative effects of the Project in combination with other projects or activities that have been or will be carried out is presented in Section 37.3 (Summary of Cumulative Effects) of the EIS.

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pub_0243-005	Keith, Margaret	If Site C is built, the noise and damage to areas close to residential areas, and close to existing farm properties would be unbearable. This is not why people have settled in the Peace River Area – to be subjected to noise, to air, water and land pollution, to diesel trucks running 24/7, etc.	Results of noise and vibration studies are presented in Section 11.12 (Noise and Vibration) of the EIS. Project construction activities will be subject to mitigation described in Environmental Management Plans, which are summarized in Section 35 of the EIS. The effects of the Project on Human Health is described in Section 33 (Human Health) of the EIS.
pub_0243-006	Keith, Margaret	I am against removing arable farmland from agricultural use. The microclimate on the Peace River west and east of Fort St. John should be utilized for producing food for local consumption.	The potential for the Project to affect agriculture is described in Section 20 (Agriculture) and Volume 3 Appendix D (Agricultural Assessment Supporting Documentation) of the EIS. Microclimate is described in Section 11.10 of the EIS. Please also see the Technical Memo on Agriculture.
pub_0243-007	Keith, Margaret	The Taylor Hill has been a source of poor air quality and unpredictable fog for many years. Adding a reservoir close to the Taylor Hill will only add to the visibility problems for traffic on the South Taylor Hill.	Potential changes to the local microclimate due to the Project are described in Section 11.10 (Micro-climate) of the EIS. The potential for the Project to affect transportation is described in Section 31 (Transportation) of the EIS. Mitigation measures for Project effects to transportation are also included in the EIS.
pub_0243-008	Keith, Margaret	The residents of the Peace River Area deserve to have a quiet, unpolluted, safe place to live and enjoy recreation and the natural environment. The BC Hydro plans do not adequately outline the Emergency Response Plans for residents of the area, in case there are problems during the construction or after the construction of the proposed Site C dam.	The Environmental Management Plan framework is described in Section 35 (Summary of Environmental Management Plans) of the EIS. Should the Project receive approval, detailed emergency response plans will be developed prior to the commencement of construction. Please also see the Technical Memo on Dam Safety for more information on public safety.
pub_0243-009	Keith, Margaret	BC Hydro has shown disrespect for the historical values of the proposed Site C dam area. It is reported that 173 palaeontologically sensitive areas and 251 archaeological sites and 42 historical sites have been identified to be impacted if Site C goes ahead.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 32.3.3 of the EIS states that “Should the Project proceed, a detailed heritage site mitigation strategy would be required based on the results of the heritage resources assessment and upon completion of detailed design” and that the “goal of the proposed mitigation strategy would be to reduce adverse Project effects on heritage sites and to provide a positive Project effect by recovering data which adds to the knowledge base of palaeontology, local prehistory, and human use of the LAA over time.” Please also see the Technical Memo on Permitting for Construction and Operations.

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pub_0244-001	Beam, Xavier	MY NAME IS XAVIER BEAM AND THIS IS WHY I DO NOT WANT SITE C: my home is the best home ever, we have swans, hawks, a RIVER OTTER, and eagles. If site c goes in all of these magnificent creatures will DIE! Because all the fish will get methyl mercury…SO WHY ARE YOU DOING SITE C? TO MAKE MONY!!! IF YOU PUT IN THE SITE C DAM, I REJECT IT. I DON'T WANT MY FUTURE CHANGED! Sincerely, Xavier Beam P.S HOW ARE YOU GOING TO STOP THE EAGLES FROM EATING THE POISONED FISH? WHAT ARE YOU GOING TO DO? TEACH THEM TO READ?!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential for the Project to affect wildlife resources, Fish and Fish Habitat are described in Sections 13 and 14 of the EIS, respectively. The need for the Project is described in Section 5 of the EIS. Please also see the following Technical Memos: - Movement of Grizzly Bears and Large Carnivores - Project Need - Methylmercury
pub_0245-001	Beam, Caroline	My name is Caroline Beam. I am a long-time resident of Hudson's Hope, with a BSc in Wildlife Biology and a BA in Education. I have been studying the potential impacts of the proposed Site C project since my teenage years, and my family has been directly affected by the dams on the Peace River for four generations. Please consider the following submission detailing some of my concerns with the current EIS submitted by BC Hydro regarding their newest version of the Site C project. Site C EIS Concerns: Land Acquisition: It is my understanding that BC Hydro intends to buy the land directly flooded by the proposed reservoir, and attach flowage easements to (but not purchase) land within the wave action line. The flowage easement prevents building structures on the land, and in some cases is present because damage and sloughing is expected. This would mean that people who have already had some of their property taken from them would suffer the further insult of being left with land they cannot use, with no compensation. This is preposterous! If the reservoir for the Site C dam is going to adversely affect these lands, they should either be acquired by BC Hydro, or the owners should be fairly compensated for their loss of use. Why should landowners have to suffer long-term with the encumbrance of land made useless by this project? BC Hydro has a responsibility for all the land that will (or may, according to BC Hydro's own studies) be adversely affected by the reservoir, not just the land that will be under the water.	Thank you for providing your input during the public comment period for the Environmental Impact statement (EIS) for the Site C Clean Energy Project. With respect to statutory right-of-way, BC Hydro would compensate property owners for the reservoir impact lines statutory right-of-way (previously referred to as a flowage easement). BC Hydro's approach is to provide compensation to property owners based on fair market value. Please see the Technical Memo on Private Property– Project Requirements and Tenure.

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pub_0245-002	Beam, Caroline	Methyl Mercury: The studies of Methyl mercury in the reservoir during and after construction are incomplete and misleading. The data claims that the methyl mercury levels will spike, making the fish 75% less edible than they are now, but only for a short time and then the methyl mercury level will return to what it was pre-dam. This is a dangerous oversimplification of a very real long-term problem. While it is possible that people fishing in the reservoir can be advised as to how much and what size fish they can eat and still be healthy, there will be no such information for the other predators in the system. Larger fish, raptors such as osprey, eagles and kingfishers, as well as otters, fishers, bears, and various scavengers will be ingesting this increased methyl mercury without any checks. As it is a heavy metal, it will dissolve in the fats of these animals and remain there, accumulating with every meal, until the animal dies of complications and/or is eaten by another animal, who will in turn gain the poison from its meal. It is called bioaccumulation, and it never goes away! How is it that this very real and dangerous threat to our long-term wildlife populations has been left out of the EIS?	Please see the response to pub_0223-011.
pub_0245-003	Beam, Caroline	Government: At a recent open house in Hudson's Hope, my conversations with project representatives led to some major concerns about the transparency and objectivity of the process. Why are other ministries not involved? Why does the BCUC only come into play after the project is approved? What is the actual role of each party? Who is ultimately responsible for the decision, and why is this not transparent? Why are the studies being carried out exclusively by the proponent? The whole information session felt much more like a pushy sales pitch than a provision of information on which to make an objective decision.	The environmental assessment process for Site C is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. A large number of provincial and federal agencies are engaged in the review process. A list of the provincial agencies and federal authorities that are involved in the environmental assessment is provided in Section 8.1 and 8.2 of the EIS, respectively. They are members of the Working Group which provides advice to the BCEAO and the CEA Agency during the pre-panel review stage (see BC/Canada Agreement). The Working Group has reviewed and provided comments on the EIS Guidelines (which define the scope of the environmental assessment) and on the EIS. The EIS Guidelines defined what studies needed to be carried out by the proponent. The provincial Minister of Environment and Forest, Lands and Natural Resources Operations will make

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			a determination under section 17(3) of BCEAA. The federal Minister of Environment will issue an environmental assessment decision statement under Section 54 of CEAA 2012. The role of the BCUC is described in Section 1.2, page 2 of the EIS Guidelines and Section 7.2.3, page 7-4 of the EIS: • Section 1.2 of the EIS Guidelines, which sets out the purpose of the EIS, states: "The EIS is not intended to constitute a Certificate of Public Convenience and Necessity for the Site C Project. The Site C Project is exempt from the requirement for a Certificate of Public Convenience and Necessity as per section 7 of the B.C. Clean Energy Act"; • Section 7.2.3 of the EIS describes the role of the BCUC with respect to the Project, which is to review the costs associated with the Project should it proceed in the context of BC Hydro's revenue requirements: "Costs associated with generation projects are recovered from ratepayers based on the revenue requirements collected by BC Hydro, as regulated by the [BCUC] … The manner of cost recovery is determined by the BCUC …".
pub_0245-004	Beam, Caroline	Bias language: In every section of the EIS, that is not favorable, the language is very abrupt and dismissive. No quantification of these adverse impacts is specified. Simply put, they are identified as "adverse" and then ignored. In the sections that favor the project, however, great detail and subjective language is used to state how these favorable aspects outweigh the negative ones. How can anyone reading this study make an objective decision when presented with such obviously biased material? This is supposed to be a study for the purposes of determining whether site C is the best decision for our province's future, but it reads more like a propaganda leaflet from a crooked politician.	The criteria used to characterize potential residual effects are provided in Table 8.3 of the EIS Guidelines and in Section 10, Table 10.3, of the EIS. Where possible, these criteria are described quantitatively. When residual effects cannot be characterized quantitatively, they are characterized qualitatively. These objective criteria were applied to assess the potential effects on each valued component. A summary of potential residual effects of the Project and their determination of significance is provided in Section 38 of the EIS. The EIS Guidelines required the proponent to "include a Section describing the predicted environmental, economic and social benefits of the project" (Section 5). This information is provided in Section 7 of the EIS.
pub_0245-005	Beam, Caroline	Farming potential I could find nothing in the EIS about opportunity cost of flooding the unique farmland in the Peace Valley. All farmland is not created equal, and you cannot sufficiently upgrade other existing farmland to replace the unique features of this region. Key factors include better soil, longer growing season (frost-free days due to proximity to water and geographic orientation), greater annual days of sunshine, and irrigation conditions and opportunities. Government studies have shown that the costs of transporting foods are on the rise, and are expected to remain that way indefinitely. There should be a number included in the cost of the Site C project to quantify the cost of losing this area for agricultural purposes. Since the decommission costs of the	The net foregone primary agricultural economic activity is an estimate of the opportunity cost of the Project on agriculture, estimated over 100 years, and is described in Section 20.3.8.6 of the EIS. The consideration of the potential future use of land for agriculture, including the foregone agricultural economic activity, land capability for agriculture, and crop suitability, presents information that is unconstrained by land ownership or tenure, and treats land currently undeveloped for agriculture as equivalent to land currently being used for agricultural purposes. BC Hydro has engaged the BC Ministry of Agriculture throughout the agricultural assessment study. BC Ministry of Agriculture provided comments on the draft EIS Guidelines.

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		dam have been omitted on the premise that it will be operational in some form forever, the cost of the loss of the valley for agricultural purposes should also have to reflect this. But since any number times infinity is … well… infinity, let's assume we only calculate it for the 100 year window the dam is proposed to be in operation according to the EIS. Since the threat of the Site C dam has impeded development in food production on any major scale in the valley since <personal information removed> very successful potato farming operation before <personal information removed> last time this project was attempted, you would have to include all the usual business start-up details. These would include increased local employment, increased local revenue generated by the purchase and maintenance of equipment and structures, decreased costs of food transportation for local businesses and the associated lower costs (and therefore increased local consumption) by residents of the region, the general boost to the provincial economy due to the produce being purchased within BC rather than shipped from foreign parts, and of course the increased annual income of the affected farmers. Once your model included this initial stimulus, you would need to develop a long-term model showing annual savings in transportation and reduction in out-of-province suppliers, and of course all applicable tax revenues. As I'm not an economist, I'm sure I've omitted some details, but I'm sure your objective team of well-paid experts will be more thorough. You see, this farmland is a virtually limitless provincial resource, left undeveloped due to the threat of Site C. So, you'll need to backdate all of this financial information to the original public announcement of BC Hydro's intention to build the project, back in the sixties. If you need somewhere to start gathering your figures, you can talk to <personal information removed>. Additionally, the department of Agriculture would be an excellent source of information, and this might be a good way to involve them in the project, since they have so far been completely omitted. We are not just flooding some benign rock quarry here. That fact must be properly addressed in the evaluation of this project.	Please also see the Technical Memo on Agriculture.
pub_0245-006	Beam, Caroline	Best Alternative: The "best" argument for Site C provided by the EIS is that it is better than fuel-based generation. The language in the EIS seems to encourage the outlook that fracking is a problem, and we should not pollute our environment with burned fossil fuels. To this,	The Project is needed whether or not any new LNG projects proceed. Section 5.2.2.2, and in particular tables 5.8 and 5.9, of the EIS set out BC Hydro's energy and capacity load resource balances which do not include potential LNG demand. Please see the Technical Memo on Project Need.

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		I see three problems: One: is building Site C going to reduce the amount of fracking going on in the province? NO! I'm sure everyone has heard the provincial government's plans to construct a pipeline to transport liquid natural gas to Kitimat for export to Asia. They have been publishing full-page ads in the local newspapers glorifying the "virtues" of this project for some time now. Natural gas extraction is NOT going away. So fracking is a separate issue, with its own political agenda that will move forward regardless of Site C. Two: Is shipping our natural gas over to China, whose environmental regulations are more lax than our own, keeping the toxins out of our air? NO! We only have one atmosphere, and we all breathe it. The only thing shipping the natural gas overseas does is prevent us from being able to control how cleanly it is burned. Three: Rather than further degrading our environment by constructing the pipeline and dealing with the tankers involved in transporting the liquefied natural gas, as well as wasting the electrical energy involved in liquefying it in the first place, why not just keep it here, burn it clean, and generate all the energy we need in an easily controlled and maintained local facility? We do possess the technology to burn natural gas with relatively low GHG emissions. Isn't that why the government recently classified it as a green energy source? While it may appear that the issues surrounding natural gas are disconnected from the evaluation of the Site C EIS, the reality is that the concept of burning our own natural gas as an alternative to Site C has not been sufficiently considered. In summary, considering the length and breadth of the potential impacts of Site C, the current EIS is vastly insufficient as a body of work upon which to base decisions concerning the validity of the project.	Section 5.4.2 of the EIS describes the potential alternatives to the Project that BC Hydro considers are not viable, with reasons provided for each alternative reviewed, while Section 5.5 provides details of the available alternative resources to the Project and examines these available alternative resources using financial, technical, environmental and economic development attributes. The financial, technical and environmental attributes and other information concerning natural gas-fired generation (for combined cycle gas turbines, simple cycle gas turbines and cogeneration) is treated as an available alternative within the 93% Clean Energy Act clean or renewable target; refer to Section 5.5.2.8 of the EIS. Note that the Provincial Government has not classified natural gas-fired generation as a 'clean or renewable' resource which is defined in Section 1 of the Clean Energy Act as: biomass, biogas, geothermal heat, hydro, solar, ocean and wind. The EIS in Section 5.5.2 notes after each available resource whether or not it is clean or renewable as defined by Section 1 of the Clean Energy Act. As described in Section 7.4.2, GHG emissions from natural gas-fired generation would be many times greater than the GHG emissions from the Project.

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pub_0246-001	Booth, Annie	I am fundamentally opposed to this proposed project for a number of reasons, listed below: 1. The EIS inadequately assesses the impacts to residents, particularly the Aboriginal groups which will be impacted by this project. It makes light of the impacts to already fragile wildlife species, most prominently bears and Cariboo, one of which is protected under SARA, which both governments appear prepared to ignore.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential for the Project to impact traditional land and resource use is described in Section 19 (Current Use of Lands and Resources for Traditional Purposes) of the EIS. The potential for the Project to affect asserted or established aboriginal treaty rights is described in Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) of the EIS. The potential for the Project to affect wildlife resources is described in Section 14 (Wildlife Resources) of the EIS. Caribou and black bears are described in Section 14.1, Table 14.2, of the EIS. Grizzly bear are assessed "key indicators" under the key species group "carnivores". (Please see Table 14.4 in the EIS). Please also see the Technical Memo on Caribou.
pub_0246-002	Booth, Annie	2. Consultation, as mandated by the courts has not been meaningful to the Aboriginal groups and the process is highly inadequate. I reference my own research upon Aboriginal consultation (funded by the CEAA) in support of this assertion.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro has consulted with Aboriginal groups about the Project since 2007. Details of the consultation process are found in Volume 1 Section 9.2 Aboriginal Group Information Distribution and Consultation, and BC Hydro Consultation Summaries are found for all 29 Aboriginal groups in Volume 5 Appendix A Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements Supporting Documentation. BC Hydro has indicated in Section 9.2.5 it will continue consultations with Aboriginal groups during construction of the Project. Please see the Technical Memo on Aboriginal Consultation.

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pub_0246-003	Booth, Annie	3. This project threatens theoretically protected wildlife, including the above noted Cariboo, and others not yet listed under SARA but whose continued existence will be threatened should this project proceed.	The assessment of potential effects of the Project on wildlife resources was conducted on key groups and key species within groups as per Section 12 of the EIS Guidelines. Within each species group baseline data were collected on all species occurring in the LAA including species not considered at risk. Potential effects of the Project were assessed on both species considered at risk and species not considered at risk. Table 14.4 in Volume 2 Section 14 of the EIS outlines the key indicators for wildlife. As described in Table 14.4 not all species assessed were species at risk. Species assed included species of interest to Aboriginal groups, species of regional management concern, species of regional interest, harvested species, species of public interest and species protected by the provincial Wildlife Act. Caribou were not included in the assessment. The rationale for selection of key indicator species is provided in Table 14.2, Volume 2, Section 14 of the EIS. Please also see the Technical Memo on Caribou.
pub_0246-004	Booth, Annie	4. This project will eliminate all of the class 1 and 2 agricultural land in northern British Columbia. As food security comes increasingly under threat world wide and as Canada is now a net importer of supplies of food staples from increasingly insecure world regimes to so wantonly eliminate agricultural lands is a crime against BC's and Canada's residents.	The assertion that the Project will eliminate all of the class 1 and 2 land in northern British Columbia is incorrect. The loss of agricultural land associated with the Project and proposed mitigation measures are described in Section 20 of the EIS. The EIS confirms 7,876 ha of unimproved class 1 and 2 agricultural land would remain in the Peace River Valley if the Project proceeds. Historical food self-reliance in British Columbia and potential Project effects on regional food production and consumption are described in Sections 20.2.9.1 and 20.3.11 of the EIS. Anticipated changes in provincial and Peace Agricultural Region food self-reliance in relation to climate change is described in Volume 3, Appendix D, Section 7.1.2.3 and 7.2.1.3 of the EIS. Please also see the Technical Memo on Agriculture.

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pub_0246-005	Booth, Annie	5. This project was never about powering BC homes or about providing “clean” energy. It is no secret that this project is designed to open up northwestern areas of the province to natural resources extraction. The residents of BC will see no benefit from this project but resource extraction companies will see a great many benefits to their bottom line while the residents of BC bear all the costs of lost agricultural land, lost livelihoods and lost wildlife species as well as costs such as regional climate change ,and increased mercury contamination from the Site C dam waters. Further, they will see facilitated further resource exploration with accompanying impacts without full or due consultation. I respectfully suggest that this project poses to many risks to both the natural environment of northern British Columbia and Alberta and to the human residents of this region to be approved.	Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers, not only requirements related to resource extraction. Section 7 of the EIS describes the Project Benefits, including benefits at the regional and provincial level.
pub_0248_001	Dunster, Katherine	Agriculture and Peace River landscape and environment are more important to BC than Site C. The amount of money that would be spent on this dam could be used to retrofit every household in BC with solar grid-tie and energy efficient appliances - all made in BC thereby providing longterm stimulus of the economy. Site C is not "clean energy" - it will destroy the environment so it really is dirty.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential effects of the Project on agriculture are described in Section 20 (Agriculture) and on other land and resource uses are described in Sections 21 to 27 of the EIS. The needs for the Project as well as alternatives to the Project are described in Section 5 of the EIS (Need for, Purpose of, and Alternatives to the Project). Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. Please also see the following Technical Memos: -Project Need - Alternatives to the Project

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pub_0249-001	Fredeen, Art	1) Site C dam will flood some of the best farmland in northern BC. 2) Site C energy will NOT be used to transition BC away from fossil fuels, but will instead be used to develop fossil fuels and other non-renewable resources. 3) Site C will violate Treaty 8 by further degrading the ability of many First nations in the north east to hunt and fish. 4) Site C will further fragment critical habitat essential for wildlife migration in the Yellowstone to Yukon corridor - the last North American corridor left. The Peace is already a bottleneck for wildlife migration - and will be made worse by a Site C dam.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: -Agriculture -Movement of Grizzly Bears and Large Carnivores - Project Need
pub_0250-001	Taylor, Bill	1. I am concerned that Vol. 3, Section 20 (Agriculture) fails to face the real long term impact of "permanent loss" of food production from the Peace Valley. Climate change that has already brought severe drought to Mexico, the U.S. South West and to the Great Plains, plus rising irrigation and transport costs, will sharply increase food cost and food security problems in coming decades. We who live here know the large potential of the Peace Valley for vegetable and grain production- and that "mitigation" will not produce more valley bottom nor mild micro- climate to replace 3,400 lost hectares of this special valley. How shocking (or laughable) it would be to farmers from China, Philippines, or Bolivia to be told by the Hydro report that most of this lost land has little or no "utility'!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Anticipated changes in provincial and Peace Agricultural Region food self-reliance in relation to climate change is described in Volume 3, Appendix D, Section 7.1.2.3 and 7.2.1.3 of the EIS. The EIS concludes that in the long term, the Project would not affect the future ability of the Peace region to be food self-reliant in vegetable crops that are climatically adapted and in dairy, meat, and egg and poultry products (EIS, Section 20.3.11). The loss of agricultural land associated with the Project and proposed mitigation measures are described in Section 20 of the EIS. Please also see the Technical Memo on Agriculture.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0250-002	Taylor, Bill	2. Site C poses a direct conflict with CEA's Sustainable Development mandate if LNG production will be a major use of the power produced (with demand of perhaps 6000 GWh "non-compression load from new LNG facilities" - whatever is meant by non-compressed LNG, p. 22, Exec Summary). If Site C hydro will power huge expansion of fossil fuel burning and GHG emissions from fracking, processing, shipping and burning tens of trillions of cubic feet of methane, that will be contrary to "clean energy" and sustainable development.	BC Hydro's forecast of power needs is not based on LNG production as a "major use of the power produced". There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. Section 5.2 of the EIS contains the need for the Project analysis. Section 5.2.1 of the EIS sets out the assumptions underpinning BC Hydro's energy and capacity Load Resource Balances (LRBs), and states with respect to potential LNG demand (referred to as 'load' in the EIS): "The 2012 mid-load forecast presented in this section does not include potential LNG load, which is described in Section 5.2.3" (EIS, page 5-5). Section 5.2.2.2, and in particular tables 5.8 and 5.9, of the EIS set out BC Hydro's energy and capacity LRBs. Section 5.2.3, tables 5.10 and 5.11 set out the range of effect LNG demand may have on the need for new energy and capacity resources. With regards to the definition of non-compression load, load associated with proposed LNG facilities has been split into two categories for planning purposes. "Compression load" is the power demand associated with pressurizing the natural gas prior to chilling into liquid form and represents the majority of the power used by an LNG facility. "Non-compression load" refers to the rest of the facility power demand, and is primarily made up of power required from facility loading equipment, lighting, and office requirements.
pub_0250-003	Taylor, Bill	3. Others question the sustainability and life expectancy of the dam and impoundment itself, considering such problems as massive sloughing and siltation, but I'm also concerned about pitching the whole worth of this large piece of the Peace River valley on the dubious gamble of LNG exports, given China's access to alternate gas from Mongolia, Kazakhstan, Central Asia, it's own vast shale and coal gas fields- and many other sources which will be bidding each other down. The price we'll get won't begin to repay infrastructure costs, yet we in BC will too likely have to provide power and gas at loss, subsidizing exports to Asia. It's too wholesale a gamble with our water, soil, forest, fish and wildlife, fiscal resources- and our climate- for dubious results.	The potential for the Project to affect terrain stability and sediment transport are described in Sections 11.2 and 11.8 of the EIS, respectively. The need for the Project is described in Section 5 of the EIS. The benefits of the Project are described in Section 7 of the EIS. Please see the response to pub_0250-002. Please also see the following Technical Memos: - Reservoir Impact Lines - Project Need
pub_0251-001	Name withheld	Yes I am in favor of the Site C Dam. I am a resident since 1960 in Fort St. John. Thank you very much for job well done.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0252-001	Rudakavitch, Mike	As you have probably sensed the Site C proposal though smaller than the two existing dams is a massive physical addition and would place all these structures in very close proximity. And even though the Site C dam as evidently proposed would have incorporated in its design and construction some earthquake safeguards, these would be utterly useless with the two upstream dams being so much larger and having no safeguards. However by incorporating the safeguards in Site C is at least an admission of the potential for a natural and unpredictable hazard. The Bennett reservoir holds 70.3cu kilometers of water, the Peace Canyon stores 216 million cu meters and the proposed Site C would contain 166 million cu meters. Furthermore B.C. Hydro didn't specify for what magnitude of earthquake this design would be able to withstand. I have received BC Hydro's 84 page Environmental Impact Summary and I would be very surprised if anyone could be satisfied that the impacts were well enough addressed. If these had been perhaps even BC Hydro could have been convinced that Site C could not be deemed a reasonable project. Obviously the need to accurately assemble environmental impact potential especially those beyond their own borders wasn't a priority with the two previous structures and similarly so with Site C now. The two dams in operation have had a massive impact in Alberta especially on the Peace-Athabasca delta where some observers have estimated the delta has been reduced in area by 50% and is now 5-6 feet shallower than what had been its natural state. The delta had been a vital natural area and a summer nesting ground for an estimated two million birds and is in the pathway of four major migration routes. It is the capture of water in early spring snow melt by the two existing dams that has destroyed the ice-jam phenomenon which had both created and maintained the delta in its natural state. The ice-jam feature was a very important event to this northbound river where the ice got thicker, the river larger after receiving the discharge from 80 tributaries and the river banks grew shallower. Even at Fort Vermillion the river flats are only 40-50 ft above river water level where the ice jams would build. The ice would often spread out beyond the river banks and remain well into June before melting. Unknown to most people these huge piles of ice would do its part in climate cooling for the early part of spring. As a consequence since the Bennett dam we are left to this day with the "rotten ice syndrome". Furthermore on page 26 under the heading "Thermal and Ice Regime" it is stated "Project would lead to reduction in the extent of ice cover". Presumably this is due to the huge amount of heat	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The Executive Summary of the EIS highlights the findings and conclusions of the EIS. As stated at the beginning of the summary: "The Executive Summary uses concise language to summarize complex subjects. Readers are referred to the full EIS for a complete understanding of these subjects. The design for new dams considers the Canadian Dam Association (CDA) guidelines, and the Project has been designed to withstand a ground motion with a mean annual exceedance probability of 1 in 10,000. Seismic withstand is given in terms of expected ground motions rather than Magnitude of the seismic event, since the actual ground motion depends not only on the Magnitude of the event, but also the distance from the event. The W.A.C. Bennett Dam and the Peace Canyon Dam were designed based on the knowledge of seismic hazards at the time of their construction. As part of BC Hydro's ongoing Dam Safety work, a major project to update the seismic hazards for all of BC (including W.A.C. Bennett and Peace Canyon Dams) was completed in late 2012 (the 2012 seismic hazard assessment described in EIS Section 11.2.5.2.2). Using these updated seismic hazards, a review of the performance of both dams will be carried out on a BC Hydro system-wide priority-basis. The seismic performance assessment of W.A.C. Bennett Dam was started in 2012, and is currently ongoing. Preliminary results indicate that the dam will withstand a 1 in 10,000 ground motion event. The seismic performance assessment of Peace Canyon Dam is planned to start in 2013. Any deficiencies and upgrade options will be identified, and capital upgrades will be initiated, if required, on a priority-basis. In addition to Section 11.7 (Ice and Thermal Regime) of the EIS, more information on the potential changes to ice and temperature as a result of the Project can be found in Volume 2 Appendix G (Downstream Ice Regime Technical Data Report) and Volume 2 Appendix H (Reservoir Water Temperature and Ice Regime Technical Data Report). Section 11.4 (Surface Water Regime) in the EIS describes the quantity, timing and rate of change of flow and water level under current baseline conditions in the Peace River and the potential changes during construction and operations of the Project. Hydroelectric water use is clean, non-polluting and non-consumptive. No water is removed from the Peace River due to hydroelectric operations — all of the water entering the turbines flows downstream. Section 11.5 (Water Quality) of the EIS describes the existing water quality conditions and sediment quality in the Peace River and select tributaries. Water quality data are compared to provincial and

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		absorbed by the “hydro dam lakes”, in the summer, and discharge with the water all winter. There is absolutely no comprehension by BC Hydro as to how vital ice, and ice-jams were to the entire river system but especially as to the delta. As human population and activities on this planet continues to increase pollution, and diminish water quality for human consumption it becomes almost imperative that good year-round supplies of fresh water are protected. In our own situation in the Peace we have the Town of Fairview that draws water from the Peace River during late fall and early winter to fill the town reservoir. The town of Peace River draws water from the Peace on a daily basis. Further downstream Lacrete and Fort Vermilion utilize water from the river within the last month we have been advised that Alberta Transportation had drafted tentative plans for a pipeline from the Peace to supply potable water to the central and south Peace communities including the city of Grande Prairie. It should be noted that according to Environment Canada standards and water analysis 1961-71, the Peace River waters did not meet their standards for water quality then. Summary of Environment Canada Water Analysis 1961-71 - Table hand-drawn (not inserted, see pdf) As you can see the Canadian water quality guidelines have elevated the tolerances for some of the contaminants to accommodate the current water supplier. The mercury tolerances were increased 10 fold to accommodate “our pollution”. The BC Hydro study on page 27 states “there may be an increase in mercury for a period of time”. No mention is made for other contaminants. The Site C project would flood 11,000 acres of high quality, high productivity land and a near similar area of natural river banks on either side of the river. The farmed land has been in production for 70 years on more with extensive and near continuous use of fertilizers and pesticides. With residues of fertilizers dominating the reservoir of Site C there would necessarily be measurable additions of undesirables to water quality. On page 26 under “Water Quality”, BC Hydro states, without the project some of these parameters currently	federal guidelines to evaluate baseline conditions. Existing and predicted mercury levels are described in Section 11.7 (Methylmercury) of the EIS. Potential effects on agriculture are described in Section 20 of the EIS. The need for the Project and the Purpose of the Project are defined in Sections 5.2 and 5.3 of the EIS, respectively. BC Hydro's forecast of power needs is not based on LNG production. The Project is need whether or not ne LNG projects proceed. The purpose of the Project is to: cost-effectively meet BC Hydro's forecasted need for energy and capacity; and align with the relevant objectives of Section 2 of the Clean Energy Act and relevant BC Government policy statements, including the objective to maximize the development potential of the Site C Flood Reserve. Alternatives to the Project are described in Section 5.4 of the EIS and BC Hydro's conservation program (Demand-Side Management) is described in Section 5.3 of the EIS. Please also see the following Technical Memos: - Dam Safety - Peace Athabasca Delta - Methylmercury - Agriculture - Project Need - Alternatives to the Project -Seismic Considerations

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		exceed guidelines under baseline conditions". How does this entitle BC Hydro to add pollutants from Site C? Further on the issue of farm land, the retention of prime agricultural land is a very high priority in spite of the huge losses to urban sprawl. There are by far more people suffering from shortage of food and starvation than there are from shortage of power, LNG and other petroleum products. The Site C dam's main stated purpose was to provide power to compress L.N.G. for export to China and Japan. Are we so obligated to reform the famous Chinese bicycle transportation system when in many cases they don't have room and space for anything other than bicycle? I see the city of Edmonton is planning bicycle lanes in the city proper and this makes a growing movement on this continent. Why are we so obsessed with powering the far east with motor vehicles? Are we then going to make an issue of them being responsible for huge increase in air pollution? There are other pending sources of power, some ancient and others novel and exciting. And conservation has huge potential too. A huge power dam on the Slave River had been studied as early as 1974 where it was determined to be one of the most economical, however as of 2012 three aboriginal bands have been ceded territorial rights in the proposed project area and they approve this development to spare the aesthetic value. However there isn't any issue with regards to agricultural land. In Canada and on this continent we need to emphasize our research and development of green, renewable sources of energy be it solar, atomic fusion, thermal, etc. rather than postpone/delay this progress simply because we are so addicted to the non-renewables. And BC Hydro doesn't need to feel the owness is on them to power up more than what they need as power sources are and will in the future be continental in scope.	

IR #	Name/ Organization	Information Request/Comment	Response
pub_0254-001	Dalgleish, Ken	I wish to comment on the inadequacy of the EIS (environment impact statement) produced by BC Hydro concerning the proposed Site C Dam in the Peace River region of British Columbia. I would like to start at the "end" and work back toward the beginning. That dam will be decommissioned. As populations explode and Climate Change creates vast new areas of unproductive, scorched earth, the prime growing regions of the Peace Region, which now fall north of the range of predicted global "desertification", will be precious beyond what we now could contemplate. The loss of 15,985 acres of the best growing land in Canada is unacceptable to our ever increasing awareness of "food security". The costs of the process of decommissioning must be built in to the beginning of this project. This summer I am visiting areas of the Bitterroot And Blackfoot River basins in Montana which have both had dams de-commissioned. The environmental destruction, fish kills, release of heavy metals and other toxins have contributed to great harm to the population and the costs of clean up have been astronomical.	Thank you for providing your input during the public comment period for the Environmental Impact statement (EIS) for the Site C Clean Energy Project. As described in Section 1.1 of the EIS, the EIS Guidelines were developed through a process that included participation by the public, aboriginal groups and agencies. BC Hydro has no plans to decommission the dam. The EIS Guidelines require that the “EIS should state the Proponent’s commitment, should a proposal be made in the future to decommission the Site C dam and generating station, to address a plan for decommissioning and restoration in accordance with applicable regulations at that time”. EIS Section 4.6 provides the commitment required by the EIS Guidelines and also “An Environmental Protection and Monitoring Plan would be developed for decommissioning to implement applicable measures for environmental protection, and to restore the area to conditions deemed acceptable at the time of decommissioning. Further details on decommissioning would depend on regulations and practice at the time of a decision to decommission.” As described in Section 5.5.4.3 the financial attributes for the analysis of alternatives to the Project was done “by comparing the present value of the costs between portfolios with and without the Project.” Net present values are calculated by discounting future costs based on BC Hydro’s cost of capital. This discounting increases for costs that are further into the future. In the present value calculation, costs that may be incurred more than 100 years in the future would be discounted by more than 99% when evaluating the Project economics and analysis of alternatives. As a result, any potential decommissioning would not be expected to have a material effect on the evaluation of Project alternatives in Section 5.

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pub_0254-002	Dalgleish, Ken	BC Hydro has not adequately assessed the environmental, economic, social, health and heritage effects of Site C. At present, the EIS only describes downstream effects as far as Vermilion Chutes, Alberta – only part way down the Peace River. Ensuring that all downstream effects are considered, the EIS must describe the current conditions and potential effects of the surface water regime, climate, fish and fish habitat, wildlife and vegetation all the way to the Peace-Athabasca Delta.	The spatial boundaries for environmental studies were developed considering the mechanisms by which the Project could influence the various physical characteristics of the water flow downstream of the dam site (e.g. magnitude and timing of flows, water temperature, suspended sediment concentrations). Conservative study areas were selected to account for the area of influence of the Project. Final results of the studies were reviewed to confirm that the study area included the entire area in which the Project could lead to changes that could influence the Valued Components (such as fish and fish habitat, vegetation and ecological communities, and wildlife resources). The rationale for spatial boundaries for the downstream changes resulting from the Project are outlined in the following sections of the EIS: a) Section 11.4 Surface Water Regime; b) Section 11.5 Walter Quality; c) Section 11.7 Thermal and Ice Regime; d) Section 11.8 Fluvial Geomorphology and Sediment Transport Regime; e) Section 11.9 Methylmercury, and f) Section 11.10 Microclimate. The rationale for spatial boundaries for the assessment of the effects of the Project on fish and fish habitat, vegetation and ecological communities, and wildlife resources can be found in the EIS in Sections 12, 13, and 14, respectively. In each case, the spatial boundary for the assessment of downstream effects was established to be consistent with the spatial extent of the potential for adverse effects on the Valued Component. The changes of the Project on the environmental conditions did not extend to the Peace Athabasca Delta; therefore, it was not included in the scope of the assessment. Please also see the following Technical Memos: - Spatial Boundary Selection - Peace Athabasca Delta
pub_0254-003	Dalgleish, Ken	“Future Case Without the Project” must describe a future in which all land use restrictions related to Site C have been removed. The EIS seems to present a "future without the project" complete with all the restrictions brought about by the Site C proposal...indeed a sloppy bit of foolery.	EIS Volume 3, Section 20.2.4 describes the methodology used in assessing agricultural utility, a term used in this assessment to reflect the likelihood of future agricultural use. It also includes land which is currently developed, and land currently undeveloped, for agricultural use. The permanent loss of land rated as having high or moderate utility is summarized in EIS Volume 3, Section 20, Tables 20.19 and 20.20. Please also see the Technical Memo on Flood Reserve.

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pub_0254-004	Dalgleish, Ken	Both federal and provincial law require that the EIS include an assessment of the cumulative environmental effects of Site C in combination with the effects of past projects and activities in the area. Thus, the EIS must describe both the state of the environment prior to any industrial activities in the Valley as well as the effects of previously-existing projects or activities. It appears this HAS NOT been done.	Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried out. The approach was applied and is described in more detail in Section 10 of the EIS. As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is provided in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project.
pub_0254-005	Dalgleish, Ken	Given the above considerations the EIS should not be accepted. Added to this is the fact that 10 billion dollars will be borne by the rate payers of B.C. when it is common knowledge that this power is for the consumption of Corporate interests related to the extraction of fossil fuel/pipelines/LNG (read fracting) and other environmentally damaging actions that the citizens of B.C. are increasingly opposing.	The Project capital cost estimate is $7.9 billion, as described in Volume 1 Appendix F Part 1 (Project Cost Estimate). Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers, not only requirements related to oil and gas activity. The Project is needed whether or not any new LNG projects proceed. Section 5.2.2.2, and in particular tables 5.8 and 5.9, of the EIS set out BC Hydro's energy and capacity LRBs. Section 5.2.3, tables 5.10 and 5.11 set out the range of effect LNG demand may have on the need for new energy and capacity resources.
pub_0255-001	North Peace Historical Society	**32.2.2.3 Historical Resources** Also of note, in 1998, the Peace River was recognized as a provincial heritage river by British Columbia's Heritage River Program (Province of British Columbia 1998; B.C. Ministry of Environment 2010). Specifically, it has been recognized as a working river that "integrates economic activities with natural heritage, recreational, historic, and traditional cultural values" (B.C. Ministry of Environment 1998). The Province's vision statement seeks to manage resource-based uses of the river while maintaining representative natural heritage qualities and recognizing the historical heritage values of the river corridor to Aboriginal groups and non-Aboriginal people (Province of British Columbia 1998). In the broader context, the cultural landscape of the Peace River region, comprising the river valley and its associated uplands, is also noted. Parks Canada (2010:253) defines cultural landscapes as "any geographical area that has been modified, influenced, or given special cultural meaning by people". In this context, the Peace River region is both a cultural landscape and a rural historical landscape.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 32.3.3 of the EIS states that "Should the Project proceed, a detailed heritage site mitigation strategy would be required based on the results of the heritage resources assessment and upon completion of detailed design" and that the "goal of the proposed mitigation strategy would be to reduce adverse Project effects on heritage sites and to provide a positive Project effect by recovering data which adds to the knowledge base of palaeontology, local prehistory, and human use of the LAA over time." Consideration of other land and resource uses that may be affected by the Project, including those along the Peace River, are included in Volume 3, Sections 19 - 27. Please also see the response to form_0004-013.

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		Comment: With the creation of a 9330 ha reservoir and further 9964 ha of impacts, it is difficult to see how the balance between the heritage qualities of the Peace River and the resource-based uses of the river can be achieved. This is not explained in this report.	
pub_0255-002	North Peace Historical Society	**32.3.2.2 Reservoir** The British Columbia Archaeological Impact Assessment Guidelines (B.C. Archaeology Branch 1998) requires consideration of project effects on "the extent or degree to which future opportunities for scientific research, preservation, or public appreciation are foreclosed or otherwise adversely affected by a proposed action". For heritage sites in the proposed reservoir area, "opportunities for scientific study" and "public appreciation" may be considered foreclosed for the planned operational life of the Project. *Comment: This section is of great concern to us and it is unclear how this situation can be mitigated. One example of an opportunity that will be lost in the future is a possible repeat of the NENAN Youth and Elders gathering project in 2009. This was an archaeological investigation put on at Bear Flat for native youths and managed by Archer CRM. As a result, one new archaeological site (HbRh-104) was discovered, and some youth developed a new field of interest. It is known there were numerous fur trading posts in the Project area other than Rocky Mountain Fort and Rocky Mountain Portage Fort. The history and location of them is not well known or studied at this time. It is our concern that should the Project proceed, the restrictions of time and funding will limit the amount of research/recovery of such sites.*	Section 32.3.3 of the EIS states that "Should the Project proceed, a detailed heritage site mitigation strategy would be required based on the results of the heritage resources assessment and upon completion of detailed design" and that the "goal of the proposed mitigation strategy would be to reduce adverse Project effects on heritage sites and to provide a positive Project effect by recovering data which adds to the knowledge base of palaeontology, local prehistory, and human use of the LAA over time." Section 39 of the EIS lists the mitigation measures that would be considered to reduce adverse Project effects and provide a positive Project effect on heritage resources. These measures include additional reconnaissance and field surveys as warranted; documentation of historical sites and relocation of important structures, if found; scientific excavation or systematic surface collection at some heritage sites; commemoration of heritage resources, as appropriate; and provision of funds to local museums to support heritage programming. As noted in Section 32 of the EIS, BC Hydro will seek input from regulators, Aboriginal groups, museums and other stakeholders in determining the nature and extent of mitigation activities for heritage resources. BC Hydro has identified loss of traditional areas in Section 19 of the EIS, Current Use of Lands and Resources for Traditional Purposes, and will continue to discuss Project impacts and potential mitigation measures with First Nation communities.
pub_0255-003	North Peace Historical Society	**32.3.2.2 Reservoir** However, the degree of preservation of heritage resources within a reservoir context is yet to be determined, and is site-specific and dependent on the erosional forces at work. Erosion and sedimentation at site-specific locations has been modelled using E-PAST (see Volume 4 Appendix C Heritage Resources Assessment Report). Opportunity for scientific examination of heritage resource locations within the operating range of the reservoir may occur during periods of maximum drawdown for scheduled and unscheduled maintenance. In the event that low reservoir levels occur in the future and exposed heritage site locations can be safely accessed, emergency salvage and systematic data collection of exposed resources would help to mitigate the potential effects of erosion and unauthorized collection of heritage materials.	Table 32.11 Follow-Up Program for Heritage Resources proposes two programs for monitoring and mitigating potential effects of erosion on sites adjacent to the reservoir. One program would "verify the anticipated effects of erosion on heritage sites due to reservoir operations in the first five years of service, and to evaluate the effectiveness of mitigation measures implemented on heritage sites along the reservoir shoreline." Subsequent monitoring programs would be developed in consultation with regulators to "evaluate the effectiveness of mitigation measures implemented on heritage sites, and to identify previously unknown heritage sites in the reservoir and mitigate potential effects of erosion on those sites." The results of the initial five year monitoring program will inform subsequent monitoring programs; therefore, it is too early to define the content and timeframe for subsequent monitoring programs.

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		Direct effects to heritage resources caused by Project operations are linked to physical changes in the resource as a result of erosion and sedimentation, and through reduction of access to resources for scientific study and other purposes. Indirect effects related to the Project operation include increased risk of unpermitted collection and inadvertent alteration of resources through increased human access. *Comment: As stated above, the preservation of historical resources within the context of a reservoir setting is unclear, and seems very doubtful. The creation of the E-PAST program specifically for this Project to model erosion and siltation of heritage resources seems even more doubtful to be accurate. To monitor this for five years is not adequate as erosion will likely continue. We have noticed that recognized archaeological sites that fall within impact lines designated by the proponent are not included in any of the spread sheets showing mitigation approaches for recognized sites. A few examples are: HbRh-21, HbRh-87, and HbRh-1. Is it to be assumed that these will all be monitored as erosion occurs?* *It is mentioned that in the event of future drawdown of reservoir levels, it may be possible to collect historic resources. However, it is not clear for how long in the future this may occur, how it will be monitored, and how it will be organized. All that is stated now is that this is yet to be determined. A more definitive response is needed.*	
pub_0255-004	North Peace Historical Society	**32.3.3 Mitigation Measures – Heritage Resources** Within the heritage resources LAA, 173 positive palaeontologically sensitive areas, 251 archaeological sites, and 42 historical sites have been recorded (Volume 4 Appendix C Heritage Resources Assessment Report). Given that heritage sites are a non-renewable resource, site preservation and conservation are considered primary principles. The preferred means of minimizing effects to heritage sites is complete avoidance. It then goes on to say this: A less common but equally valid approach to mitigating adverse effects is compensation-in-kind, which could include replication (replacement) and funding for public programming, museums, or even for research in areas within or beyond the LAA. Should the Project proceed, a detailed heritage site mitigation strategy would be required based on the results of the heritage resources assessment and upon completion of detailed design. Applying the principles outlined above, an opportunity	As proposed in the heritage mitigation, BC Hydro would provide mitigation funds to support local museums for heritage programming where required by the Archaeology Branch in conditions of any permits issued for construction under the Heritage Conservation Act. BC Hydro welcomes the opportunity to engage in discussions with local museums with respect to the types of programs that may be proposed as a component of the heritage mitigation program. BC Hydro would bring proposed programs forward to the Archaeology Branch for consideration as part of the overall heritage mitigation plan. To date the field program has resulted in the recovery of artifacts that can be contained within eight file boxes, that have been or will be delivered to the North Peace Museum as an approved repository under the existing permit requirements. BC Hydro provided the museum with $5,000 to support the storage requirements for artifacts recovered during the archaeological impact assessment field program.

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		exists to incorporate heritage resource considerations into Project planning and detailed design. The goal of the proposed mitigation strategy would be to reduce adverse Project effects on heritage sites and to provide a positive Project effect by recovering data which adds to the knowledge base of palaeontology, local prehistory, and human use of the LAA over time. *Comment: The North Peace Historical Society does not currently have the capacity to deal with the onslaught of historical resources that will arrive in the event of this project moving forward. As it stands, we have received some funding (but not all required) for the purchase of a container to house what has arrived so far. We will require much more assistance to move forward from here. What assurance do we have at this point that not only will proper funding be forthcoming for the above mentioned mitigation strategies, but proper follow up will continue?* *At this point, all mitigation measures are just general suggestions, and it is stated a detailed heritage site mitigation strategy will be required should the project move forward. To date, the North Peace Historical Society has not been consulted on any issues related to this (except the underfunded container issue). This will need to change in the future.*	
pub_0255-005	North Peace Historical Society	**32.3.3.3 Historical Resources** Site HbRf-31 (Rocky Mountain Fort) and HaRl-4 (Rocky Mountain Portage House) are Class I historical sites protected by the B.C. Heritage Conservation Act, and have been identified as candidates for systematic data recovery (excavation) to expose and identify additional architectural details and to gather a sample of historical artifacts. At site Rocky Mountain Fort (HbRf-31), previous excavations conducted were undertaken within a research-oriented design, rather than one oriented toward salvage recovery of data. Mitigation measures for HbRf-31 would be proposed (Table 32.6), including relocation, systematic data recovery, capping, monitoring, and compensation-in-kind (replication). *Comment: It needs to be noted here that these sites will be lost. Rocky Mountain Fort is the oldest fur trading post in the province of B.C. It is the earliest European settlement on the British Columbia mainland. There are no physical structures left from this fort; the significant historical feature is the original site. Arthur Hadland (Peace River Regional Director Area C) has requested that this site become a Federal or Provincial Historic Site.*	Volume 4, Appendix C Heritage Resource Assessment Report, Section 5.1.5.10.4 includes a description of previous investigations at Rocky Mountain Fort, and a summary of what was learned during those studies. It further describes the focus of this field program on identifying possible outlying aboriginal encampments, which was identified as an area of limited information. No further evidence was found of aboriginal encampments during the field program. Section 3.2.3 of this appendix provides a historical background, which further describes the fur trade period on the Peace River. As noted on Table 32.6, reservoir preparation and filling during construction and ongoing operations are expected to affect both HbRf-31 (Rocky Mountain Fort) and HaRl-4 (Rocky Mountain Portage House) should the Project proceed. As noted in Section 32.2.2.3, the private landowner did not grant permission to BC Hydro to access HaRl-4 (Rocky Mountain Portage House) for the field program; a field assessment of HaRl-4 will be needed before a mitigation strategy can be developed.

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pub_0255-006	North Peace Historical Society	**32.4.5 Assessing Significance of Residual Effects on Historical Sites 18** The degree, to which planned alterations and mitigation strategies are acceptable, is a decision that rests with the B.C. Archaeology Branch for sites protected by the B.C. Heritage Conservation Act. For those sites that are not protected by the Heritage Conservation Act, mitigation would be to a level equivalent to recognized best practices. As such, the residual effect would not be significant. *Comment: Has the B.C, Archaeology Branch made any decisions or comments on this yet? It appears that this is important and could influence the viability of this Project.*	A detailed mitigation plan for archaeological sites protected under the *Heritage Conservation Act* will be developed with the BC Archaeology Branch, as a component of Project permitting. BC Hydro anticipates that the final mitigation plan will be developed following consultation with Aboriginal groups, heritage stakeholders, and discussions between BC Hydro and the BC Archaeology Branch. The BC Archaeology Branch may provide comments on the mitigation strategy presented in the EIS during the public review process. The final decisions, including any conditions and mitigation, will be issued through permits under the *Heritage Conservation Act* prior to construction activities.
pub_0255-007	North Peace Historical Society	**32.4.6 Determination of Significance of Residual Effects** The potential residual effects to archaeological and historical resources are not considered to be significant. The determination of a threshold for residual effects on archaeological and historical resources that are protected under the B.C. Heritage Conservation Act is the jurisdiction of the B.C. Archaeology Branch, with input from Aboriginal groups. It is therefore understood that residual effects would need to be mitigated to an acceptable level before the proposed Project activities could proceed. *Comment: The first sentence seems to pre judge that effects are not considered to be significant. Again, has the B.C. Archaeology Branch made any definitive comments on the significance of the archaeological resources?*	Based on the results of the analysis BC Hydro has conducted to date, the Project is not expected to have a significant residual effect on archaeology and historical resources once mitigation measures are applied. The BC Archaeology Branch may provide comments on the determination of significance of residual effects in the EIS during the public review process or during the Joint Panel Review process, or further through the process of issuing permits for construction under the *Heritage Conservation Act*.

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pub_0255-008	North Peace Historical Society	**32.5.1 Screening of Cumulative Effects** The heritage effects assessment indicates the Project does have the potential to affect heritage resources. However, the magnitude of the effects would be reduced to a level that is acceptable to regulators through mitigation measures as described in Section 32.3.2. No other foreseeable projects have been identified that temporally or spatially overlap with the heritage resources LAA. As such, no other projects contribute to potential effects on the heritage resources VC. Therefore, in conducting an assessment of cumulative future effects on heritage resources within the LAA, with and without the Project, it is concluded that predicted future effects on heritage resources in the LAA, without the Project, would remain consistent with their current state, should land use remain the same. *Comment: What is the baseline for cumulative effects used here? Obviously, any look at this will need to include the reservoirs formed by the WAC Bennett Dam and the Peace Canyon Dam. This is even more important when considering the size of Williston Reservoir and the lack of mitigation and recovery measures employed then. There are stories of banks eroding during the filling of the reservoir and native gravesites washing away while people watched. How can this not be considered in cumulative effects?* *Conclusion: The above comments and questions were compiled on a volunteer basis from members of our Board of Directors as we do not have the capacity to hire professional advice on this subject. This is not a complete and thorough analysis on heritage from our perspective, but it is a start. Some of the concerns mentioned have suggestions for mitigation where possible. Other concerns do not as either we could not think of a suggestion or we believe they are not able to be mitigated.*	Please see the Technical Memo on Cumulative Effects Assessment.

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pub_0256-001	Michaud, Verna	Please accept my comments regarding the adequacy of BC Hydro's Environmental Impact Statement for the Site C Clean Energy Project (the EIS). Site C will have significant and irreversible environmental, health, social, economic and heritage effects that will unjustifiably add to the industrial burden that northeastern BC already bears. Impacts of this dam will include: • **Harm to food security, crop diversity and farming communities** The Peace is a region of exceedingly good productivity, capable of growing a broad diversity of crops and home to a rich farming community. Site C will result in the permanent loss of 6,469 hectares (15,985.25 acres) of agricultural land, 2,601 ha (6427.21) of which are Class 1 and 2 lands. In addition to the loss above, an additional 6,290 ha, of which 343 ha are Class 1 and 2 lands, would be seriously at risk from flooding, slope instability and high waves. Global warming is destroying and threatening traditional food producing lands in BC and around the world. As the value of potential agricultural lands that could be used for food production increases, the unique agricultural potential of the Peace must be prioritized. Also, preserving this land and the agricultural sector in the Peace would help protect the health of our communities, our economies and our families.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Both temporary and permanent effects have been taken into account in the assessment of Project effects on agriculture. Volume 3, Appendix D, Section 7.1.2.3, page 65, provides information regarding anticipated changes in provincial food self-reliance in relation to climate change. Please also see the Technical Memo on Agriculture.
pub_0256-002	Michaud, Verna	• **Unjustifiable cost to ratepayers** BC Hydro claims that the Site C Dam would cost $7.9 billion to construct, but it is widely agreed that the dam's construction costs would increase to more than $10 billion due to the unstable ground around the dam and reservoir site. The cost of this project would inevitably fall on the shoulders of ratepayers in the form of higher rates.	As stated in Volume 1 Appendix F Part 1, the Project cost estimate includes "... an appropriate level of contingency to reflect uncertainty in future conditions." As a result, BC Hydro expects Project costs "… to be within the bounds of the current capital cost estimate in ordinary market conditions." Please see the Technical Memo on Project Costs for a description of the Project cost estimate.

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pub_0256-003	Michaud, Verna	BC Hydro has not adequately assessed the environmental, economic, social, health and heritage effects of Site C. The following deficiencies in the EIS must be addressed: • **The potential value of agriculture is not recognized** The Peace River Valley contains its own micro-climate that provides ideal growing conditions for a diverse array of crops. The EIS does not specifically identify the areas where this unique micro-climate occurs, and so underestimates both the growing and economic potential of those areas as agricultural lands. The EIS must map the climate characteristics of the Peace River Valley to accurately account for the potential productivity of the valley and contribute to a more accurate assessment of the economic and social effects caused by flooding the Valley.	Climatic capability for agriculture ratings are reflected in the land capability for agriculture ratings. EIS Volume 3, Figure 20.2 Maps 1 through 25 show improved land capability for agriculture ratings. Areas shown as having an improved land capability for agriculture rating of Class 1 and 2 are, for the most part, areas of improved climatic capability of Class 1 and 2 respectively. These high capability areas are suited for a wide variety of crops, as described in Section 20.2.3 Agricultural Suitability of Lands of the EIS. A determination of the range of crops that could be grown successfully at a specific location would require a site-specific evaluation of soils and climate, which is beyond the requirements of an agriculture assessment for the EIS, as it is the type of evaluation done for commercial farm operations planning.
pub_0256-004	Michaud, Verna	• **No description of the pre-industrial environment and effects of past projects** Both federal and provincial law require that the EIS include an assessment of the cumulative environmental effects of Site C in combination with the effects of past projects and activities in the area. Thus, the EIS must describe both the state of the environment prior to any industrial activities in the Valley as well as the effects of previously-existing projects or activities.	Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried out. The approach was applied and is described in more detail in Section 10 of the EIS. As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is provided in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project.
pub_0256-005	Michaud, Verna	• **'Future Case Without the Project' ignores removal of land use restrictions** If there were no Site C, there would be no flood reserve and other project-related land-use restrictions interfering with farming those lands. In order to assess the agricultural and economic potential of the Valley, the "Future Case Without the Project" must describe a future in which all land use restrictions related to Site C have been removed.	EIS Volume 3, Section 20.2.4 describes the methodology used in assessing agricultural utility, a term used in this assessment to reflect the likelihood of future agricultural use. It also includes land which is currently developed, and land currently undeveloped, for agricultural use. The permanent loss of land rated as having high or moderate utility is summarized in EIS Volume 3, Section 20, Tables 20.19 and 20.20.
pub_0256-006	Michaud, Verna	• **Assessment of downstream effects stops short of potential actual effects** Many concerns have been raised by the public, First Nations, provincial and territorial governments, Environment Canada and Fisheries and Oceans Canada regarding the need to assess the downstream effects as far as the Peace-Athabasca Delta. Currently, the EIS only describes downstream effects as far as Vermilion Chutes, Alberta – midway down the Peace River. To ensure that all potential downstream effects are considered, the EIS must describe the current conditions and potential effects of the surface water regime, climate, fish and fish habitat, wildlife and vegetation all the way	Please see the response to pub_0254-002

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		to the Peace-Athabasca Delta.	
pub_0256-007	Michaud, Verna	• **Decommissioning and associated effects ignored** Decommissioning dams is expensive, requires considerable planning and can have significant environmental effects. For example, sediment that has become trapped behind dams can cause turbid waters, harming fish and fish habitat when released. Changing water levels can further endanger already at-risk species. Despite this, Hydro refuses to address decommissioning and associated effects of the dam and generating facilities. As decommissioning is an inevitable component of the project, it must be addressed in the EIS.	Please see the response to pub_0254-001.
pub_0257-001	Moritz, Barbara	Some suggestions about the Peace Dam project. Hydropower uses landmass. As closer to a town-as more in use agricultural land is needed. The Bennett-Dam displaced only Indian settlements. The Peace Valley is sand sand... Ask Highways about road construction Taylor Hill, Bear flats, Mouth of Halfway. Landslide on S-side of Halfway.50 meter high loose[illegible] on the Halfway. All this and the tributary will fill up the dam (See Assuom-Egypt) Fluctuations will erode more shoreline –off limit-danger-or private Property. Bennet Dam Argument: access for recreation where? That landslide is not stable-no stop – if that slips like in North Italy? Dam break and flushflood. I heard about Dam planning on the books - every 2nd generation. 1 more?! Life expectancy? Gas supply 200 years++ The Power produced is to sell to America. For Canada- we have enough Suggestion: Gaswell; compact refinery, turbines for power producing; heatexchange. Americans get all the power they need on a part of the land. We have as bonus: Heat- for greenhousing and heating. Summer and Winter production. Scraps for egg and [illegible]eat production- no waste Jobs close to town or in town. H20 instead of Glycol in heatexchange. use for watering plants. CO2 exhaust from turbines, [illegible] tough wood woolfilter – catches all fine	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 11.2 Geology, Terrain and Soils - Section 6 Need for, Purpose of, and Alternatives to the Project Please also see the following Technical Memos: - Reservoir Impact Lines - Dam Safety - Project Need - Alternatives to the Project

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		particles. Then Fully automated Greenhousing with added fans. End of Channel: pristine forest full of oxygen no fancy high technic gadjeds needed, a batch of spruce does it. We have Kyoto accord hands down or better hands in pockets. We can do that will all Ontario coal power plants and keep using the plants. Selling coal to the Chinese is just producing CO2 there. globally the same. Shale gas will be drilled on every continent. If we use it for power heat and food production and catch back the CO2- there is no impact on the environment. A pilot project in northern communities with existing greenhousing, give them better infrastructure less dependence from government with food production, summer and winter – less impact on the road system. More chance for Canada. For towns with existing greenhousing – use regular gas supply – feed in power in grid- use regular water supply. Noise buffer the turbines. That is eat the cake and have it too. Kyotoaccord- no problem. E-car in the greenhousing Bonus points for Ma nature Make a milkmaid calculation	
pub_0258-001	Brough, Deb	I have the same concerns as many others do about the Site C Project. I am not in favour of flooding a valley that could in the future provide food that we may not be able to import. I feel that the global weather change will eventually effect places like the southern USA to the extent that they will not be able to supply our produce as they do now. I am a gardener and I know that the Peace River Valley has potential to supply produce for years to come. A small market garden at Bear Flats, which is between Hudson's Hope and Fort St John, proved that very point this past summer. The valley is its own micro climate as well as there is an abundance of water with which you can irragate crops if need be. Another concern I have is do we really need all this power and if so why can we not generate it with our abundance of natural gas instead of shipping the gas out of the country? I feel an independant feasability study needs to be done for the BC taxpayers as it seems our present provincial government wants to build this mega project whether it makes complete sense or not. And my final concern is that this is one of the most beautiful areas around with all of the wildlife and natural beauty, and it would be such a shame to disturb the valley.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential effects of the Project on agriculture, including food production and the consideration of the microclimate, is described in Section 20 (Agriculture) of the EIS. The need for the Project and alternatives to the Project are described in Section 5 of the EIS. The potential for the Project to affect wildlife resources and visual resources are described in Sections 14 and 27 of the EIS, respectively. Please also see the following Technical Memos: - Agriculture - Alternatives to the Project - Project Need

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pub_0287-001	Kerr, Rod	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. I think it is a viable well thought out project that should go ahead as planned. It will not make a big difference to anything as all the land around it is not great farmland and it is not a wildlife corridor. We need to do things like this in areas that are not going to be badly impacted and certainly this area is not. Thank you for your attention.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0291-001	Layman, Danielle (Fort St. John)	Comments here are focused on 'agriculture' from BC Hydro's Summary on "Valued Components" (p. 29) and are as follow. BC Hydro has listed 22 valued components and agriculture is number nine which suggests that the first eight components are more valuable. BCH has listed fish habitat, ecological communities, wildlife, greenhouse gases, local government revenue, labor market, economic development and traditional purposes before agriculture. Agriculture is likely one of the top components in terms of its value to the Peace and the surrounding communities. And to add more insult, BCH has limited agriculture to TWO sentences. The first sentence says that agriculture is an important component of the Peace economy which says very little in terms of production loss. The second sentence indicates that BCH has assessed the project as it is related to four agricultural interactions. The impact of local weather changes created by the pending reservoir on local growing conditions isn't even mentioned. The Summary does not very mention climate change. On page 29, reference is made in a sentence to illustrate the fact that there is a potential for green house gases, which are believed to be related to changes in climate, to be emitted. This lack of reference to climate change marginalizes the impact of climate on the local region. I. Summary of valued Components (part 2, p. 40-84) I suspect BCH is aware of the publication, Climate Action Initiative's BC Agriculture & Food, which has a report, "BC Agriculture Climate Change Action Plan 2010-2013", that addresses BC's climate future. It quotes (p. 12), from the Intergovernmental Panel on Climate that BC can, in the future, expect: Increasing climate variation and more extreme weather events with an increase in	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for the Project is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). Need for the Project The need for the Project is described in section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. Executive Summary The Executive Summary of the EIS highlights the findings and conclusions of the EIS. As stated at the beginning of the summary: "The Executive Summary uses concise language to summarize complex subjects. Readers are referred to the full EIS for a complete understanding of these subjects." BC Hydro did not list the 22 valued components in the Executive Summary by preference, level of importance or other subjective ranking. They are listed in the order they appear in the EIS Guidelines and the EIS. Food Self-Reliance The EIS Guidelines required the consideration of changes to local food production, and thus consideration of food self-reliance as a function of food production and consumption. Baseline

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		the associated damage costs, Shrinking of glaciers with many expected to disappear within 100 years resulting in serious impacts on water availability and hydrology, Reduction of snow accumulations, particularly at lower elevations, Warming by 2-7°C by 2080, impacting sea levels, precipitation patterns and ecosystems, Increasing frequency and severity of wildfires, and Increasing frequency and severity of pest, disease and invasive plant outbreaks. "These changes are likely to have consequence for food production through impacts to health and quality of crops, pasture, forests and livestock. The biophysical changes are anticipated to result in socio-economic impacts, which could also be felt in BC, even if the more dramatic changes to climate are occurring elsewhere. Potential impacts include: declines in yield and production, fluctuations in world market prices for food, changes in geographic distribution of trade regimes, and an increasing number of people at risk of hunger." BCH must be prepared to establish and keep its food sustainability. The BC Peace valley contains BC's second greatest land area of top quality potential class 1-3 agricultural land. Market garden vegetables and fruit including apples, cherries, cantaloupe, tomatoes, cucumbers, cabbage, potatoes, pumpkins and corn can currently be grown in the valley. Further, and critically, the climate change plan referred to above indicates: Less than 5 percent of land in BC is suitable for agriculture, which was one of the primary reasons for the development of the Agricultural Land Reserve between 1974 and 1976. iii However, land continues to be removed from the Reserve and 86 percent of the land excluded since 2002 has been in regions with the highest concentration of prime farm land. Some research predicts BC will experience increasing agricultural capability and a broader range of suitable crops. However, it is likely that climate change will increase uncertainty and the costs associated with weather damage for BC's agricultural operations. In light of these assessments, removing Peace River land from the Agricultural Land Reserve and flooding, it makes no sense for maintaining food sustainability. In fact,	conditions identified a decreasing trend in food self-reliance in British Columbia due to globalization, increased trade and changes in government regulation. The EIS considers potential changes to regional food self-reliance with the Project based on the ratio of food production to food consumption for relevant, locally-produced food commodities. The analysis confirms high levels of regional self-reliance in grains, oils and fats, sugars, and red meats and low levels of self-reliance in dairy, poultry, and vegetables. Increased self-reliance in dairy and poultry would not require higher capability farmland to support increased production, if economic conditions were to encourage such a trend. For vegetables, sufficient high capability agricultural land would remain in the Peace River valley to support higher levels of regional food self-reliance. Climate Change The influence of potential global climate change on future climatic capability for agriculture was assessed using temperature and precipitation anomalies for the 2050s and 2080s, as estimated by the Pacific Climate Impacts Consortium (PCIC) at the University of Victoria. The regional climate change analysis indicated that climate capability for agriculture within the region as a whole will improve, increasing the land capability for agriculture throughout the region. Section 20.2.2.1.5, page 20.12, Regional Climate Change states: Applying the PCIC climate change model temperature anomaly projections, statistically significant changes to growing degree-days and frost-free periods are expected, and as a result, a significant improvement in climatic capability for agriculture is predicted. Improved climatic capability in the vicinity of the reservoir would generally improve from Class 2 and 3 to Class 1. The effect would be an increase in the area of land with a land capability rating of Class 1. Climate change predictions also indicate that climate capability within the region as a whole will improve, increasing the land capability for agriculture throughout the region. It is expected that the relative proportion of high capability land within the Project activity zone relative to the total within the region will not increase with climate change, and may decrease. As indicated in the EIS, results for land capability for agriculture, the region will have up to 2,670,460 ha of remaining (unimproved) Class 1 – 5 land, of which 486,456 ha is Class 1 – 3, land that may experience an overall improved capability under the global climate change scenarios. Section 20.3.6 describes potential effects of the Project operations on agricultural operations, including changes in microclimate. Reservoir induced local climate effects on agriculture are anticipated to be limited to possible effects on crop drying within 1km of the reservoir. EIS Section 20.2.2.1.5 describes the impact of potential global climate change on future climatic

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		the report further states (p. 14): It is estimated that about between 40 and 50% of the food consumed in the province is imported and a significant percentage comes from California which has recently been experiencing severe drought conditions. As climate change impacts are felt in other jurisdictions, heavy reliance on imported food may become increasingly problematic and costly. Despite the importance of maintaining a viable agriculture sector, to date the issues of agricultural adaptation to climate change has received little attention in BC. There is a critical need to determine how best to support the industry with climate change adaptation and how to increase food security in the face of a changing climate. It is obvious, which shopping in the local grocery store that BC is important half of its food from problematic areas over long international distance, which requires ever-increasing fossil fuel costs for transport and it raises the question why the province would willingly destroy such a valued resource. Produce (food) is one of human's basic needs. Hydroelectric capability for this case can be replaced by other alternate forms of energy. It takes about six hundred years for nature to create one centimeter of soil. BCH has indicated that most of the class one, two and three valley bottom soil will be permanently flooded as the cost of removing it is too high. Does BCH realize that soil is not replaceable. The Peace valley is the only viable market garden area present north of Quesnel and it is, if it were given the opportunity to develop would be capable of feeding the entire northern half of the province. Comments on page 53 of Hydro's Summary refer to "Valued Components". These notations highlight soil and climactic capability. They do not appear to look at the value of such a resource 20 to 100 years in the future (the lifetime of the dam). Comments pertain to the likelihood of future cultivation, but they do not note that wise entrepreneurs' will not invest as long as there is a flood reserve on the river. That is, investment may not be viable until changing climate conditions and the resultant necessity of BC food sustainability in the future make it necessary. The "Agricultural Compensation Fund" suggested by BCH, as a form of mitigation, cannot compensate for an inability to grow food when there is no other food source. BC Hydro states on page 59 of their document that they see "No changes anticipated	capability for agriculture. Changes in food self-reliance in relation to climate change It is expected that global climate change will change the conditions for agriculture within regions of the province. According to a climate change action plan prepared by the provincial Ministry of Agriculture and Land (BC Agriculture and Food 2010): "Some research predicts BC will experience increasing agricultural capability and a broader range of suitable crops. However, it is likely that climate change will increase uncertainty and the costs associated with weather damage for BC's agricultural operations." The direction of the potential net effect of climate change is toward increased Peace Agricultural Region food self-reliance and the potential for the Peace Agricultural Region to supply more food to the rest of the province, as well as increased exports to the rest of the world. This would be supported through an anticipated increase in the frost-free period and the number of growing degree days that will improve agricultural capability and increase the potential for agricultural production throughout the region. As indicated in the results for land capability for agriculture, the region will have up to 2,670,460 ha of remaining (unimproved) Class 1 – 5 land, of which 486,456 ha is Class 1 – 3, land that may experience an overall improved capability under the global climate change scenarios. Reservoir Top Soil BC Hydro has proposed that localised soil relocation will be considered on a site-specific basis as a component of farm specific mitigation plans. Surface soils of suitable quality, salvaged from areas that would be inundated or from areas disturbed by Highway 29 relocation works, could be placed in nearby areas of poorer quality soil or in low lying, poorly drained areas to improve agricultural productivity . BC Hydro would also salvage and store surface soils from temporary construction areas for later use in reclamation of these areas. Environmental management plans will be developed to support BC Hydro's proposed soil relocation activities. Large scale topsoil removal and relocation is not proposed by BC Hydro because there are a number of environmental constraints to this activity. However, during the construction period there would be adequate time for interested third parties (e.g. oil and gas industry) to evaluate the impacts and benefits of topsoil removal and to develop an environmental management protocol for such activities in discussion with relevant provincial regulatory agencies. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 15 (Greenhouse Gases)

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		to regional food self-reliance." But, most market garden vegetable and fruit crops cannot be grown on the banks of the Peace or further back on the high land. It is the soil, water, and particularly the aspect and heat retention ability of the valley, which allows for such food production. BC Hydro has indicted (p. 60) that is will monitor crop and stored feed damage, crop drying, crop production and livestock damage for five years after the reservoir is filled. Once the valley is filled with water, it is dead. The last comment in this section of the report states: "The mitigation measures described above would mitigate the Project effects on agricultural production and agricultural economies." The red flat word in the world of sustainability, steward-ship or ecology, is the world mitigation. It is meaningless and mean to appease. It should be replaced with words or phrases which describe actual changes. BC Hydro continuously put forward the point that Site C will produce enough electricity to power 460,000 homes. Never, is the fact the power is not needed for residential homes, expressed. In the end, the people of northern BC will need the agricultural resources of the Peace, more critically than an industry for an LNG plant will need the power of a site C. II. EIS Full Document Response to Section 20: Agriculture To be meaningful, the following response comments are best viewed concurrently, along side the actual document lines indicated, to remain in context. Responses, which pertain to climate changes, are not referenced during commentary for particular sections below, but the final paragraphs outline some references, pertinent climate situations. Page 20.13: (20.2.3) Agricultural Suitability of Lands are defined here in terms of being a "function of climate, soil capability, and crop needs, but there is no consideration of the economic viability of producing specifically market garden crops. Reference should be provided to indicate where, in the document, such information is provided. In addressing what is suitable, Hydro's comments seem to imply impacts only for the present. They do not indicate that this analysis pertains to the future, twenty to a hundred years or more, ahead. If they do, then they should say so and apply expected	- Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Flood Reserve • Greenhouse Gas Emission Merits of the Project • Project Need • Alternatives to the Project • Uncertainty and Precaution

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		or projected conditions for those times (see below). In the future, different populations and different climatic conditions (here and elsewhere) will create the necessity for this area to supply its own food (see references below). Insofar as grains can be grown on the upper benches and highlands, market garden vegetables and fruit cannot. It is in our future, when the greatest losses of farmland will be felt. BC Hydro does not address, here, the fact of climate change both world wide and locally, or the implications of that change on the demand for food, the difficulty of transport of that food from long distances or the changes to the growing seasons in the Peace valley in the future. Page 20.14 The document states: "For areas within and near the reservoir, soil characteristics generally do not limit the suitability of most crops, and crop suitability is primarily dependent on climate." Nothwithstanding global and continental climate change, the climate of land adjacent to a reservoir will be affected, which will affect crops grown close to the water line. The effect will most likely be adverse due to fog, which will limit sunlight and create longer lasting cooler temperature leading to less growing capability. Page 20.15 (Table 20.6) Although the preamble for this table states that only some examples crops are included, it would be prudent to include a major staple of most foods, corn (which is not mentioned). Corn cannot be grown reliability anywhere in the Peace except in the valley bottom. Corn was decimated this past year in the mid-west of the USA as a result of record-breaking drought. Fruit orchards of apples and cherries of the northern variety are also not explored. Page 20.15 In addition to addressing the concept of agricultural suitability, BC Hydro has commented on agricultural utility (line 6). Areas within the Project activity zone were assigned in an agricultural utility rating to reflect the likelihood of future agricultural use. In accordance with the EIS Guidelines, agricultural utility was classified based on the physical capability (soil and climate) and on potential constraints to agricultural use… And on Page 20.16 (line 18) If created, this protected area would include land within the Project activity zone, including the majority of the south bank lands and islands that are within the proposed reservoir 20 area. If the protected area is established, agricultural land use would be expected to be limited to existing grazing tenures or some expanded grazing	

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		use. It is unlikely that any cultivated agriculture would occur within the protected area. For these reasons, lands within the proposed protected area were assigned a low to nil utility rating. The problem with this conclusion is that is it is a political one in that it pertains only to existing zoning, which is always subject to change. Zoning can be politically reversed if the need arises, for instance, in light of the future necessity of using the land for agricultural purposes. If the land is flooded because it was deemed low utility for the present, that decision simply cannot be reversed in the future. To state (see bold print) "it is unlikely.." is subjective and solely in BC Hydro's interest to says so; certainly it is not in the interest of future generations who will live in the Peace region and look to the valley as its primary food provider. Such political statements should not be part of the terms of reference. Another example of subjective politicized comment occurs on page 20.17 (line 6) Islands and tributaries were assigned a low to nil rating on the basis of limited access. Again, this is politically subjective, and pertains only to the present. Access can change in the future and may do so out of need. Present and current practice is not an argument for classifying class one and two soil in viable growing areas. It appears that land which is not currently cultivated, is not considered by BC Hydro as important agriculturally now, or in the future. Basing such arbitrary decisions on the here and now only, is counter productive. Page 20.18 Comments on interviews of landowners, which includes potential use (current and future plans) of farmland. Information sought during the interviews with owners and operators included the following: (line 13) Current and future land use. (line 15) Historical and potential trends in agricultural land use. (line 21) Planning by landowners for the development of future crops (type and volume) or by potential future land investors and landowners would be influenced by whether or not a flood reserve remains on the river and its valley. In the future, investors, current and new, would be more likely to develop market garden crops if there was not the specter of flooding hanging over the valley farms. This report does appear to comment on this potential, which could be very significant. Page 20.20 compared the decrease in number of farms in the Peace, indicating the	

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		drop is greater relative to other parts of the province. Overall, the number of farms decrease 12% in the Peace Agricultural Region between 2001 and 2011, compared to a decline of about 3% in B.C. as a whole. (line 18) BC Hydro did not mention that the decrease in the number of farms was influenced by the fact that BC Hydro brought up many of those farms, if not most of the land residing in the flood reserve. This kind of ethically questionable spin-by-omission is not helpful in making good forecasts or good decisions and creates a sense of distrust. And on line 17 the comment: Peace Agricultural Region farms comprise 8% of the farms in the province. Apparently the number of farms in the province are more important than size of farms which Hydro professes are four times larger than the provincial average. If so, then, why? Further the list of farm land-use, (line 11-16) which indicates for the entire Peace region that only 32% of land is devoted to agriculture, is misleading. And lines 32-38 state: In the Peace Agricultural Region, 77% of the farms specialize in hay (43%), beef (16%), horses (12%), or livestock combinations (6%). The Peace Agricultural Region alone represent 20% of B.C.'s hay farms and 10% of its beef farms. About 11% of Peace Agricultural Region farms are oilseed (5%), wheat (1%), and other grain farm types (5%). Other types of farms include sheep, apiculture, fruit, berries and nuts, poultry and eggs, vegetables, and potatoes, with each representing less than 1% of the total farms in the region (Statistics Canada 2012a). This comment, which points out that less than 1% of the Peace region is devoted to market garden produce, suggests that growing such produce is marginal, at best. Since virtually all market garden produce can only be grown in the Peace valley, comparing such a venture to the rest of the region is misleading. The very fact that such ventures can only occur in the valley, make the valley critical to market garden production and food sustainability in the Peace. That BC Hydro has brought up most former market garden sites and does not use the land for this purpose is not a reflection of the potential for such sites and is not an argument or piece of evidence in support of the project. The negative spin placed on market garden capabilities in the Peace valley is, to put it	

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		mildly, disgusting. This habit of making continuous comparisons to the entire region, when the critical market garden land in discussion is found only the Peace valley, biases any objectivity of the importance of this resource. Most assuredly, the bottomland of the Peace should not be used for hay, canola, most grain crops or livestock. It should be set aside and used predominantly for market garden vegetable and fruit crops. Most of the comments on pages 20-22 to 20-24, which refer to marketing, employment and economic returns, have little to do with the Peace valley or the impact of the dam. For instance the comment from lines 1-3 on page 20-23 state: "A few farmers' markets selling local honey, fruits, and vegetables are in operation in the region, and some vendors also sell processed food products such as baking and preserves." Comments like this, and in fact this entire section, appear to be set up to make the importance of the agricultural potential of the valley seem very unimportant. It is not, as indicated below. Further, this entire agricultural section seems intentionally designed to make farming in the Peace, incidental, and marginal or insignificant. Again, it is not. And in the future, barring flooding, it will be the market garden capabilities that ensure continued survival of the Peace area residents. 20.2.8.3 This page outlines economic returns for the Peace region. It is a mystery as to why the entire Peace region is cited here. Why comment on the region? It is the Peace valley, which is in question. Not targeting the Peace Valley specifically, fails to delineate returns or potential returns for agriculture affected by the project in the valley. There is no account taken of the potential for and estimated cost returns for large-scale market garden operations, now or in the future. When peak oil arrives and climate change affects North American breadbaskets, local market gardens here would have the ability to generate many millions of dollars of produce, annually. Even the concept of such market garden and orchard ventures has apparently been completely dismissed in this report. The British Columbia Quarterly (Spring, 2009) no. 161, p. 103 notes that in the 1970s, the Peace River Branch of the Institute of Agrologists, presented a summary report to the BC Cabinet. Insofar as Site one dam and the W A C Benet dam were already in the works on the Peace, the report indicated that "further damming the Peace River	

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		would forever remove any possibility of market garden self sufficiency in the region". 20.2.9.1 Historical Food Self-Reliance. The past trends over time of food production and self-sufficiency in BC will have little or no bearing on what happens in the future, because of never-before experienced impacts of increasing global population expected to reach over 9 billion people by the year 2050. Additionally, loss of conventional fossil fuel, higher fuel prices, and changes in the ability to produce food due to climate change will compromise local self-sufficiency. If this section is designed to provide some kind of reassurance or an argument against the necessity of maintaining the ability of the valley to produce food, then it is mistaken. Page 20.25:20.2.92 Food Self-Reliance in the Peace Agricultural Region BC Hydro's commentary on what appears to be political spin, here, point out that vegetables in the region account for 5% of the regional consumption of crops. Such a statement makes it sound like vegetable/fruit produce is not important for economic return or as a viable necessity. It does not mention that BC Hydro has bought up most of the market garden land, leaving it produce-unproductive. Insofar as most produce is trucked or flown in to the communtiies now, the report does not indicate that such conditions may not be certain in the future and that the bottom, class one to five land, may be absolutely invaluable in the future. Further, to compare volume by consumption of the vegetables produced in the region to the total of all crops does not provide for reasonable or logical comparison. Of course, grains, hay and canola, which are grown on the up-lands of the region will be both produced and consumed in greater amounts. They cannot substitute for or replace varieties of vegetables. Page 20.35-20.41 In terms of credit and dismay, on page 20.26, line 11 notes that: "Overall, regional food self-reliance has not been examined in detail." This pretty well says it all. Future self-reliance needs to be examined in detail, extensively and thoroughly before any consideration of valley bottomland destructions can be considered. This report has not addressed that concern. Page 20.54 Agricultural land in the project Activity Zone. Noting table 20.29: what would 1,666 ha of class 1-5 land (high to moderate yield), have been worth in the Frazer valley in the year 1850, then 1950, then in 2030? It would have become increasingly and, (likely) geometrically, valuable. The same would hold true of those classes of land in the Peace valley. These top class soils with their	

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		valley bottom climate and south facing aspect, may, in the future, have the potential to be literally worth their weight in gold. You can grow food in the soil. Gold may, at some point in time, become, useless. Page 20.56/57/58 Table 20.31 Two scenarios set out by BC Hydro indicate that future vegetable production could be increased by 100 ha or 200 ha by year 100 out of the 5, 143 ha available. This assumes (line 2) a constant rate of current growth. This assumption seems to be based on the idea that no changes will occur in the future to alter the rate of change. Again, peak oil, climate change and changing world demographics will all have impacts creating the need for vegetable crops to increase in number and size. The report scenarios, here, are arbitrary and subjective, and are therefore meaningless, misguided and likely harmful. Why develop a present case only scenario, which restricts vegetable growth to a mere 100 or 200 ha when thousands of ha are available? Page 20.58, lines 2-7 indicate that over the first 100 years, trade for agricultural products are assumed to improve by 0.5% per annum relative to the price of other products. But circumstances change. These assumptions are tenuous as best. Who can make such specific predictions for time frames on the order of 100 years? The price of corn in the USA rose 25% in 2012 because of the massive and sustained mid-west drought. Using the analysis set out in this section, to predict USA corn prices, would have ended in an entirely inaccurate forecast of the reality. Rating the Peace growing region in such a way, based on non-predictable long-term market forecasts, becomes increasingly arbitrary as the time lengthens. Further, using economic forecasting to determine the necessity for and availability of food, is still only one measure of the value of the product. In the future, it will probably not be the best measure. Climate change Research material centered on the effects of climate change and impacts on food and agriculture are many. This response to the EIS has not set out a research format in APA citations, but information presented below is supported by scientific research from a number of academic and research institutes. This multimillion dollar BC Hydro report, should have investigated the potential for future climate change impacts on food production and related it to the potential and necessity of producing speciality foods in the Peace Valley. Here are some pertinent points, which have bearing on a	

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		number of points made previously. Research Institutions noted: - National Climate Assessment Development Advisory Committee: Federal Advisory Committee Draft Climate Assessment Report: U.S. Global Change Research Program, January, 2013 - Fifth Assessment Report: A Synthetic of over 800 Authors for: Intergovernmental Panel on Climate Change, 2013 Draft report. - Explaining Extreme Events of 2011 From a Climate Perspective, May 2012, UK Met Office Hadley Centre, United Kingdom, National Oceanic and Atmospheric Administrative Office, Silver Spring Maryland - Global Environmental Change (2012) Bryce et al. indicated that climate scientists are biased toward overly cautious estimates, erring on the side of less rather than more alarming predictions. - United Nations Environmental Program Report, 2007 Dery and Brown, indicates that northern snow cover is declining faster than expected. NASA: National Aeronautics and Space Administration Climate Change Division (see James Hanson). - Climate Change, Agriculture and Food Security Research Program Current and Future Climate Impact Consideration: • Build-up of greenhouse gases in the atmosphere has already caused America's average temperature to rise by 1.5°F since 1895. With continued increases in emissions, U.S. temperatures are projected to increase 5-10°F by the end of the century. Rising temperature have implications for human health, drought, storm intensity, and species and ecosystem health, among others. • The United States will experience, every two to three years, what is now a once-in-20-year heat wave by the end of the century. • The average high temperature is projected to increase by 3 F to 6 F 2080-2100 in the continental United States. • Global atmospheric C02 concentrations have increased over 40% above pre-industrial levels. • The number of tons that global greenhouse gas emissions have been rising per year over the last decade is 0.9 billion tons. • There has been an increase of 74% in the amount of precipitation associated with very heavy, extreme precipitation events in the Northeast between 1958 and 2010.	

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		For every degree C of temperature rise, there is a 7% increase in atmospheric moisture. Models suggest that on a warming planet, most areas will experience greater drought, but when precipitations occurs, it will be extreme. Atmospheric rivers containing up to 15x the volume of water of the Mississippi river could be released within a few weeks over some areas and create , in particular, devastating effects along the western coast of the USA and Canada. • There has been a $ 5 billion loss associated with impacted livestock and crops during the 2011 drought in Texas. • There has been a 40% decrease in minimum Artic sea ice extent since satellite records began in 1978. • There has been a 63% decrease in total winter ice coverage in the Great Lakes since the early 1970s. • Anywhere from 5 to 20 percent of land area in the United States could be subject to ecosystem changes by 2100 as a result of climate change. • Honey bees have advanced their arrival in the spring by 10 days average in northeastern United States over the past 130 years; • Plants and animals have migrated an average of 10.5 miles per decade to higher latitudes to find suitable habitats; • A record 9.2 million acres were burned in the United States during the 2012 wildfire season • Scientists from NOAA, the U.K's Met Office, and other institutions showed that conditions leading to the 2011 Texas drought are 20 times more likely to occur now than in the 1960s as a result of rising greenhouse gas emissions and associated climate changes. • North Atlantic oscillations have become more frequent and more unstable, likely enhanced by the record low artic ice pack and resultant lack of albedo effect. This effect, which increases sudden event stratospheric warming, which in turn, destabilizes the polar vortex jet stream, is responsible for sending cold waves of arctic air down the Atlantic snowstorms as seen in 2012 and 2013. Conclusion: Our changing climate will affect all of North America's ability to grow food. The Peace Valley will need its valley. GIVEN THIS ANAYLSIS, HOW IS THAT BC HYDRO HAS FAILED TO IDENTIFY AND COMMENT ON THE INFORMATION I HAVE CRITIQUED IN THESE SUMMARIES AND IN THE FULL DOCUMENT?	

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		THE SUMMARIES, IN PARTICULAR, ARE THE PRIMARY ACCESS MATERIAL, WHICH WILL INFLUENCE MOST OF THE GENERAL PUBLIC, RATE PAYERS AND TAX PAYERS. THE SUMMARY REPORTS DO A DIS-SERVICE TO THESE GROUPS. IN MY OPINION, THE FACT THAT BC HYDRO WOULD RELEASE THIS MULTI-MILLION DOLLAR, THREE YEAR REPORT, AND NOT ADDRESS THE NOTED OMMISSIONS, WHILE INCORPORATING, AT TIMES, WHAT APPEAR TO BE POLITICAL OPINIONS WITH ARBITRARILY IMBEDDED ASSUMPUTIONS SEEMS TO ME TO BE BLATENTLY IGNORANT, IF NOT MANIPULATIVE? THIS IS PARTICULARY CONCERNING, CONSIDERING THE LONG-TERM HARSH CONSEQUENCES TO THE PEOPLE OF THE REGION OF ELIMINIATING FOREVER, THEIR MAJOR SOURCE OF DEVELOPING OR ACQUIRING CRITICALLY REQUIRED, LOCALLY GROWN PRODUCE.	
pub_0292-001	Name withheld	I understand the need for power in BC but the environmental impacts of the Site C Project just seem too damaging. As a result, I do not support the Site C Project. Thank you for your consideration of my opinion on this matter.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the Technical Memo on Project Need.

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pub_0293-001	Mazik, Kim	This facility would be the third massive dam in a series along the river. Results would also include the potential degradation of water quality, the loss of farmland as well as significant habitat loss for moose, deer, bull trout, and other wildlife species, not to mention the loss of important First Nations treaty land. Peace region wildlife populations already are unacceptably impacted due to human activity and development. The only appropriate response is to deny approval to the Site C dam and implement a management approach that will ensure the recovery of sensitive species like grizzly bears and caribou.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential changes to water quality as a result of the Project are described in Section 11.5 (Water Quality). The potential effects of the Project on agriculture, loss of wildlife habitat, and potential impacts to Treaty rights is described in the following sections of the EIS: - Section 14 (Wildlife Resources) - Section 20 (Agriculture) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements Section 8.5.3 of the EIS Guidelines set out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried out. A cumulative effects assessment was conducted for each to the valued components according to the detailed methods described in section 10.5 of the EIS. Please also see the following Technical Memos: - Agriculture - Cumulative Effects Assessment - Movement of Grizzly Bears and Large Carnivores - Caribou
pub_0294-001	Larstone, Virginia	If this is clean energy, why does it leave such a mess? I've spent time on Williston Lake, what a mess ! Why would you even consider building a dam so close to a community (Taylor, B.C.) leaving it vulnerable if something goes wrong with the dam. Why, in these times of great concern about how humans are affecting the planet, would you not consider more advanced ways of producing energy that doesn't cause such damage to the environment and the wildlife involved. I suggest you get with the times and put on your thinking caps !	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Alternatives to the Project are described in Section 5 of the EIS. Alternative means of carrying out the Project is described in Section 6 of the EIS. Please also see the following Technical Memos: - Alternatives to the Project - Dam Safety

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pub_0295-001	Belak, Marilyn	The taxpayer costs and natural/lifestyle impacts of Site C development need to be reconsidered in the light of future energy plans for BC. Best use criteria must be projected for our future needs. Food and water supply are the best use priorities. Food production is the highest and best use for the Peace Valley. Diversified agriculture will be very important to BC as the traditional food growing regions of southern BC get swallowed into urbanization and as climate change reduces southern North America's agricultural abilities with droughts, heat, water shortage and salinization problems being demonstrated in California and other traditional suppliers. Bio-diversity is the co-dependent criteria that will determine biostability that allows agriculture and water cycle within a healthy biosphere. This region is greatly impacted by other energy developments and is struggling already to retain a healthy biosphere within the already naturally challenging / fragile environment of northern climate impacts. Healthy land masses are exotic rarities on the planet and higher economic value over generations is likely to come from retaining and guarding our natural resources than from destroying them. For our generations to come, this old idea of selling resources instead of husbanding them must be revised. As a species we never know what we have done or lost until we review it over time. This is a time to be proactive and look to the future of life over what in the scale of time is short term economic gain.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for and Purpose of the Project) of the EIS. The potential effect of the Project on agriculture is described in Section 20 (Agriculture) of the EIS. Please also see the following Technical Memos: - Agriculture - Project Need - Project Costs

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pub_0326-001	Bergenske, John	I take this opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. In a word--- UNSATISFACTORY BC does not need to destroy the Peace River to generate power for British Columbians----It is an insult that this project is being foisted upon us. Impacts to wildlife are far reaching and the vallues being lost are not well documented or respected.Existing developments on the Peace have already degraded the system--- NO MORE.Your cumulative effects assessment fails both the wildlife and does not take into account past and potential projects. BC Hydro needs to concentrate on serving British Columbians, not large scale economic developments that only further threaten the future of the very values that make British Columbia unique on this planet. The EIS is insufficient. Back to assessing real needs, as any reasoned assessment takes the Peace off your drawing board!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The needs of the Project are described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The potential effects of the Project on wildlife resources are described in Section 14 (Wildlife Resources) of the EIS. Please also see the Technical Memo on Cumulative Effects Assessment. The matter raised is addressed in the EIS in accordance with the EIS Guidelines.
pub_0331-001	Boon, Arlene	I would like to submit the following comment to CEAA on the Site C Project EIS Reference # 63919. The Environment Impact Statement (EIS) from BC Hydro is lacking in many ways and the topics I will address are involuntary displacement, development-induced-displacement and resettlement for the displaced. Canadian Environmental Assessment Act, 2012 “environment” means the components of the Earth, and includes a) Land, water and air, including all layers of the atmosphere; b) All organic and inorganic matter and living organisms; and c) The interacting natural system that includes components referred to in paragraphs (a) and (b). Humans are a living organism and many humans inhabit the impacted lands of the Project. Therefore, must be included in a socio-economic section of BC Hydro’s Environment Impact Statement. The EIS recognizes that the First Nation traditional cultural use areas will be lost and that this cannot be mitigated. At the same time the EIS fails to recognize and acknowledge all of the losses to the inhabitants, particularly multi-generational farmers and ranchers that have lived all or most of their lives in the valley. Many of	Thank you for providing your input during the public comment period for the Environmental Impact statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro’s proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. Human use of the land and environment is considered in the following land and resource use Value Components: Current Use of Lands and Resources for Traditional Purposes (Section 19), Agriculture (Section 20), Forestry (Section 21), Oil, Gas and Energy (Section 22), Minerals and Aggregate (Section 23), Harvest of Fish and Wildlife Resources (Section 24), Outdoor Recreation and Tourism (Section 25), Navigation (Section 26), Visual Resources (Section 27), Population and Demographics (Section 28), Housing (Section 29), Heritage (Section 32), and Human Health (Section 33). BC Hydro’s approach is to provide compensation to property owners based on fair market value. Please also see the Technical Memo on Private Property – Project Requirements and Tenure.

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		these people have a very deep rooted attachment to this special place. It is their place, their home and their community. The EIS partly addresses the physical displacement of residents but it also doesn't recognize the "spiritual" displacement of people, and how this loss will affect people emotionally. In all countries, providing public facilities or public infrastructure sometimes requires acquisition of private land and/or even relocation of people. In virtually all countries of the world, governments are legally required to pay "just" or "fair" compensation for expropriated private property. When a person's place is not for sale, it can't be bought, therefore, when a dam project needs part or all of your property, it must be expropriated. Expropriation means involuntary displacement. <u>Involuntary Displacement</u> The possibility of expropriation or the forced loss of a home place is a stressful and disorienting experience. Since 1957, our family, 3rd generation (to myself) inhabitants of the Peace Valley, has been threatened with possible expropriation. As early as 1975, our family joined with others to protect our homes by creating the Peace Valley Environment Association, and more recently, the Peace Valley Landowners Association. In other words, since 1957, our family members have had their day to day life disrupted with the stress of an uncertain future and the demanding work of struggling to prevent expropriation. We do not want to be displaced. And should we be forced to accept expropriation, we will be thrown into looking for a new place and into reaching a financial settlement; both of these tasks we would expect to be very stressful. Wherever we go will mean starting over. We will never be able to rebuild a third generation home in our lifetime. In addition to being stressful, involuntary displacement or expropriation brings with it a deep sense of loss for our home and for our failure to prevent its loss, to protect what belongs to us. A study which explored the experience of farmers and ranchers who were involuntarily displaced by the Old Man River Dam in Southern Alberta concluded that while families/landowners were compensated financially for the "market value" of their buildings and land, the loss of their home was neither acknowledged or valued (Million, Marie Louise, "It Was Home": A phenomenology of place and involuntary displacement as illustrated by the forced dislocation of five southern Alberta families in the Old Man River Dam flood area, unpublished Ph. D. Dissertation, Saybrook Institute, 1992). Furthermore, the stress of securing a financial settlement, or another	

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		place of equitable value, was intensified by the failure of the settlement process to recognize that a home place is more than the financial sum of each building and each piece of land. A home place is a meaningful and functioning totality that has taken years, in some instances, generations, of work to build (Million, 1992). In other words, a workshop maybe housed in a shed that has little financial value but if the windows shed light in exactly the right way for the farmer to carry out tasks on his workbench, then the value of that shed will be greatly enhanced for the farmer but not for the assessor. And a barn may have no particular outstanding financial value for the assessor but if it was built by the rancher's father then it has great meaning, or value of a different order, for the rancher. In total, the financial settlement process did not acknowledge the loss of home, of belonging to a place, nor the stress of their struggle to prevent expropriation, nor the stress of securing a settlement, and for some, the stress of finding a "new" farm/ranch and beginning the work of rebuilding a home place. How can a measure of the "common good" take into account the human "cost"? And in situations where displacement is necessary, how can compensation for loss honor the phenomenon of home and those who belong? How can the vulnerability of those who are expropriated, those who do not wish to sell, be acknowledged and supported? <u>Development-induced-displacement and Resettlement</u> Social safeguards have been established by multilateral organizations (World Bank, ADB,) as tools that aim to limit the negative impacts on displaced persons. The World Bank first adopted a policy on involuntary resettlement in 1980, as an Operational Manual Statement. The policy was revised in 1990. In 2001, the World Bank officially adopted its revised Operational Policy on involuntary resettlement (OP 4.12). Establishing a baseline socioeconomic survey is a requirement of Operational Policy 4.12. The EIS does not contain such information for the impacted landowners. The World Bank policy is directed at improving (or at least restoring) incomes and living standards, rather than merely compensating people for their expropriated assets The ADB policy set out a number of safeguards including (a) early screening to identify past, present, and future involuntary resettlement impacts and risks. (b) meaningful consultations with affected persons and the establishment of grievance redress mechanism.	

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		The area to be submerged by a dam does not benefit from additional investment in infrastructure development from the time the project is announced (in this case it is 1957, a reserve under the Land Act was put in place by Order-in-Council) until the area is finally submerged. The affected people are often unable or unwilling to expand their houses or invest in other developments during this period. To promote shorter gestation periods, project agencies could be required to increase compensation for each year of delay from day one till the time the affected person is displaced. This would provide a disincentive for project agencies to delay resettlement implementation and give affected people some level of compensation for benefits foregone as a result of the long gestation period for dam construction. The threat of this proposed project has been hanging over the valley residents heads for 56 years to date. An estimated 106 private land holdings comprising 178 separate parcels of land would be affected by permanent statutory rights-of-way. Of these totals, 52 private land holdings and 79 separate parcels would also be affected by required fee simple tenure. According to the BC Hydro EIS documents, if they received their certificate according to their schedule, we will be displaced in the fall of 2014. As one of the many inhabitants, we will lose all of our farmland, home, our place, mother's home, historic buildings and our businesses. o The EIS must address that the landowners have not been consulted on being displaced, and it does not contain an established grievance redress mechanism o The EIS does not have a development plan, policy or procedure that addresses the needs and concerns of those who will be displaced and must address this. o The EIS must develop an established baseline socioeconomic survey for the impacted landowners. o The EIS does not include an early screening to identify past, present, and future involuntary resettlement impacts and risks of the previous dams.	

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pub_0365-001	Parsons, Nick	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* To add my concerns already sent in regarding this proposed Site C Dam. I strongly believe that the area measurements should read in ACRES. All land in Western Canada is measured in Acres. The whole west was mapped out in quarter sections (160 acres) and sections (640 acres) (1 square mile). BC Hydro are downplaying the area involved for the flooding which will be caused by the lake of the proposed dam, 10,000 hectares sounds less than 24,000 acres which will be involved.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located at end of this table. The area to be inundated would be the same whether it is reported in hectares or acres.
pub_0376-001	Brennan, Marilyn	I respectfully ask why we are contemplating the resurrection of this outmoded and unnecessary project that will destroy one of the most beautiful valleys in BC. How can we be looking at an Environmental Impact Statement (EIS) when an entire valley is being obliterated? That's not "impact" that's destruction. Nothing in that statement can ameliorate what BC Hydro intends to do to this area and the people in it. I submit to you that this project has been brought forward yet again because of the personal agenda of a few wealthy stakeholders who stand to lose money. For the First Nations and other long time residents, whether this project is shelved or moves forward will decide how the rest of their lives will play out and determine their future livelihood; for the wildlife and ecosystems in the area, this project will decide their very existence. So I have to ask again, how is it that we are even contemplating this? Treaty 8 territory became my home for a while when I took a job with the Treaty 8 Tribal Association in 2005. Turning up in Fort Saint John after a long and dusty drive from Vancouver, I had no idea of the impact the land would have on me. Not only was it beautiful and totally unexpected – after all most people from Vancouver, including me at that point, have no idea what's North of Chilliwack, let alone the beauty and promise that the North of BC holds – but the people of Treaty 8 introduced me to a world where the land and the people are one. I remember walking the trail to see dinosaur footprints in the rock by flashlight and wondering across river flats to see the area where hundreds of First Nations had been buried after the flu epidemic of 1917; I remember being offered bush tea and sitting quiet as mice by the side of the road near Hudson's Hope watching deer nibble at shrubs. I remember as much laughter and generosity as there was hardship and early death, in fact I saw my first open	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The needs of the Project are described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. BC Hydro began consultation with Aboriginal groups in regard to the Project in late 2007 and prior to any decision to advance the Project to an environmental assessment. Aboriginal consultation for the Project is ongoing. BC Hydro and Aboriginal groups are engaged in a process that will continue through all stages of the environmental assessment process, as well as through the proposed construction and operations stages, as described in Section 9.2 (Aboriginal Group Information Distribution and Consultation) of the EIS. The matters raised are described in the following sections of the EIS: - Section 11.9 (Methylmercury) - section 12 (Fish and Fish Habitat) - Section 13 (Vegetation and Ecological Communities) - Section 14 (Wildlife Resources) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 20 (Agriculture)

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		casket while I was there. But most of all I remember a profound sense of community linked to the land. Lose one, you lose the other and BC would be immeasurably poorer for their loss. The land to be flooded is Treaty 8 First Nations territory, yet BC Hydro had already implemented two stages of their 5-stage evaluation of Site C before T8FN's were even approached, and have pushed forward their agenda despite consistent objections and concerns voiced by T8FN's. This is a direct violation of the UN Declaration of Indigenous Peoples; of Section 35 of the Constitution; and of Treaty 8 itself. This dam will have a devastating effect on T8FN's culture and heritage – just as it did when the Parsnip River and Finlay Forks disappeared under the W.A.C. Bennett Dam. How is it that this area must pay not twice but three times over for BC Hydro's greed and lack of forward thinking? If we wish to deal in statistics, this third dam, Site C, will flood another100km of river valley and 8,310 acres of prime agricultural land, which is considered "high capability" by Canada Lands Inventory ratings and represents 18% of such land in the Peace River Valley area. This is a considerable and irresponsible loss of arable land at a time when looming climate change prompts protection of our valuable resources. A similar loss of good agricultural land in the Lower Mainland and all over BC should make this area even more valuable, not less, and certainly worth saving from the accumulation of toxins and heavy metals that is the result of a valley becoming a lake-bed behind a dam. More old growth forest along the valley bottom will be destroyed, as will another huge section of islands, riverbanks and terraces that are the habitats of Mule and White-tailed Deer, Moose, Elk, Black & Grizzly Bear, Coyotes, Wolves, Otter, numerous bird species and other small mammals. The dam will impede the movement of fish and any fish seeded into the newly made lake stand a good chance of becoming so contaminated with heavy metals accumulating in the lake-bed, that residents will be warned against their consumption, as is the case with fish from Williston Lake. Luckily we don't have to depend on conjecture to know what will happen if this project becomes reality. We have the evidence of the first two stages, Site A, the Peace Canyon Dam, and Site B, The WAC Bennett Dam to show us. The three-stage project may have been a capitalist dream in the 1960's, promising abundant cheap	- Section 22 (Oil, Gas, and Energy) -Section 32 (Heritage) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: - Agriculture - Methylmercury - Movement of Grizzly Bears and Large Carnivores - Cumulative Effects Assessment - Project Need

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		power, jobs a-plenty and the riches of 20th century progress, but it became a social nightmare. The CBC Archives has footage of First Nations scrambling to move their belongings up the slope as waters rose. They stood and wept as their homes – everything they had - went under water. The Ingenica were relocated to prefabricated trailers and abandoned. They finally received a settlement of reserve land in 2005 after nearly forty years of privation. Other non-First Nations settlers in the area reported being harried and pressured to sell their land below market value, and promises of jobs and cheap power never materialized. Apart from the way the land was acquisitioned, the Bennett Dam had a host of other problems that have been well documented: 1. Hydro didn't clear the land before the water rose and Williston Lake was full of debris. No one has been able to safely boat or swim in the lake for years, and First Nations have been unable to reach their traplines across the lake 2. Many traplines of First Nations and settlers alike were either cut by the lake or completely submerged, leaving many without any means of survival. 3. Game, especially moose, were trapped on either side of the lake unable to reach their normal feeding grounds. Many starved; the rest moved away 4. The banks of Williston Lake were and are still so steep and unstable that they slide constantly, especially as the level of the dam varies. These slides create huge waves that have eroded the banks even more, making recreational use difficult and dangerous, and impeding stock and wildlife from accessing water. 5. Beaver were starving because the dramatic rise and fall of the water level (often 50 feet or more) combined with the unstable banks separated their homes from their food 6. The ecology of the area has been completely changed. Many species of flora and fauna have been wiped out and the climate has altered. Williston Lake is one of the largest expanses of fresh water in the world. It generates unpredictable strong winds and changes temperatures across the lake, which in turn have changed the climate and ecology of the land in the vicinity 7. Many important archaeological and cultural sites now lie beneath the waters of Williston Lake Site C promises to repeat this disaster point for point. The project is being raised again because, they say, it's the only way BC can get the power it needs. But that is not true. There are other ways. BC Hydro's own estimate,	

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		as stated in the Environmental Impact Statement for Site C (Table 5.10, P. 5-17), of their energy surplus over the next four years is 19,400 GWh for which they have "long-term commitments" to buy at a price well above market value. This means a huge loss to BC Hydro of over a thousand million dollars, which is then passed on to BC residents. We don't necessarily need more power, we need re-negotiated contracts! Residents of the Peace and T8FN's are tired of supporting big business at the expense of ordinary people. BC Hydro supplies the Oil & Gas Industry with cheap power and in the case of the Gas industry, cheap water from Williston Lake for their camps and fracking, when residents have to pay a premium for their power. If Site C is built, current connections between the Oil & Gas Industries will open up the floodgates for new test wells in an area already overrun and under environmental pressure. The environmental impact of Site C cannot be looked at in isolation, but must be seen as part of a systematic assault on areas of our Province by industries bent on resource extraction. With a project like Site C, residents and in fact the whole of the Province stand to receive way more harm than benefit. Please listen to the voices of people, who live on the land, rather than the voice of big business. In years to come, they are the ones who will be dealing with the leftovers from BC Hydro's schemes. All BC Hydro will see if Site C is defeated is a loss; billionaires will be petulant. For all the people and wildlife, flora and fauna, it means the preservation of a way of life, homes, habitat, food and water sources, sacred places and burials – everything that makes life worthwhile; and everything that makes us human.	
pub_0377-001	Name withheld [Hudson's Hope, BC]	Geothermal has not been sufficiently addressed as an alternative power source. *The commentator submitted a newspaper article from the Prince George Citizen titled "Geothermal could trump Site C dam: geologist", dated March 15, 2013.* http://www.princegeorgecitizen.com/article/20130315/PRINCEGEORGE0101/303159971/-1/princegeorge/geothermal-could-trump-site-c-dam-geologist	As shown in table 5.17 of the EIS, geothermal was considered an available resource in the analysis of alternatives. In Section 5.5.2.7 of the EIS, BC Hydro describes the attributes of geothermal and concludes that the geothermal resource option should not be in the portfolio analysis in Section 5.5.4 for the reasons stated on Page 5-52 Lines 24-31 and Page 5-53 Lines 1-7.

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pub_0378-001	Fisher, Debra	I Do have questions! I have scanned the impact statement to find information in regards to the Shoreline Protection part of the project. As I noted, in project material, BCHydro has planned to utilize DA Thomas Road for the main haul road in constructing the Berm. This road goes directly beneath my yard to the Ferry Landing. I think along with my 4 neighbours, we are certainly going to be greatly impacted, although, no one has contacted me to discuss these plans. My questions are: Has BC Hydro, in fact, studied how the 2-3 year construction phase of the berm is going to affect those of us living above this road? Have they studied the incredible increase of noise,vibration, and dust, the people living above this road will have to deal with? Have they even, studied the stability of the road, itself? I question why I have not been notified by BC Hydro of the plans to turn my backyard into a major construction zone?	Thank you for providing your input during the public comment period for the Environmental Impact statement (EIS) for the Site C Clean Energy Project. In October – November 2011, BC Hydro consulted with the District of Hudson's Hope, property owners and the community regarding the Hudson's Hope shoreline protection, including options for a berm, potential public use options for berm areas, public access to berm areas, and potential landscaping and recreation opportunities in berm areas. See Section 9.1.2.3 of the EIS. The potential changes in noise and vibration resulting from construction of the Project have been evaluated. Where possible, BC Hydro proposes to implement measures to mitigate the potential for noise and vibration resulting from construction activities.
pub_0379-001	Fisher, Debra	I almost forgot. I have more questions: I for one, do not care how many boat launches they build over budget. They are using my money, and I would prefer the boating public finance their own pleasures. What is in it for those of us who simply love to watch the river? I did not see a single positive benefit to those of us who live along the river. Perhaps I missed them, and they could be pointed out?	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro expects that provision of boat access to the Site C reservoir will be a requirement under the Navigable Waters Protection Act administered by Transports Canada to provide access to navigable water.
pub_0380-001	Erickson, Anders	I am opposed to the Site-C Dam for 2 reasons. 1. loss of the small amount of agricultural land in that region. Productive farmland is a very finite resource of increasing scarcity and this will only become more important with climate change. Flooding farmland is not reversible and is not replaceable. The remaining land is of poorer quality at higher altitude on steeper slopes with no depth of soil. The best land is closest to the Peace River and under the plans for the proposed Site C, this best land will be flooded and thus lost forever. Also, the valley floor is a warmer micro-climate location which plays a huge role in its productivity.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in Section 20 (Agriculture) of the EIS. Please also see the Technical Memo on Agriculture.
pub_0380-002	Erickson, Anders	2. Flooding land releases naturally occurring mercury into the water and transforms it into a more toxic and bioavailable form of Methyl-mercery (MeHg). There is numerous research on this topic specific to this area and the North in general (refer to research by Dr. Laurie Chan). MeHg bioaccumulates in fresh water fish, rendering them unsafe to eat as a regular part of one's diet (i.e. First Nations diet).	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the Technical Memo on Methylmercury.

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pub_0380-003	Erickson, Anders	3. The "cumulative effects" assessment has omitted a number of past and potential future projects, including the impacts of the existing dams and reservoirs on the Peace River. Thus, the scope of the cumulative effects assessment is far too narrow.	The cumulative effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. Section 10 describes the methodology for the cumulative effects assessment. Please also see the Technical Memo on Cumulative Effects Assessment.
pub_0381-001	Name withheld	You can see by the gentle slopes on the Peace River that the soils are sedimentary - unstable/prone to slump. For this - proposed site C, and the devastation it would wreak is not recommended. Two proposals have been turned down. Hoping this will be the final proposal turned down. Please - no Site C ! There are other options.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11.2 (Geology, Terrain and Soils) - Volume 2 Appendix B, Part 2 Preliminary Reservoir Impact Lines The Project has not been rejected twice before. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139). Section 5 of the EIS addresses the need for and alternatives to the Project. Section 5.2.1.1 describes the methodological approach and results of BC Hydro's 2012 Load Forecast, the most recent load forecast. Section 5.4.2 of the EIS canvasses the potential alternatives to the Project that BC Hydro considers are not viable, with reasons provided for each alternative reviewed, while Section 5.5 provides details of the available alternative resources to the Project and examines these available alternative resources using financial, technical, environmental and economic development attributes

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pub_0382-001	Canadian Manufacturers & Exporters	Canadian Manufacturers & Exporters (CME) represents businesses in all sectors of manufacturing and exporting across Canada. Our mandate is to promote the competitiveness of Canadian manufacturers and the success of Canada's goods and services exporters in markets around the world. We focus on the issues that are most critical to our members. Access to a reliable source of energy at competitive rates is a critical issue facing manufacturers across Canada and in British Columbia. Ensuring that BC maintains a sustainable future is also a critical issue for our members. CME is writing today to state its support for the BC Hydro Site C Dam proposal. We understand that the Environmental review process has been completed and the Environment Impact Statement shows it to be a comprehensive assessment of the potential effects from Site C. CME is pleased with BC Hydro's commitment to avoiding or mitigating effects wherever possible, and that a comprehensive set of proposed mitigation measures is outlined. Site C is an important project for B.C. and there are enormous opportunities for our members and industry across B.C. to benefit from the project. Despite ongoing efforts to reduce energy use, manufacturers overall have an increasing demand for electricity in B.C. We believe that this project is needed to meet this increasing demand for electricity, both for businesses and residents. In addition to obvious energy supply benefits, Site C would help provide a market advantage to attract companies, investment and high paying permanent manufacturing jobs to the province, which will increase the tax base that helps pay for health care and education in B.C. for the benefit of all British Columbians. It would be a stable supply of energy at rates that are in line with our competing jurisdictions. Further, with this project going forward, there is an estimated increase of $3.2 billion in provincial gross domestic product and 10,000 direct jobs through the construction phase of Site C. Many of these jobs would be in the manufacturing sector. In summary, while the project would have impacts on the environment, we are comfortable that BC Hydro has assessed these impacts thoroughly and will address them wherever possible through strong mitigation commitments. We have confidence in the joint provincial and federal environmental assessment process, and that the effects outlined in the Site C Environmental Impact Statement will be seriously considered against the benefits of the project.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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pub_0407-001	Nagel, Patsy	There are many reasons that the Site C Dam should never be built. The most important to me is the loss of thousands of acres of class 1 and 2 soil in the river valley. Of course, flooding valuable land means that it will never be useable for agriculture in the future, when our great grand children will need it to produce their food. The lake (reservoir) will encourage sloughing of the unstable clay banks all along the shore line, and will make more agricultural land unuseable. This means that the micro climate in the Peace River Valley will not be utilized to grow the soft fruits and vegetables that could be produced in the valley if farmers were allowed to develop the land to its full capabilities. This could be the Valley of Eden for Northern B.C. if allowed to produce to its full potential. We have other choices for producing power. Since large dams are now believed to be archaic, why not use the many other sources of power available today instead of flooding valuable farm land? Why not use the wind, the sun, and underground heat to bring power to homes and industry? These sources are proving to be very environmentally friendly. Why don't we use our vast resources of natural gas for our own power instead of selling it to other countries? This would make common sense to me. Maybe we could even leave some of that gas in the ground for future use! The way BC Hydro is going ahead, purchasing land to use for fill among other things, makes it look as though they are going ahead before the environmental reports have been approved. It makes the people who are trying to point out other means of producing power and are trying to save the Peace River Valley for producing food for future generations, feel that we are not being listened to and that our concerns are of no consequence. It looks like big money will win again and our future farmers will have to move away to find land to produce our food. What a waste of wonderful agricultural land. I wonder if people realize that there will be no more farm land made in the world that is suitable to produce the food that will be needed for the increasing population in the future. Many more people could be starving all over the world if the precious farm land is not preserved. I don't want that on my conscience - do you? Of course there are many more reasons to preserve the beautiful Peace River Valley. Loss of valuable timber producing land will also impact the future generations. Flooding vegetation produces toxic materials in the reservior which will impact the fish population. These thousands of acres of river valley are home to many species of wild life and it is	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 20 (Agriculture) Please also see the following Technical Memos: • Reservoir Impact Lines • Alternatives to the Project • Agriculture

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		part of the important Yellowstone to Yukon wildlife corridor as well as the birthing place for moose, deer and other animals. Many bald eagles make their nests in the valley. What will happen to them? Another great concern is the enormous cost of such a mega project. Highways will have to be re-routed, new roads will be needed to transport the tons of fill that is required. Can our present road system stand up to this amount of heavy traffic? This project will make many changes to the landscape as well as the environment, and most will be detrimental to this pristine area. I feel that the taxpayers of B.C. will be paying for many years to reduce this huge debt. In summary, I would like you to consider other sources of producing power and save this and other productive river valleys for agriculture and recreation. There will be no turning back once the river is flooded - it is lost forever. Let's not destroy our grandchildren's heritage, let's move on to new solutions that will work for everyone, now and in the future. Let's protect our invaluable ecosystems and the natural beauty of our rivers that it so much a part of what makes B.C. 'The Best Place on Earth'!	
pub_0417-001	Sykes, June and Ed	*The commentator submitted a letter with comments contained in form_0004-001 to form_0004-022 and in submission pub_0537-001 to pub_0537-004.*	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the responses to form_0004-001 to form_0004-022 and pub_0537-001 to pub_0537-004.
pub_0422_001	London, Clara	*The commentator submitted a letter with comments contained in form_0004-001 to form_0004-022 and in submission pub_0537-001 to pub_0537-004.*	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the responses to form_0004-001 to form_0004-022 and pub_0537-001 to pub_0537-004.

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pub_0428-001	Beckett, Doug	The assessment of solar alternatives in Section 5.4.2.2 of BC Hydro's submission is insufficient. The JRP must have BC Hydro complete an in-depth comparative assessment (financial and environmental) of generating an equivalent amount of power as Site-C through combined wind turbine and residential solar power generation.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The EIS Guidelines in Section 4.2 provides that alternatives must be "technically and economically feasible". Section 5.4.2.2 of the EIS describes that although solar power technologies are commercially proven and the costs have declined; the cost declines are not expected to become cost competitive in Canadian jurisdictions over the next 10 years in the absence of price support. There are no known commercial utility-scale solar power installations in B.C. As such, BC Hydro concluded that commercial solar is not an economically feasible alternative to the Project. Section 5.5.4 of the EIS describes that BC Hydro prepared a Clean Generation Portfolio using the available clean or renewable resources described in Section 5.5.2. Figure 5.10 demonstrates that the portfolio analysis resulted in about 80% wind generation for a portfolio of an equivalent amount of power as the Project.
pub_0428-002	Beckett, Doug	The JRP must have BC Hydro assess at which point technological advances will result in solar generated power - with no incentives - to be about the same price as power generated from Site-C.	Please see the response to pub 0428-001. BC Hydro has assessed the availability and cost of resources in its 2010 Resource Options Report including inviting technically knowledgeable stakeholders to participate in a consultation input and review process; refer to Section 5.4.1.1 of the EIS. BC Hydro through the Resource Options Report process identified solar as a relatively high cost option in B.C. There are sufficient alternative resources that could provide the energy contribution of the Project. For the cost of solar resources to impact the alternatives assessment, their costs would need to become lower than wind and run-of-river hydro. This is very unlikely. Please also see the Technical Memo on Alternatives to the Project.
pub_0428-003	Beckett, Doug	The JRP must have BC Hydro assess technological trends and cost trends of residential solar technology, and the implications of these trends on the future costs of generating power through residential solar.	Please see the response to pub 0428-001 and pub 0428-002.

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pub_0428-004	Beckett, Doug	The JRP must have BC Hydro assess the amount of power that would be generated in response to various levels of incentives. As a component of this assessment, BC Hydro must analyze incentive programs in other jurisdictions (I.e. Ontario); the associated 'soft' and 'hard' cost trends of generating residential solar power; and developments in research and production that occurred in response to these incentive programs.	A proper economic assessment of alternatives should not compare the costs of subsidized resources to resources that are fully costed. As such, the results of feed-in-tariff (FIT) programs should not be compared; rather the resources composing such a program should be compared as applicable. In assessing the incentive programs in other jurisdictions, the experience in Ontario, with the microFIT program, provides the best insight into the current potential of residential solar power. The microFIT program has been offered since October 2009, initially with an incentive of $800/MWh, subsequently reduced to $550/MWh. In approximately 3 ½ years the program has achieved less than 100 MW in contracts or accepted applications for rooftop PV installations. [Source: PUB_0428-004_Attachment: OPA microFIT Report as of April 1, 2013. Based on the PV Rooftop source technology, Version 2.0 progress to target (43 MW) plus Versions 1.3-1.6 projects in the Pending LDC, Conditional Offer, Connected and Contract Executed categories (53 MW)]. Based on this uptake, and recognizing that the B.C. household market is two and a half times smaller than Ontario, this would represent less than 40 MW in the B.C. market. As a result, the current potential for residential PV to be considered as an alternative to the Project is very limited, even at the sizable microFIT incentive levels provided in Ontario and is not an available alternative to the Project.
pub_0428-005	Beckett, Doug	The JRP must require BC Hydro to initiate a more progressive residential solar generation incentive program. I suggest such incentive program should not be restricted by a maximum capacity as Ontario had in place - as some generation facilities were scaled back so they did not disqualify from the incentive program.	Section 16 of the B.C. Clean Energy Act provides that the Lieutenant Governor in Council (B.C. Cabinet) may through a regulation require BC Hydro to establish a feed-in-tariff program which could address residential solar generation, among other things. However, to date the B.C. Cabinet has not enacted such a regulation. It is the B.C. Cabinet, and not the Joint Review Panel, which has the authority to decide if there should be a feed-in-tariff of the kind contemplated in pub_0428-005.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0428-006	Beckett, Doug	Recently BC Hydro has offered residents of BC $0.099 per kWH of net power generated through solar generating systems. In contrast BC Hydro has offered $0.100 to $0.130 for power generated through more environmentally damaging means such as 'Run-of-the River' hydro projects. The JRP must require BC Hydro to provide a rationale as to why this price disparity has existed.	The requested information is not material to the Environmental Assessment. However, to clarify, BC Hydro provides the following information. The quoted price range of $0.10 to $0.13 per kWh reflects the energy prices (in $F2009) bid by the proponents of projects which were awarded Electricity Purchase Agreements (EPAs) under BC Hydro's most recent competitive call process, namely the Clean Power Call. Further, the quoted prices are adjusted bid prices including the costs of delivery to the Lower Mainland. The stated $0.099 per kWh price available for net power generated by solar generating systems arises from BC Hydro's Net Metering program. This price is a local plant gate price and is available to any customer who qualifies for Net Metering by installing a small generating unit (up to 50 kW) utilizing a clean or renewable resource whether it be biogas, solar, hydro or wind. The $0.099 per kWh price stems from a government policy (Policy Action No. 11 of the 2007 BC Energy Plan) which provides that Net Metering prices should be generally consistent with Standing Offer Program (SOP) prices. Furthermore, Policy Action No. 11 states that the SOP price should be transparent, simple and based on the most recent call results. BC Hydro's most recent call was the Clean Power Call which was completed in mid-2010. The $0.099 per kWh price is a composite average figure of the plant gate prices which is derived from the prices paid for energy from the hydro, wind and waste heat projects awarded EPAs under the Clean Power Call.
pub_0428-007	Beckett, Doug	The JRP must require BC Hydro to provide an assessment of the potential power generation that could be achieved if all new construction in BC incorporates geothermal technology. To what extent would adoption of geothermal technology meet the projected growth in power consumption in BC?	Please see the response to pub 0428-001 and pub 0428-002. It is unlikely that all new construction in BC would incorporate geothermal technology. BC Hydro assumes that the reference to geothermal technology for new construction in B.C. is referring to geothermal or ground source heat pumps. Such heat pumps do not actually generate electricity but are typically used for space heating or cooling needs in homes and commercial buildings. The main benefit arising from the usage of heat pumps is that they can result in reduced energy expenses. With regard to the widespread adoption of geothermal heat pumps in B.C., it should be noted that using heat pumps as the only source of heat in a home is not considered to be economical. As a result, the request is not material to the Environmental Assessment.
pub_0438-001	Kroecher, Mike and Koechl, Rick	IF LARGE HYDRO SUCH AS SITE C , PROVIDES SUCH PHENOMENAL BENFITS, WHY WOULD THE "CLEAN ENERGY ACT" PROHIBIT FURTHER LARGE HYDRO PROJECTS?	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matter raised in this comment lies outside the scope of the environmental assessment.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0438-002	Kroecher, Mike and Koechl, Rick	Question #2 –Re: Disposal of Wood Wastes Clearing at the dam site, transmission line right of way, access roads and reservoir would involve the harvesting of about 1 million m3 of merchantable timber and the creation of about 1.5 million m3 of waste vegetation. Disposal of this waste vegetation would be conducted in accordance with provincial and federal regulations and in a manner that minimizes air quality impacts. Alternative to burning such as chipping, composting, resue or conversion of waste to bioenergy would also be explores to minimize GHG and other emissions (page 40) "….non recycle wood waste would be burned where permitted" (page 42) The disposal option for non merchantable timber an other vegetation would be considered and assessed for feasibility and economic, social and environmental impacts, such as community health, air quality, fish and wildlife and costs. From the quotations it is obvious that burning of waste wood and other vegetation will happen. It is also obvious that burning is by far the least expensive method of disposal. QUESTION: WHAT PATHWAY WILL BC HYDRO BE EXPECTED TO TAKE REGARDING THE DISPOSAL OF WASTE WOOD, WHEN… THEY SIMPLY LIST "OPTIONS" INSTEAD OF A DEFINITIVE SOLUTION? ALSO…. HOW WILL WE BE GUARANTEED THAT THE "LOWEST COMMON DENOMINATOR" (BURNING) WILL NOT BE CHOSEN BY HYDRO DUE TO THE LOW COST?	The estimated volume of merchantable timber is approximately 1.4 million cubic metres, with a further 1.2 million cubic metres of non-merchantable fibre as described on page 12 and 13 of the Vegetation Clearing and Debris Management Plan, Volume 1, Appendix A of the EIS. BC Hydro lists a number of treatment options for non-merchantable fibre in the management plan; application of these options will be applied on a site-specific basis. The least cost option would be to move the non-merchantable fibre into the local biofuel market, however, as the demand for fibre to feed the biofuel market is limited in size, BC Hydro is currently seeking other feasible options for non-merchantable fibre utilization through a request for qualifications public bid process. The request for qualifications was posted on BC BID April 3, 2013.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0438-003	Kroecher, Mike and Koechl, Rick	On page 26 (Business Summary) and page 8 Exec Summary, there are two figures for the EUC. One is for 2013 price of $110/mWh and the other is 2011 price of $95 (up from the earlier $87/mWh. So…why the difference in price regime? Why not have consistency in both Summaries? Can you explain:	All Project UEC figures provided in the EIS are consistent and based on the same detailed Project cost estimate. There are two broad categories of UECs in the EIS. The first category is UECs at the point of interconnection (POI). For the Project this UEC is $95/MWh as provided in Volume 1 Appendix F Part 1 (Project Cost Estimate) on page 5. The UEC for the Project of $95/MWh is not "up from the earlier $87/mWh)". As noted on page 4 of Volume 1 Appendix F Part 1, the $87/MWh figure is based on the same costs as the $95/MWh figure with a discount rate of 5.5% rather than 6.0%. The second category is UECs adjusted for cost of delivery to the lower mainland. For the Project this UEC is $110/MWh as provided in Section 5.4.4.3 (Financial Attributes) Table 5.42 on page 5-68. As noted in footnote (2) to Table 3 in Volume 1 Appendix F Part 1, the difference between the $110/MWh UEC and the $95/MWh UEC is the inclusion of system transmission costs, line losses, escalation to F$2013 and the exclusion of sunk costs. For additional information please see the Technical Memo on Project Costs.
pub_0438-004	Kroecher, Mike and Koechl, Rick	Also, on page 26 (Business Summary) ….what is meant by a 6% discount for BC Hydro? What does this mean? How does it work?	The discount rate of 6% is described on page 5-63 of the EIS. Discount rates are used to represent the time value of money and determine the present value of cash flows (expenses and revenues) that will occur over a period of time. Discount rates reflect the cost of capital associated with these cash flows. BC Hydro's cost of capital reflects a weighted average of the cost of debt (i.e. interest payments) and BC Hydro's regulated return on equity, and thus reflects BC Hydro's capital structure. Please see the Technical Memo on Alternatives to the Project.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0438-005	Kroecher, Mike and Koechl, Rick	On page 8 and 9, Exec Summary, why is Hydro comparing the following: a)Site C portfolio b)Clean Alternative Portfolio c) Clean + Thermal WHY are you comparing Thermal in conjunction with something like Clean? What is the explanation? You've done this for; Financial Comparison, Environmental Comparison and Economic Comparison?	As described in Section 5.5.4.1 of the EIS, BC Hydro built a number of alternative portfolios to compare to the Project. Each alternative portfolio was built to: • Meet the forecasted need for energy and capacity identified in Section 5.2.2 of the EIS; and • Align with the relevant objectives of Section 2 of the Clean Energy Act (CEA) as described in Section 5.3.2 of the EIS. As described in Section 5.5.4.1, BC Hydro built a Clean Generation portfolio to align with the province's clean energy and greenhouse gas reduction objectives and a Clean + Thermal Generation portfolio that met the minimum requirements of the 93% clean or renewable target. As described in Section 5.5.2.8, Table 5.33 sets out the maximum GWh of new natural gas-fired generation that could be built in F2022 under the 93% clean or renewable target as 836 GWh. This is equivalent to a combined cycle gas turbine (CCGT) of about 106 MW or simple cycle gas turbines (SCGTs) totalling about 530 MW. As a result, a portfolio composed solely of natural gas-fired generation resources within the 93% clean or renewable target does not meet the need for the Project. Therefore, neither CCGTs nor SCGTs are an alternative to the Project on their own; they must be combined with clean or renewable resources to compare against the Project's 5,100 Gwh/year of average energy and 1,100 MW of dependable capacity.
pub_0438-006	Kroecher, Mike and Koechl, Rick	BC Hydro continues to be imprecise in the media and in your documents regarding the lifespan of the dam + reservoir , sometimes 70 years, sometimes 100 years: The Business summary states 70 years, yet the NE News had Mr. Conway quote 100 years. Explain the inconsistency.	As described in Volume 1 Appendix F Part 1 (Project Cost Estimate), the term of the analysis used to prepare the Unit Energy Cost for the Project is 70-years, equivalent to the financial planning life of the Project. This is the time period over which the majority of the depreciable equipment in the Project would be replaced through investments in sustaining capital. The operating life of the Project is greater than 100 years, as described in Section 4.6 (Page 4-69, line 20) of the EIS "BC Hydro expects that the Project would be operated for over 100 years…" The Project would be expected to operate as long as it was properly maintained through investments in sustaining capital.
pub_0438-007	Kroecher, Mike and Koechl, Rick	You state on page 25/26 (Bus. Summary) the definition of "Sustaining Capital". Why is "dredging" not included in this list?	The components of Sustaining Capital are given in Volume 1 Appendix F Part 1 (Project Cost Estimate). BC Hydro does not expect to undertake dredging activities on the Project in the evaluation period considered in the EIS due to low levels of sediment deposition in the reservoir. The discussion of sediment deposition in the reservoir is provided in Volume 2 Appendix I Fluvial Geomorphology and Sediment Transport Technical Data Report, specifically Section 4.2.2.3.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0438-008	Kroecher, Mike and Koechl, Rick	Mr. Conway, issued a comment recently in the local news, stating that “426,000” homes would be serviced by the Site C dam. What is this figure based on? Is it based on the 1100 MW of Power? Is it based on the 5100 Gwh of Energy? Explain which	Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The use of "homes" is a way of measuring the amount of generation from the Project. The calculation is based on the 5100 GWh of average annual energy divided by the average energy use of a residential customer.
pub_0438-009	Kroecher, Mike and Koechl, Rick	What length of time (hours, days) can the Site C project sustain a 1100 MW output? Why ?	The ability of the Project to maintain generation levels is dependent on the water available within the dam and hence on both the outflows of upstream facilities on the Peace river and local tributaries. To be considered a dependable capacity resource in the BC Hydro system, the Project can maintain 1100MW of output as required during a two week cold period in the winter corresponding to peak load in the BC Hydro system and be available to back up other generation throughout the year for forced and maintenance hours.
pub_0438-010	Kroecher, Mike and Koechl, Rick	Ms Siohban Jackson stated in the NE News, that “hydro costs will go “down” verses the natural gas option: Where is the evidence for this deduction? What are the prices (production and ratepayer costs) for the project for the 2020-22 start up? What are the EUC for the natural gas option for the 2020-22 period?	Please refer to Section 5.5.4 for the results of the portfolio analysis. Financial attributes are described in Section 5.5.4.3 starting on page 5-67. Further information on the effect on ratepayer costs is described in Section 7.1.3. The UEC for natural gas fired generation is provided in Table 5.34 and Table 5.35, both on page 5-56 of the EIS.
pub_0438-011	Kroecher, Mike and Koechl, Rick	Mr. Conway, has publicly stated over and over “low operational costs” of Site C versus high costs for natural gas. Yet on page 26, (Business Summary) under the EUC per megawatt-hour, the CAPITAL COST is included in the overall cost of this unit, to the tune of 88%. WHY has this never been disclosed every time the subject of the cost to the rate payer comes up? Explain:	Section 7.1.3 of the EIS sets out the differing cost profiles of the Project and a sample combined-cycle gas turbine (CCGT). Section 7.1.3 makes clear that the majority of the Project UEC is made up of capital costs whereas the majority of a CCGT’s costs are made up of variable operating costs such as fuel costs. Refer in particular to Table 7.2 which provides a "Comparison of Unit Energy Cost Composition between the Project and a Representative Combined-Cycle Gas Turbine."
pub_0438-012	Kroecher, Mike and Koechl, Rick	On page 26, under the EUC, what is INCLUDED in the Capital Costs category? Specifics on what is included:	A list of what is included in the capital cost estimate is provided in Table 1 of Volume 1 Appendix F Part 1 (Project Cost Estimate).

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pub_0438-013	Kroecher, Mike and Koechl, Rick	Has SNC Lavalin made any submissions regarding the Enviro assessment or Construction for BC Hydro? If so….what are these submissions entitled? Where can they be accessed?	The engineering definition design of the dam, generating station, spillway and associated structures, are being completed by an Integrated Engineering Team (IET). The IET includes engineers from BC Hydro, Klohn Crippen Berger Ltd (KCBL) and SNC Lavalin Inc (SNC). The Integrated Engineering Team (which includes SNC) provided the engineering design information contained in the EIS (see Sections 4, 6, 11.2, and 37). At this time, there have been no contracts awarded for the construction of the Project.
pub_0438-014	Kroecher, Mike and Koechl, Rick	Does SNC Lavalin presently have a fixed contract with Hydro to do any of the preliminary work? If so, what are these projects? How can they be accessed?	Please see the response to pub_0438-013.
pub_0438-015	Kroecher, Mike and Koechl, Rick	On page 9, of the Exec Summary, why does Hydro compare the Thermal portfolio with the Clean Energy portfolio? Why does Hydro not SEPARATE the two portfolios ? Explain the reason for clumping them into one portfolio. (specific to demonstrating the enviro “footprint” of the thermal in the same context as the “clean energy” folio footprint)	Please see the response to pub_0438-005.
pub_0438-016	Kroecher, Mike and Koechl, Rick	On page 9, of Exec Summary, why are the GHG’s for Site C= “0” tonnes. Explain the rational for this.	As stated in the footnote to the Environmental Attribute Comparison table on Page 9 of the executive summary, the values shown are for the comparison of portfolios and include “... GHG emissions due only to fuel combustion during operations.” As stated on page 5-69 of Volume 1 Section 5, “The operating phase GHGs are sufficient for planning-level analysis…” as these are the only material GHG emissions at the level of portfolio comparisons. A full assessment of the life-cycle GHGs of the Project may be found in Volume 2 Section 15 Greenhouse Gases.” Potential CO2 and CH4 emissions from the reservoir are included in the analysis in Volume 2 Section 15.
pub_0438-017	Kroecher, Mike and Koechl, Rick	Why is there NO mention on page 9 (Exec Summary) of Site C reservoir “emissions” of CO2 and CH4 included with the chart? The reservoir clearly IS part of the dam. Generation of CO2 and methane should be part of the “generation” overall: Why is it omitted? Explain:	Please see the response to pub_0438-016.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0438-018	Kroecher, Mike and Koechl, Rick	On page 9, Exec Summary, why is there no mention of the number of jobs in a separate manner? Example: compare with “jobs compared to producing one megawatt-hour of energy” for Site C compared to natural gas facility. Why again….is thermal clumped together with clean energy grouping?	Jobs are reported in a consistent manner with the BC Stats analysis, provided as Volume 3 Appendix A Economic Assessment Supporting Documentation. Please see the Technical Memo on Workforce and Population Estimates During Construction. With regards to portfolio composition, please see the response to pub_0438-005.
pub_0438-019	Kroecher, Mike and Koechl, Rick	What companies were involved in assessing, modeling the amount of CO2 and Ch4 emissions from generation and the reservoir? Please give names and addresses:	The GHG assessment and modeling was completed by Stantec Consulting Inc., and the authors are listed in Volume 2 Appendix S Greenhouse Gases Technical Report.
pub_0438-020	Kroecher, Mike and Koechl, Rick	In the 15000 page document, mention was made that the estimates for emissions from the dam were on the "conservative” side. What exactly does this mean? What percentage or deviation of conservative was being applied in this model? Explain:	The treatment of non-merchantable vegetation, and biomass buried deep in the reservoir is described for the likely and conservative scenarios in Volume 2 Appendix S Greenhouse Gases Technical Report. The conservative scenario results in a higher estimate of GHG emissions than does the likely scenario. The results of both scenarios are described in Section 15 of the EIS. Section 8.6 of this report summarises the treatment of biomass: the conservative scenario assumed that all biomass affected by the Project be considered an emission, whereas the likely scenario provides a more site-specific, realistic emission estimate that assumed all carbon in merchantable timber would be permanently stored, 30% of the carbon from non-merchantable fibre would be permanently stored buried in deep portions of the reservoir, and the remaining 70% would be considered an emission. For the GHG assessment, carbon in non-merchantable fibre that would be burned was considered to be emitted as CO2 since proper incineration protocols were assumed to be applied. Carbon assumed to be buried in biomass in the reservoir was not considered an emission as decay would occur over centuries.

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pub_0438-021	Kroecher, Mike and Koechl, Rick	*The original submission (CEAR document #838) contains multiple pages of handwritten text.*	Thank you for your handwritten comments. While not all comments are legible, BC Hydro believes that the matters raised in the handwritten text are described in the responses to the typed comments (as provided in pub_0438-001 through 0438-020) as well as the following Technical Memos: – Project Need – Alternatives to the Project – Demand-side Management – Dam Safety – Reservoir Impact Lines – Project Costs – Agriculture The environmental assessment process for the Project is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act.
pub_0446-001	Thompson, Neil	It appears, by way of this 15000 page version of BC Hydro's EIS submission, that the Project Team are still trying to mislead you, the public, the JRP, and the responsible Ministers away from a proper assessment of the impact this project is likely to have on the aviation weather and aviation forecasts in the Fort St. John air traffic control zone. I have been unable to find any professional in the aviation community who believes Hydro's statement that "the impacts to aviation weather will be restricted to the river valley". IMPACT INCREMENTS Accordingly, this is to again request a full and proper assessment, by persons with a full working knowledge of operational aviation meteorology, air traffic controlling, and scheduled air carrier flying of the weather implications at the following significant	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 26.4.10, Navigation, describes potential effects of fog on aviation operations at the airport. The Project is not expected to have an adverse effect on aviation visibility due to changes in fog at the North Peace Regional Airport. No mitigation measures are proposed based on no significant changes to visibility expected at the North Peace Regional Airport and along runway approach route 2. BC Hydro responded to Mr. Thompson's previous request for the credentials and experience of RWDI in completion of aviation assessment on May 3, 2012. RWDI, representatives from Transport Canada Civil Aviation Division (Grant Youngson) and North Peace Regional Airport (Moira Green) met on July 13, 2012 to discuss the approach and results of the aviation assessment and associated Site C microclimate modeling. Both Transport Canada and North Peace Regional Airport representatives considered the aviation assessment approach appropriate for evaluating potential Project related

IR #	Name/ Organization	Information Request/Comment	Response
		increments of cloud height and visibility: 1. Visibility of 6 miles. This parameter normally dictates a close study of aviation forecasts and an assessment of whether or not extra fuel should be carried for the flight. Obviously, every pound of extra fuel taken on a flight replaces a pound of payload that cannot be taken. 2. Visibility of 3 miles. This parameter dictates whether or not the flight can be flown into the 5 mile control zone under Visual Flight Rules. Approximately 1/2 of our air traffic operates under VFR rules. 3. Visibility of 1 1/2 miles. This increment is the minimum visibility limit for: a) Permission to enter the air traffic control zone under fixed wing Special VFR rules. b) Permission to fly an IFR approach to the back course on runway 11. c) Permission to fly IFR RNAV approaches to runways 20 or 02. d) Any deterioration from this value dictates that all air traffic will be rerouted to the Instrument Landing/High Intensity Lighting equipped runway (29) regardless of the runway condition and/or severity of crosswind direction and/or wind velocity. 4. Visibility of 1 mile. This increment is the minimum visibility limit to enter the zone as a helicopter requesting Special VFR clearance to land at the airport. 5. Visibility of 3/4 mile. This value dictates full approach plate traffic patterns for very well equipped carriers. 6. Visibility of 5/8 mile. At this value Hydro and their consultants acknowledge that fog exists. 7. Visibility of 1/2 mile. Any deterioration below this value shuts the airport down. 8. Cloud ceiling of 1500 feet. See 1. above with respect to fuel management. 9. Cloud ceiling of 1000 feet. See 2. above with respect to visual flight rules. 10. Cloud ceiling of 500 feet. This is the minimum height for circling within the air traffic control zone. 11. Cloud ceilings of 300 and 400 feet. Special weather reports are required for any change in these critical values. 12. Cloud ceilings of 200 feet. See 7. above. 13. A few words about aviation forecast reliability. It has been my experience that the	microclimatic changes on aviation use at the airport. The change in visibility and the frequency of poor visibility was assessed based on increased humidity associated with the creation of the proposed Site C reservoir as described in Volume K of the EIS. Examination of visibility at FSJ Airport was based on potential changes due to fog (liquid-water content) as predicted by the Site C microclimate model (WRF - - http://www.wrf-model.org/index.php). Since aircraft operations may be altered by changes in visibility over scales greater than one kilometre, the visibility analysis examined changes in the values of visibility over the entire study time series rather than just for those hours defined as fog by the model (visibility less than one kilometre) or dense fog (visibility less than 500 metres). Visibility was examined to determine the potential for change at the North Peace Regional Airport as a result of the Site C reservoir. These results are shown in Volume 2 Appendix K, Table 11.10.9. The number of poor visibility hours (less than 1 kilometre) was predicted to increase by seven hours per year over the current conditions of 1,567 hours per year. However, the occurrence of fog and atmospheric visibility are both determined by the base quantities of temperature and moisture, for which statistically significant changes were limited to within 1 km of the reservoir. The airport is approximately 12 km from the Site C dam site and reservoir. As described in Volume K of the EIS, the microclimate study predicted that the changes in absolute humidity (i.e. the change in atmospheric water content expressed as mixing ratio) will be statistically insignificant at FSJ airport. The study also examined changes to absolute humidity at heights above ground level that may be of specific concern to local air traffic. The predicted changes in absolute humidity mixing ratio at these heights were also found to be statistically insignificant. As such, it is reasonable to conclude that any other quantity with a dependence on atmospheric water content, such as visibility or aerosol pollution, should also be statistically insignificant and not affect visibility at the FSJ airport.

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		textbook behavior of an air mass can be dramatically affected by pollution and/or any additional sources of air borne moisture. Foul conditions will form earlier, persist longer, and are much harder to accurately forecast. CREDENTIALS Rereading the assessment work submitted in this latest EIS allows us to assess the AVIATION knowledge of Hydro's consulting team. If we put .6 of a mile, which is where their questionable modelling begins, over 6 miles, which is the World Meteorological Organization and International Civil Aviation Organization standard as used by our Canadian Air Regulation Standards regulators, we get .1 which is a 10% understanding of this topic. It is therefore critical that the Joint Review Panel have sufficient aviation weather credentials to properly assess this EIS much less the project. MITIGATION While it is unlikely that BC Hydro could mitigate all probable impacts, I will submit the following formula used by Transport Canada when they assessed impacts of planned expansions at Pickering. Loss = $40 per passenger times hours elapsed between the time the flight should have arrived until the time the flight actually did arrive. In the case of a Q400 delayed for 3 hours that would be 40 x 70 x 3 = $8400 in losses to be absorbed by the community, which does not include second trips to pick up passengers arriving late at the airport or the connections/appointments they have missed. As submitted previously, if Hydro do an honest comprehensive assessment of impacts the project will probably have on our air traffic, and still elect to proceed, they should be committing serious money to upgrades the airport will require to properly serve this community. Please do not be confounded by the avoidance of aviation subjects in the 15000 pages of this EIS. The questionable modelling contained therein avoids the important values outlined above, has no values for background moisture or pollution from other industry near the airport, and presumes to model with no actual upper air data with which to establish duration, frequency, or structure of our local inversions which is completely unacceptable.	

IR #	Name/ Organization	Information Request/Comment	Response
pub_0448-001	Peace Valley Environmental Association and British Columbia Women's Institute	**1 Introduction** The EIS contains a number of deficiencies that render it inadequate. The purpose of the EIS is to meet the requirements of an EA under CEAA 2012 and to serve as the Environmental Assessment Certificate (EAC) Application for the Project. The EIS is the cornerstone of the public assessment process, and as such it must contain adequate information in accordance with the regulatory framework to enable the Panel and the public to assess the Project's potential environmental impacts, and related mitigation measures, in a thorough and technically credible manner. The EIS as it presently stands falls short of that mark in several key ways: 1.The extremely complex Table of Contents and convoluted, confusing organization of material makes cross-checking volumes and sections to determine the presence or adequacy of information deemed important to agriculture extremely difficult and likely to result in errors and omissions. 2.It contains significant gaps in adequate information necessary to assess the Project's potential impacts and how those impacts will be mitigated, and fails to identify and provide justification for many of the assumptions on which the Proponent has relied for the conclusions presented. 3.Based on the 2011 Census of Agriculture, the EIS baseline is not reflective of the productive potential of the Peace River Valley farmland. The region has been in the shadow of the Site C dam for over half a century, which has adversely impacted the way Peace River Valley farmland has been farmed. Failing to take these impacts into account has rendered an accurate assessment of the productive potential of Peace River Valley farmland impossible. 4.Inadequate consideration has been given to the economic impact on farm owner/operators, including impacts arising from the loss of unique microclimate farmlands, the loss of future Crown grazing lands and constraints placed on the management of land within and adjacent to stability impact lines. 5.The economic model developed to evaluate the future public benefits under the "Future Case without the Project" scenario is artificially and arbitrarily static, failing to reflect what would be rational decision-making regarding use of lands. It also uses a problematic Social Discount Rate without justification and an inadequate sensitivity analysis.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the responses to pub_0448-002 to pub_0448-ag-129.

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		6.In addition to the gaps described above, it fails to adequately grasp the full scope and nature of the impacts of the proposed Project on agriculture and demonstrate how the base information was interpreted to result in the assessment of that impact. Accordingly, it is impossible to know where potential Project impacts on agriculture have been seriously underestimated, the adequacy and appropriateness of proposed mitigation and compensation measures have been seriously overestimated, and to determine the validity of the conclusion that the effect of the Project on agriculture is "not significant". 7.The scope of the agriculture economic assessment fails to consider the agriculture sector itself, the future importance of the Peace River Valley farming to the health and nutrition of peoples living in the Northwest Territories and the Yukon, and the impact of the Project on the ALR. 8.It fails to measure the potential economic effect of reduced food sufficiency and high access costs on nutrition, poverty, health and social costs or acknowledge the Project's potential psychological and social costs on families and communities. 9.It fails to describe how monitoring will be provided for the duration of risks caused by the Project. 10.It fails to adequately analyse the economic impact of risks, such as slumping, climate change, higher fuel oil prices, increased concentration in agri-food markets and their impact on food costs. Moreover, there is no cumulative analysis of risks. As a result of these shortcomings, the EIS fails to meet the basic requirements of the EIS Guidelines and the regulatory framework. For example: 1. It is unclear from the information in the EIS how the Proponent reached many of the conclusions contained therein. The EIS Guidelines requires that all hypotheses and assumptions be clearly identified and justified, that analyses be transparent and reproducible, and that all significant gaps in knowledge and understanding related to key conclusions presented be identified along with the steps taken by the Proponent to address those significant gaps. Despite this requirement, many analyses are weakened by data gaps and assumptions that are not identified in the EIS, which renders the conclusions based on those methodologies speculative and unreliable. 2. The EIS fails to include information that is available, credible and would permit a more robust and accurate assessment, contrary to the requirement of the EIS	

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		Guidelines that the effects assessment be based on the best available information and methods.[1] 3. The EIS fails to meet the requirements of CEAA 2012. It does not contain sufficient adequate information and methodologies to identify and ensure the protection environmental components, to ensure that the EA will be conducted in a careful and precautionary manner, to enable the public to meaningfully participate in the EA, to take into consideration the cumulative effects of the Agricultural VC, or to adequately assess the significance of potential Project effects. It also fails to provide sufficient details of some mitigation measures, such as the Compensation Fund proposed for agricultural land losses, and fails to provide sufficient details of follow-up programs, such as monitoring of Project effects on groundwater and erosion. 4. The Proponent has failed to apply precaution in its assessment of risk according to the Canadian Framework for the Application of Precaution in Science-Based Decision Making About Risk. This Project would constitute the largest single exclusion from the ALR of high capability (Class 1-3 improved) agriculture land in the 40-year history of the ALR and the Agricultural Land Commission in British Columbia. There is a significant risk that the Project would have serious implications on food security, public health, the affordability and availability of nutritious food, livelihoods and economies as a result of this Project. Due to these risks, it is crucial that the EA be rigorous and in accordance with best practise. PVEA and BCWI submit that the Project EA cannot proceed on the basis of the EIS in its present inadequate state. Doing so will compromise the integrity of the EA from the outset, and burden the Panel with the task of remedying substantive deficiencies through its own review and information request process. The Agency and EAO, in cooperation with the Working Group and First Nations, should direct BC Hydro to prepare a revised EIS that remedies the deficiencies. PVEA and BCWI have included specific information requests and recommendations for identified deficiencies to assist the Agency and EAO in providing direction to the Proponent on a revised EIS. As noted above, this list is not exhaustive and is constrained by the time and resources available to PVEA and BCWI. PVEA and BCWI have had the opportunity to review the submissions of Yellowstone to Yukon Conservation Initiative and the Landowners Affected by Proposed Site C in draft form,	

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		and endorse their analysis and recommendations. ____ 1 BC Ministry of Environment and Environment Canada, *Site C Clean Energy Project Environmental Impact Statement Guidelines* (5 September 2012) [EIS Guidelines], s 8.5.2 at 30.	
pub_0448-002	Peace Valley Environmental Association and British Columbia Women's Institute	**2 Regulatory Framework** **a. Governing Legislation** The Project is subject to EA requirements under the *Canadian Environmental Assessment Act 2012* (CEAA 2012) and the British Columbia *Environmental Assessment Act* (EAA).[2] Purposes of CEAA 2012 include:[3] 1 To protect components of the environment within federal jurisdiction from significant adverse environmental effects caused by a project subject to an EA under that Act; 2 To ensure that projects requiring a federal EA are conducted in a careful and precautionary manner according to the precautionary principle, to avoid significant adverse environmental effects; 3 To ensure that opportunities for meaningful public participation are provided during a federal EA; 4 To encourage federal authorities to take actions that promote sustainable development in order to achieve or maintain a healthy environment and economy; and 5 To encourage the study of the cumulative effects of projects and activities in a region and the consideration of those cumulative effects assessments in EAs. CEAA 2012 requires that the environmental assessment of a designated project must take into account the following factors:[4] (a) the environmental effects of the designated project, including the environmental effects of malfunctions or accidents that may occur in connection with the designated project and any cumulative environmental effects that are likely to result from the designated project in combination with other physical activities that have been or will be carried out; (b) the significance of the effects referred to in paragraph (a); (c) comments from the public — or, with respect to a designated project that requires that a certificate be issued in accordance with an order made under section 54 of the	The comment attempts to paraphrase the statutory purposes of CEAA 2012. Section 4 of CEAA 2012 is set out below in full: 4. (1) The purposes of this Act are (a) to protect the components of the environment that are within the legislative authority of Parliament from significant adverse environmental effects caused by a designated project; (b) to ensure that designated projects that require the exercise of a power or performance of a duty or function by a federal authority under any Act of Parliament other than this Act to be carried out, are considered in a careful and precautionary manner to avoid significant adverse environmental effects; (c) to promote cooperation and coordinated action between federal and provincial governments with respect to environmental assessments; (d) to promote communication and cooperation with aboriginal peoples with respect to environmental assessments; (e) to ensure that opportunities are provided for meaningful public participation during an environmental assessment; (f) to ensure that an environmental assessment is completed in a timely manner; (g) to ensure that projects, as defined in Section 66, that are to be carried out on federal lands, or those that are outside Canada and that are to be carried out or financially supported by a federal authority, are considered in a careful and precautionary manner to avoid significant adverse environmental effects; (h) to encourage federal authorities to take actions that promote sustainable development in order to achieve or maintain a healthy environment and a healthy economy; and (i) to encourage the study of the cumulative effects of physical activities in a region and the consideration of those study results in environmental assessments.

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		National Energy Board Act, any interested party — that are received in accordance with this Act; (d) mitigation measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the designated project; (e) the requirements of the follow-up program in respect of the designated project; (f) the purpose of the designated project; (g) alternative means of carrying out the designated project that are technically and economically feasible and the environmental effects of any such alternative means; (h) any change to the designated project that may be caused by the environment; (i) the results of any relevant study conducted by a committee established under section 73 or 74; and (j) any other matter relevant to the environmental assessment that the responsible authority, or — if the environmental assessment is referred to a review panel — the Minister, requires to be taken into account. The EIS does not meet the requirements of CEAA 2012. In particular, and for reasons that are set out in greater detail below, the EIS: 1.Fails to contain sufficient adequate information to identify and ensure the protection of components of the environment within federal jurisdiction from significant adverse environmental effects that are likely to be caused by the Project; 2.Fails to include sufficient information and scientifically justifiable methodologies to ensure that the EA will be conducted in a careful and precautionary manner; 3.Fails to include sufficient information to enable the public to understand and thereby meaningfully participate in the EA; 4.Fails to adequately take into consideration the cumulative effects of all VCs, such as the Agricultural VC (as described below); 5.Fails to include the essential information, such as agricultural land utility ratings by improved capability and historical (pre-2011) information, that are necessary considerations for adequately assessing the significance of potential Project effects; 6.Fails to provide sufficient details of some mitigation measures, such as the Compensation Fund proposed for agricultural land losses; 7.Fails to provide sufficient details of follow-up programs, such as monitoring of Project effects on groundwater, erosion etc. _____ 2 Amended Agreement to Conduct an Environmental Assessment Including the	(2) The Government of Canada, the Minister, the Agency, federal authorities and responsible authorities, in the administration of this Act, must exercise their powers in a manner that protects the environment and human health and applies the precautionary principle. The environmental assessment of the Project is being conducted in accordance with the BC/Canada Agreement. That agreement was entered into in February 2012, prior to the enactment of CEAA 2012. Section 126 of CEAA 2012 provides, in part: 126. (1) Despite subsection 38(6) and subject to subsections (2) to (6), any assessment by a review panel, in respect of a project, commenced under the process established under the former Act before the day on which this Act comes into force is continued under the process established under this Act as if the environmental assessment had been referred by the Minister to a review panel under section 38. The project is considered to be a designated project for the purposes of this Act and Part 3 of the Jobs, Growth and Long-term Prosperity Act, and (b) if, before that day, an agreement or arrangement was entered into under subsection 40(2) of the former Act, in respect of the project, that agreement or arrangement is considered to have been entered into under section 40 of this Act; The EIS meets the requirements of the EIS Guidelines, which were developed in accordance with the BC/Canada Agreement and CEAA 2012. Accordingly, the EIS meets the requirements of CEAA 2012.

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		Establishment of a Joint Review Panel, of the Site C Clean Energy Project Between the Minister of the Environment, Canada and the Minister of Environment, British Columbia (24 September 2012) [Amended Agreement]. 3 *CEAA 2012*, s 4. 4 *CEAA 2012*, s 19(1).	
pub_0448-003	Peace Valley Environmental Association and British Columbia Women's Institute	**b. Terms of Reference and EIS Guidelines** The Terms of Reference for the Project are established under section 42 of CEAA 2012. The EIS Guidelines, which are deemed to be incorporated into the Terms of Reference,[5] identifies the issues that must be addressed and information that must be provided in the EIS.[6] The Proponent must prepare the EIS in accordance with the EIS Guidelines.[7] In a number of instances, the Proponent has departed from the EIS Guidelines in preparing the EIS, rendering the EIS deficient. Some of those departures include: 1.The EIS Guidelines requires that the effects assessment be based on the best available information and methods.[8] As set out in detail in section 7 below, the EIS fails to include an adequate baseline for an assessment of agricultural impacts, losses to farmers and impacts on the farming community. As such, the EIS fails to provide the "best available information and methods" as required by the EIS Guidelines. 2.The EIS Guidelines requires that all hypotheses and assumptions be clearly identified and justified, that analyses be transparent and reproducible, and that all significant gaps in knowledge and understanding related to key conclusions presented be identified along with the steps taken by the Proponent to address those significant gaps.[9] 3.The EIS Guidelines requires the EIS be structured similarly to it and include a Table of Contents between Definitions and Project Overview.[10] As set out in detail in section 3 below, despite this requirement, the EIS is missing a unified Table of Contents, Preface and Acknowledgements, and provides the Definitions, Acronyms and Abbreviations, and Table of Concordance separately from the body of the EIS and with no obvious placement within the EIS. Accordingly, the EIS does not comply with the EIS Guidelines requirements regarding structure. 4.The EIS Guidelines require the EIS to provide an overall description of the baseline conditions of each VC[11] and that it be written in clear, precise language, with aids where appropriate to clarify the text.12 As discussed in section 3 below, while the EIS	The BC/Canada Agreement establishes Terms of Reference for the Joint Review Panel, not the Project. Please also see the responses to pub_0448-002 through pub_0448-ag-129.

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		claims to contain a description of the baseline conditions,13 many of the baseline conditions of the Agriculture VC lack any clear textual descriptions. As such, the EIS fails to provide an adequate overall description of the baseline conditions of the Agriculture VC as required by the EIS Guidelines. 5. The EIS Guidelines requires that the EIS provide charts, diagrams, tables, maps and photographs, where appropriate, to clarity the text.[14] Despite this requirement, the EIS fails to include mapping of climate characteristics that would clearly identify those Peace River Valley lands with a unique microclimate, crop suitability, agricultural land capability and suitability, ALR boundaries, present land use, land tenure and parcel configuration, the 56-year BC Hydro flood reserve boundary, preliminary statutory rights-of-way (impact lines), or the location and nature of limitations upon crop options and farm management (see sections 7b-d below). Thus the EIS fails to include adequate mapping as required by the EIS Guidelines. ____ 5 Amended Agreement, supra note 2, s 3.9. 6 Amended Agreement, supra note 2, s 1 at 3. 7 Amended Agreement, supra note 2, s 3.10. 8 EIS Guidelines, supra note 1, s 8.5.2 at 30. 9 EIS Guidelines, supra note 1, s 8.1. 10 EIS Guidelines, supra note 1, s 1.2 at 2. 11 EIS Guidelines, supra note 1 at 30; CEAA, Guidelines for the Preparation of an Environmental Impact Statement for the Comprehensive Study Process Pursuant to the Canadian Environmental Assessment Act (March 2011) [Guidelines] at 6. 12 EIS Guidelines, supra note 1 at 3. 13 EIS, vol 3, s 20.2 at 20-7, lines 10-11. 14 EIS Guidelines, supra note 1 at 3.	

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pub_0448-004	Peace Valley Environmental Association and British Columbia Women's Institute	**c. Application of Precaution** A purpose of CEAA 2012 is to ensure that designated projects that require the exercise of a federal regulatory power are considered in a careful and precautionary manner to avoid significant adverse environmental effects.[15] The Government of Canada's Framework for the Application of Precaution in Science-Based Decision Making About Risk outlines the guiding principles for the application of precaution to science-based decision making in the context of federal regulatory activities regarding health and safety, the environment and the conservation of natural resources.[16] It is intended to "provid[e] a lens to assess whether precautionary decision making is in keeping with Canadians' social, environmental and economic values and priorities."[17] The EIS fails to apply this lens when assessing many of the Project's potential risks. As noted above, there are significant risks associated with this Project. Regarding agriculture alone, the Project would constitute the largest single exclusion from the ALR of high capability agriculture land in the history of the ALR and the Agricultural Land Commission in BC. There is a significant risk that the Project would have serious implications on food security, public health, the affordability and availability of nutritious food, and livelihoods and economies. Despite the magnitude of these risks, the Proponent has departed from the EIS Guidelines in preparing the EIS, rendering the document deficient. Some of those departures include: 1. The Framework requires that in all cases, sound scientific evidence is a fundamental prerequisite to applying the precautionary approach.[18] As demonstrated throughout these comments, and in particular in section 7, the EIS fails in a number of instances to provide sufficient information to meet the Framework requirement that its analyses and conclusions be grounded in sound scientific information. 2. The Framework requires that "[r]eports should summarize the existing state of knowledge, provide scientific views on the reliability of the assessment and address remaining uncertainties and areas for further scientific research or monitoring." As set out in detail in sections 5 and 7k, n and p below, the EIS fails to identify and justify many assumptions on which the conclusions contained therein rely. It also fails to address areas for monitoring beyond five years after operations begin. Accordingly, the EIS fails to adequately address uncertainties and areas for further research or	Please see the following Technical Memos: • Uncertainty and Precaution • Agriculture Please see the responses to pub_0448-002a to pub_0448-ag-129.

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		monitoring as required by CEAA 2012 and the Framework. 3. The Framework provides that precaution requires an appropriate assessment of scientific factors and consequent risks.[19] However, as discussed in section 7q below, the EIS fails to adequately analyse the economic impact of risks, such as slumping, climate change, higher fuel oil prices, increased concentration in agri-food markets and their impact on food costs, or include a cumulative analysis of risks. As such, the EIS fails to include the information necessary for precautionary decision-making to be made regarding this Project as required under CEAA 2012. 4. As discussed in section 7h below, second only to the reservoir itself, the preliminary statutory rights-of-way areas resulting from the various impact lines have the greatest potential impact on agriculture, both present and future, but the implications of the preliminary stability impact line and associated statutory rights-of-way on ± 9,600 ha have been seriously downplayed in the EIS, resulting in several key gaps. ____ 15 CEAA 2012, s 4(b). 16 Canada, Framework, supra note 32 at 2. 17 Canada, Framework, supra note 32 at 3. 18 Canada, Framework, supra note 32, s 4.2 at 7. 19 Canada, Framework, supra note 32 at 6.	
pub_0448-005	Peace Valley Environmental Association and British Columbia Women's Institute	**3 General Concerns** **a. Layout and Contents** ***Structure*** The EIS does not comply with the EIS Guidelines requirements regarding structure. The EIS Guidelines requires the EIS be structured similarly to it and include a Table of Contents between Definitions and Project Overview and a Table of Concordance between the Acknowledgements and Executive Summary.[20] It also requires the Proponent to provide charts and tables, among other things, where appropriate to clarify the text. [21]In particular, the EIS: is missing a single Table of Contents, Preface and Acknowledgements, and provides the Definitions, Acronyms and Abbreviations, and Table of Concordance separately from the body of the EIS and with no obvious placement within the EIS. **Issues** 1. There is no single, comprehensive table of contents to enable readers to easily and	The EIS is structured in accordance with the EIS Guidelines. The absence of a preface and acknowledgements is immaterial. The Table of Contents provided in each of the Volumes of the EIS demonstrate clearly where all information is found. In the EIS, the Table of Concordance is in Volume 1, Binder 1, immediately in front of Section 1. The descriptions of the baselines of all VCs, including Agriculture, meet the requirements of the EIS Guidelines and are sufficient. Some information describing of the baseline conditions is provided in maps and figures, as required by Section 1.3 of the EIS Guidelines, which states: "The proponent shall provide charts diagrams, tables, maps, and photographs, where appropriate, to clarify the text."

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		conveniently ascertain the entire contents of the EIS. As per the EIS Guidelines,[22] the EIS cross-references much of the information contained therein. The lack of a single, comprehensive table of contents makes cross-referencing unduly complicated and time-consuming and increases the risk of readers (including Panel members) failing to find and draw linkages between related information contained in different volumes. In this case, a single comprehensive table of contents in addition to the Volume-specific Tables of Contents is necessary to show clearly where in the EIS information is contained. 1.The EIS appears to be lacking a preface and acknowledgements as required by the EIS Guidelines.[23] 2.The Table of Concordance is listed in the Volume 1 Table of Contents as appearing before the Introduction but is not included in the text of that Volume. Instead, it is inconveniently located on the CEAA Registry at the end of Volume 1. As its purpose is to assist with cross-referencing and organization, the Table of Concordance should appear at the outset of the EIS as required by the EIS Guidelines. **• Requests/Requirements** 1. That the EIS be structured according to the EIS Guidelines, and in particular that: a. it includes a table of contents that describes the entire contents of all volumes of the EIS; b. the Table of Concordance appear at the outset of the EIS as required by the EIS Guidelines; and c. it includes a preface and acknowledgements. **Descriptions Lacking** The EIS Guidelines require that the EIS must provide an overall description of the baseline conditions of each VC.[24] Agricultural baseline data must be adequate to provide an understanding of the current agricultural land base, operations and systems.[25] It is a guiding principle of this EA that all parties, including the public, have a clear understanding of the proposed Project as early as possible in the review process.[26] Accordingly, the EIS should be written in clear, precise language, and charts, diagrams, tables, maps and photographs, where appropriate, should be provided to clarity the text.[27] **Issue** 1. While the EIS claims to contain a description of the baseline conditions,[28] many of	

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		the baseline conditions of the Agriculture VC lack any clear textual descriptions, such as Land Capability (s 20.2.2), Agricultural Suitability (s 20.2.3), Agricultural Utility (s 20.2.4), Agricultural Land Use (20.2.5) and Agricultural Tenures on Crown Land (20.2.5). • **Request/Recommendation** 1. That the EIS include clear and comprehensive textual baseline descriptions for all VCs and their sub-components, and in particular (but not limited to) Land Capability (s 20.2.2), Agricultural Suitability (s 20.2.3), Agricultural Utility (s 20.2.4), Agricultural Land Use (20.2.5) and Agricultural Tenures on Crown Land (20.2.5). ----------	
		20 EIS Guidelines, supra note 1, s 1.2 at 2. 21 EIS Guidelines, supra note 1, s 1.3 at 3. 22 EIS Guidelines, supra note 1 at 3. 23 EIS Guidelines, supra note 1, s 1.2 at 2. 24 EIS Guidelines, supra note 1 at 30; CEAA, Guidelines, supra note 11 at 6. 25 EIS Guidelines, supra note 1 at 77. 26 EIS Guidelines, supra note 1 at 1. 27 EIS Guidelines, supra note 1 at 3. 28 EIS, vol 3, s 20.2 at 20-7, lines 10-11.	
pub_0448-006	Peace Valley Environmental Association and British Columbia Women's Institute	**d. Representation** The Appendices form part of the EIS. The EIS Guidelines require that the effects assessment be based on the best available information and methods.[29] They also require that all hypotheses and assumptions be clearly identified and justified, that analyses be transparent and reproducible, and that all significant gaps in knowledge and understanding related to key conclusions presented be identified along with the steps taken by the Proponent to address those significant gaps.[30] **Issue** 1. The Proponent states that it does not represent, guarantee or warrant: • the accuracy, completeness or usefulness of, • the intellectual or other property rights of any person or party in, or • the merchantability, safety or fitness of the information contained in the Reservoir Filling Plan Report in Appendix B (vol 1,	The proponent is not required by the environmental assessment legislation, the BC/Canada Agreement, nor the EIS Guidelines to "represent, guarantee or warrant" the information contained in the EIS. There is no purpose in imposing such a requirement. The information in an EIS would not be more reliable simply because a proponent makes a statement couched in the language of a contractual promise. The reservoir filling plan has been developed by BC Hydro and is included in the EIS for the purpose of the environmental assessment. The provincial ministers and the Minister of Environment of Canada are entitled make use of the information in that plan for that purpose.

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		Appendix B). The Proponent further states that it does not accept any liability of any kind arising in any way out of the use of or reliance on any information, statement, recommendation, product or process disclosed, described or recommended in the report, and that should third parties use or rely on any information, product or process disclosed, described or recommended in the report, they do so entirely at their own risk. 2. As noted above, the purpose of the EIS is to permit the Joint Review Panel to conduct the EA in accordance with the requirements of CEAA 2012 and the EAA and to permit the public to participate meaningfully in this EA. In order to be able to justify the adequacy of the information and methodologies on which its assessments, including assessments of potentially significant risks, the Proponent must stand behind the information it has provided in the EIS. Moreover, the subject of the information included in Appendix B (the various hazard and impact lines associated with the reservoir) and the intended use of that information (the assessment of potential risk to environmental and human health and safety) both involve significant risk. 3. As the Canada Framework for the Application of Precaution in Science-based Decision Making About Risk policy recognizes, the decision-making process for managing risks associated with scientific information requires sound judgment that is based on a credible scientific basis.[31] It is critical that the Panel is able to rely on the reliability of this basis when reaching its conclusions and making recommendations to the Ministers, and that the Ministers subsequently make their decisions based on the best available information. 4. The Proponent has responsibility for providing that credible scientific basis. Accordingly, it must represent, guarantee and warrant the accuracy, completeness, usefulness for the purposes of the EA, merchantability, safety, fitness and intellectual or other property rights of any person or party in the information contained in the Reservoir Filling Plan Report in vol 1, Appendix B. • **Request/Recommendation** 1. That the EIS contain an express warranty by the Proponent that it represents all information contained in and on which all conclusions rely in the EIS, and is responsible for all assumptions made in the EIS. _____ 29 EIS Guidelines, supra note 1, s 8.5.2 at 30.	

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		30 EIS Guidelines, supra note 1, s 8.1. 31 Canada, Framework for the Application of Precaution in Science-Based Decision Making About Risk (2003) [Framework] at 4.	
pub_0448-007	Peace Valley Environmental Association and British Columbia Women's Institute	**Baselines Inadequate** **Issue** 1. Throughout the EIS, descriptions of baseline descriptions lack some or all required information. The EIS must provide descriptions of the baseline conditions that include the following information:[32] a. The relevant legal framework; b. Methods used to collect the baseline data; c. Sources of information; d. The extent to which information has been obtained from the public and has been considered; e. The extent to which Aboriginal traditional knowledge has been obtained and has been considered; and f. An overall baseline description. • **Request/Recommendation** 1.That the Proponent be directed to ensure that all baseline condition descriptions contain the information required by the EIS Guidelines. 2.That section 11.2.2.2 include a description of changes to the composition of vegetation communities, and in particular effects on sensitive or rare species, ecosystems and ecotypes for both upstream and downstream communities. 3. That section 11.2.2.2 include a description of the quantity and quality of lost habitat, and the effects on populations of flooding, habitat loss, fragmentation etc. _____ 32 EIS Guidelines, supra note 1 at 30.	The information describing the baseline conditions of each of the VCs, including the relevant legal framework, the methods, and the sources, including information obtained from Aboriginal groups, meets the requirements of the EIS Guidelines and is sufficient. Section 11.2.2.2 of the EIS provides a description of regional glacial history. The information in Section 11.1.2.2, Biological Conditions, is provided for the purposes stated in, and meets the requirements of, Section 9.1, Previous Developments, of the EIS Guidelines.

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pub_0448-008	Peace Valley Environmental Association and British Columbia Women's Institute	**4 Purpose** **Issue** 1.The EIS states that its purpose is to "provide the information that the Minister of Environment of Canada and the Executive Director have identified in the EIS Guidelines" (vol 1, s 1.2 at 1-4). This statement is inaccurate; while it is true that the EIS must provide the information identified in the EIS Guidelines, that requirement is not the document's purpose. 2.The EIS fails to describe its purpose as containing adequate information to proceed to public hearings. As the EIS notes, the Proponent must provide the EIS for the purposes of the EA under CEAA (now CEAA 2012).[33] As the EA must be conducted according to the Terms of Reference, and as the Terms of Reference require that the EIS must be sufficient to proceed to public hearings on the proposed Project,[34] a purpose of the EIS is therefore to ensure that it contains sufficient information for the public hearings to be conducted. 3.The EIS fails to describe its purpose as containing adequate information to meet the purposes of CEAA 2012. As noted above, the Proponent must provide the EIS for the purposes of the EA under CEAA (now CEAA 2012),[35] which include protecting components of the environment within federal jurisdiction from significant adverse environmental effects caused by the Project; ensuring that the Project is conducted in a careful and precautionary manner to avoid significant adverse environmental effects; ensuring that opportunities for meaningful public participation are provided during the EA; encouraging federal authorities to take actions that promote sustainable development in order to achieve or maintain a healthy environment and economy; and encouraging the study of the cumulative effects of projects and activities in the Peace Region and the consideration of those cumulative effects assessments in the EA. The EA is intended to achieve the purposes and fulfil the requirements of CEAA 2012. • **Request/Recommendation** 1.That the purpose section of the EIS be amended to strike the sentence at s 1.2, page 14, lines 8-9. 2.That the EIS include a description of its purpose as being to provide the information necessary to: a. ensure that the EA is conducted in such a manner that meets the purposes of CEAA 2012, including ensuring:	The purpose of the EIS is correctly described at page 1-4, in Section 1.2 of the EIS. In section 1 of the BC/Canada Agreement, "EIS Guidelines" is defined: ""EIS Guidelines" means the document provided to the proponent by the federal Minister of the Environment and the Executive Director of EAO that identifies the issues to be addressed and the information to be provided in the EIS." At page xi of the EIS Guidelines, in the preface, the Minister of Environment of Canada and the Executive Director of the EAO state this: "In this document, the information which must be included in the EIS is identified." At page 1 of the EIS Guidelines, the Minister of Environment of Canada and the Executive Director of the EAO set out three guiding principles and state this: "An environmental assessment conducted in accordance with the agreement between the Ministers of Environment of Canada with respect to the environmental assessment of the Project and with these EIS Guidelines, which have been developed under that Agreement, will meet the objectives of these principles." The information contained in the EIS meets the requirements of the EIS Guidelines, serves the objectives of the Guiding Principles, and is sufficient for the purpose of giving public notice and conducting the public hearings.

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		i. ensuring the protection of components of the environment within federal jurisdiction from significant adverse environmental effects caused by the Project; ii. ensuring that the Project is conducted in a careful and precautionary manner to avoid significant adverse environmental effects; iii. that opportunities for meaningful public participation are provided during the EA; iv. encouraging federal authorities to take actions that promote sustainable development in order to achieve or maintain a healthy environment and economy; and v. encouraging the study of the cumulative effects of projects and activities in the Peace Region and the consideration of those cumulative effects assessments in the EA; b. enable the EA to proceed to a public hearing and the Joint Review Panel to conduct the EA and prepare a report for the federal Minister of Environment and the Executive Director of the EAO pursuant to the statutory requirements and the Terms of Reference. _____ 33 EIS Guidelines, supra note 1 at ix. 34 Amended Agreement, Terms of Reference, supra note 2, ss 3.1-3.2. 35 EIS Guidelines, supra note 1 at ix.	
pub_0448-009	Peace Valley Environmental Association and British Columbia Women's Institute	**Need For and Alternatives** ***Need For*** The EIS fails to present a clear and consistent rationale and demand forecast to demonstrate the need for the Project. This is a major deficiency that undermines the integrity of the assessment process, as it creates confusion around the fundamental question of why this Project, with its attendant costs and impacts, is needed. **Issues** 1.The EIS is unjustifiably ambiguous about the relationship between potential LNG demand and the proposed Project and seemingly arbitrary in the range of load forecasting presented. On the one hand, the Proponent states that potential or proposed unconfirmed LNG projects are not included in the load forecasting on which the need for the project relies, while on the other hand it presents considerable load forecasting that includes potential and proposed unconfirmed LNG project demand. 2.The 2012 mid-load forecast for both energy and peak demand is stated to represent	The relationship between the Project and potential LNG demand is stated in unambiguous terms in the EIS. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential Liquefied Natural Gas (LNG) demand: • The Project need is established on the basis of the load-resource balances (LRBs) depicted in tables 5.8 and 5.9 of the EIS, which do not include potential LNG demand; • Good utility practice and the British Columbia Utility Commission's (BCUC) Resource Planning Guidelines (a copy of which is found at Volume 1 Appendix D Part 2 of the EIS) provide that LRB uncertainties should be acknowledged. The potential for LNG demand is one such uncertainty, and this is why in Section 5.2.3, tables 5.10 and 5.11 BC Hydro set out the range of effect LNG demand may have on the need for new energy and capacity resources. Please see the Technical Memo on Project Need. Including potential future Demand Side Management (DSM) options such as DSM Options 4 and 5 in the 2012 Load Forecast would be contrary to the BCUC's Resource Planning Guidelines and good

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		the Proponent's expected future load. The EIS expressly warrants that the 2012 mid-load forecast does not include potential LNG load.[36] Despite this claim, LNG energy demands are subsequently presented, along with load-resource balance forecasts that include both low and high estimates of future LNG demand. It is unclear why, if LNG energy demand does not comprise part of the mid-load forecast and so does not per se form a basis for the 'need for' the project, the Proponent has included it anyway. 3.Moreover, while the EIS describes industrial demand as historically "the most variable" and "the most challenging to forecast",[37] it includes load forecasting based on potential LNG demand in s 5.2.3 while excluding load forecasting based on the more "aggressive" DSM options 4 and 5 and DSM capacity initiatives. While the Proponent cites uncertainties over government and customer acceptance, delivery risk and implementation success as rationales for their exclusion as viable alternatives to the Project,[38] no justification is given for their exclusion from load forecasting. To exclude DSM Options 4 and 5 and capacity initiatives from load forecasting due to uncertainties would be arbitrary, as uncertain LNG demand has been included. 4.The EIS Guidelines and CEAA operational policy statement on addressing the "Need for the Project" state that the "Need for the Project" must establish its fundamental justification or rationale.[39] Due to the ambiguity regarding the role of potential LNG demand, and the arbitrariness regarding exclusion of untested but feasible DSM Options 4 and 5 from any load forecasting, the EIS has failed to adequately describe the fundamental justification or rationale for the Project. 5.The Proponent states that potential growth in BC's supply of LNG to Asian markets is a key driver of future load growth (vol 1, s 5.2.1.1) and that several LNG proponents have approached it and/or the BC Government with respect to LNG projects for the BC north coast (vol 1, s 5.2.3). Potential LNG load is discussed in Section 5.2.3. However, LNG load is not included in the 2012 mid-load forecast (vol 1, s 5.2.1.1). The EIS Guidelines requires the Proponent to base predictions on clearly stated assumptions.[40] However, tt is unclear in the EIS to what degree the 'Need for" the Project relates to anticipated LNG load. • **Request/Recommendation** 1. That the Proponent be directed to clarify the basis for its conclusion that the Project is needed, and in particular address: a. Whether the load forecast that forms the basis for the Project justification includes forecast LNG demand;	utility practice. BC Hydro's treatment of DSM is guided by the BCUC's Resource Planning Guidelines, which specifically provide that future DSM "should not be reflected in the utility's gross demand forecasts". The 2012 Load Forecast is a gross demand forecast. BC Hydro's 2012 Load Forecast assumptions are set out in Section 5.2.1.1 of the EIS. The 2012 Load Forecast reflects the impact of savings from BC Hydro's past DSM initiatives such as energy conservation achieved through F2012. Future projected DSM savings from F2013 onward are accounted for separately in Section 5.2.2.2 of the EIS as part of development of the overall energy and capacity LRBs. A description of BC Hydro's future DSM savings target, together with the reasons for choosing the DSM target, are found in Section 5.2.2.2 of the EIS. Additional information concerning DSM delivery risk (the risk that forecasted DSM energy and capacity savings do not materialize) is found in Section 5.2.3 of the EIS. The EIS analysis then proceeds to review potential alternatives in Sections 5.4 and 5.5 to address the energy and capacity gaps shown in tables 5.8 and 5.9 after taking into account BC Hydro's future DSM savings target. BC Hydro is of the view that DSM Options 4 and 5 are not viable for the reasons set out in Section 5.4.2.3. Please see the Technical Memo on Project Need. The EIS is in accordance with the EIS guidelines and is sufficient for the evaluation of the Project. The clean energy projects contemplated in Section 3.1.4 are, as stated, "intermittent resources, such as wind, run-of-river hydro and solar." As set out in Section 5.2.1, the Project is needed whether or not any new LNG projects proceed. Note that the Provincial Government has not classified LNG projects or natural gas-fired generation as a 'clean or renewable' resource which is defined in Section 1 of the Clean Energy Act as: biomass, biogas, geothermal heat, hydro, solar, ocean and wind.

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		b. Why DSM Options 4 and 5 and DSM capacity initiatives have been removed from load forecasting, and provide the technical rationale for this removal; c. Provide a description of all potential and proposed LNG projects considered in the high and low-LNG forecasts, including sufficient details to provide a general understanding of the proposed projects, including project name, location, date proposed, anticipated start-up date, proposed LNG processing/storage/transport capacity, and likelihood that project will proceed; and d. Provide the justification for the inclusion of each LNG demand and the more aggressive DSM in that load forecasting. 2. That Proponent clarify whether the “clean energy projects" mentioned in the Site C Clean Energy Project Charter "Vision" (vol 1, s 3.1.4 at 3-3) include LNG. -------- 36 EIS, vol 1, s 5.2.3 at 5-5. 37 EIS, vol 1, s 5.2.1.1 at 5-7. 38 EIS, vol 1, ss 5.2.3 at 5-35 and 5.2.4 at 5-37. 39 EIS Guidelines, supra note 1, s 4.1; CEAA “Addressing “Need for”, “Purpose of”, “Alternatives to” and “Alternative Means” under the Canadian Environmental Assessment Act” at 2. 40 EIS Guidelines, supra note 1, s 3.1.2.	
pub_0448-010	Peace Valley Environmental Association and British Columbia Women's Institute	**Alternatives** ***Issues*** 1.It is not clear in the EIS whether the rapid growth forecast in the oil and gas and mining industries would occur if these industries were not attracted by electricity rates that are less than half the cost of new supply. 2.The reliance on the Clean Energy Act as a bar for considering Burrard Thermal and spot-market power as potential future sources of energy ignores the possibility that the relevant provisions of the Clean Energy Act may be repealed at a future date. 3.The alternatives considered in the EIS are seriously constrained by current policy (e.g., for no more major hydroelectric projects or more aggressive DSM). 4.The economic analysis of alternatives assumed that all alternatives except the Project would be IPPs, with a higher cost of capital than the Proponent faces and assumed for the Project, but failed to consider the unit costs of the Proponent were to develop or finance the projects itself.	BC Hydro serves its customers, including oil and gas customers, pursuant to tariffs (rates) approved by the BCUC and in accordance with the legislated Heritage Contract. The B.C. Environmental Assessment Office, the Canadian Environmental Assessment Agency, other government agencies and indeed any Joint Review Panel must recognize existing legislative parameters. Thus consistent with Section 4.2.1 of the EIS Guidelines, BC Hydro identified those potential resources that are legislatively barred in Section 5.4.2.1 of the EIS, including Burrard Thermal Generating Station (Burrard) and spot-market power: • BC Hydro is prohibited from planning to rely on Burrard for energy (sections 3(5), 6(2)(d) and 12 of the B.C. Clean Energy Act) or for capacity after Mica Units 5 and 6, the Interior to Lower Mainland Transmission Reinforcement Project and the third transformer at Meridian are in-service (Authorization for Burrard Thermal Electricity Regulation). Therefore, Burrard is not a viable alternative to the Project; • BC Hydro is prohibited from planning to rely on spot-market power (section 6(2) of the Clean Energy

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		Requests/Recommendations 1.That the EIS provide the rationale for its effective subsidy of new electric intensive industry loads. 2.That the EIS include a forecast taking into consideration electricity rates provided at the same cost as new supply. 3.That the EIS include the potential of Burrard Thermal and spot-market energy in its forecasting. 4.That the EIS be amended so as to remove current government policy from bars to consideration of alternatives. 5.That the EIS include the unit costs of alternative IPPs if the Proponent were to develop or finance the projects itself.	Act). Therefore, spot-market power is not a viable alternative to the Project. The potential large hydroelectric resources listed in schedule 2 to the Clean Energy Act are legislatively barred pursuant to sections 10 and 12 of the Clean Energy Act; refer to Section 5.4.2.1 of the EIS. More aggressive DSM, such as DSM Options 4 and 5, is neither legislatively barred nor constrained by Provincial Government policy. BC Hydro is of the view that DSM Options 4 and 5 are not viable for the reasons set out in Section 5.4.2.3 of the EIS. Please also refer to BC Hydro's response to pub_0448-09. As described in Section 5.5.3.4 of the EIS, BC Hydro's alternatives analysis is consistent with the Provincial Government's 2002 Energy Plan, which provides that the private sector (i.e., independent power producers) will develop new electricity generation, with BC Hydro restricted to improvements at existing plants (such as Resource Smart projects) and the Project. BC Hydro analyzed Resource Smart projects in Section 5.5.2.9 of the EIS using its cost of capital. The EIS is in accordance with the EIS guidelines and is sufficient for the evaluation of the Project.
pub_0448-011	Peace Valley Environmental Association and British Columbia Women's Institute	**6 Cumulative Effects Assessment (CEA)** **a. Temporal Boundary Inadequate** 1. The baseline for determining the effects of the Project cumulatively with those of other projects and activities is inadequate for assessing the true cumulative impacts of the Project and does not meet the regulatory requirements for consideration of past projects: a. It is a purpose of CEAA 2012 to encourage the study of cumulative effects of physical activities in a region and the consideration of those study results in environmental assessments.[41] b. Section 19(1) of CEAA 2012 requires that the EA include, among other things, a consideration "of any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out" [emphasis added]. c. Likewise, the Joint Review Panel Terms of Reference requires that the Panel will include in its assessment of the Project the cumulative effects that are likely to result from the Project in combination with other projects or activities that have been or will be carried out. [emphasis added][42] d. The BC EAO User Guide similarly describes cumulative impacts as the "likely impacts from a reviewable project, combined with the impacts from prior	BC Hydro has no plans to decommission the dam. In the EIS, the information required by Section 3.3.11 of the EIS Guidelines, including the commitment that BC Hydro was required to make, is provided. No further consideration of decommissioning is required. The potential adverse effects of the Project have been characterized in accordance with the requirements of Section 8.5.2.3 and Table 8.3 of the EIS Guidelines. Please also see the following Technical Memos: - Cumulative Effects Assessment - Flood Reserve.

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		development, existing activities; and, reasonably foreseeable future development that is sufficiently certain to proceed."[43] [emphasis added] 2.By failing to consider the period from the start of site prep activities (at least as far back as when the flood reserve was established in 1957) the EIS fails to include the best available information required for a cumulative effects assessment as required under CEAA 2012, the Terms of Reference and, accordingly, the BCEAA. It is a best practice that in characterizing the environmental effects of the Project, the EIS describe the current baseline environment and environmental trends within the study area. The description should include a consideration of past projects and activities carried out by the proponent and/or others within the regional study area, and in describing and predicting the environmental effects of the Project, "the proponent must cover the period from the start of any site preparation activity associated with the Project through construction, operation, including maintenance and repairs, and eventual decommissioning (closure phase) and abandonment (post-closure phase)."[44] 3.That the 1983 BCUC review of Site C included a consideration of the effects of the 1957 flood reserve suggests a sufficient baseline of information is available for an assessment of the Project's impacts from at least as far back as that early activity associated with the Project. It is contrary to the EIS Guidelines, CEAA 2012 and common best practices to not include the best available information in an EA. 4. The EIS fails to address Project decommissioning and abandonment, despite the fact that these elements are a part of the Project life and as such must be addressed in the EA. • **Request/Recommendation** 1.That in characterizing the environmental effects of the Project, the EIS describe environmental trends within the study area. 2.That the description of the existing baseline and the environmental trends include a consideration of past projects and activities carried out by the proponent and/or others within the regional study area. 3.That in describing and predicting the environmental effects of the Project, the Proponent cover the period from the start of any site preparation activity associated with the Project through construction, operation, including maintenance and repairs, and eventual decommissioning (closure phase) and abandonment (post-closure phase). **b. Pre-Industrial Case Required**	

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		In the EA of the proposed Shell Canada Ltd. Jackpine Mine Expansion Project (JME), the Joint Review Panel required the proponent to include in its Environmental Impact Assessment a preindustrial baseline.[45] Where information on the pre-industrial setting was lacking, the preindustrial case was based on the oldest data available, or the most representative, for each components.[46] The temporal boundaries of the Frontier Oil Sands Mine Project CEA Environmental Impact Assessment include a "predevelopment" case from pre-1965, which is prior to oil sands development activity in the region.[47] In the EA of the Cold Lake Oil Sands Projects, the temporal boundaries for the CEA included a "Past" boundary to represent pre-1979 regional conditions prior to major heavy-oil development in the region.[48] PVEA and BCWI note that the Alberta oil sands environment where the JME, Frontier Oil Sands Mine and Cold Lake Oil Sands projects occur are heavily industrialized and impacted environments, much like the RAA of Site C.[49] Accordingly, a pre-industrial baseline is appropriate for this EA. **Issues** 1.By failing to include a pre-industrial baseline, the EIS fails to adequately assess the impacts of past projects as required for a cumulative effects assessment and as is commonly required in EAs under CEAA (now CEAA 2012). [50] 2.As Environment Canada has noted, "a meaningful and comprehensive cumulative effects assessment includes a pre-industrial baseline case to identify the effects of projects that have been carried out."[51] CEAA's Cumulative Effects Assessment Practitioner's Guide states that the temporal boundary for assessing past project ideally begins before the effects of most major actions were present.[52] It is important to ensure that the effects of past projects that are no longer active yet continue to represent a disturbance to VCs are recognized, even where those effects are no longer readily visible, and even where they have become part of the existing baseline conditions.[53] The Practitioner's Guide provides for the use of a historical baseline, which it defines as a past point in time "representative of desired regional land use conditions or pre-disturbance conditions."[54] 3.The Proponent has agreed that "in characterizing any potential residual effect and any potential cumulative effect, it is helpful to characterize the extent to which an area has already been disturbed including a consideration of the existing hydroelectric generation projects on the Peace."[55] However, in the EIS any projects or activities occurring prior to September 5, 2012 are expressly excluded from the cumulative	

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		effects assessment.[56] Thus, despite the Proponent's assurance to the EAO and CEAA that characterizing the extent to which an area has been disturbed by past and existing projects and activities, it has expressly omitted such information from the EIS. 4. In its comments in response to public comments on the Draft EIS Guidelines, the Proponent states that "[a] pre-development case is inherently unreliable because there are little or no reliable data in existence that could scientifically describe the pre-development state of the area."[57] It has not provided the methodology used to draw its conclusion that little or no reliable data exists to describe the pre-development state of the area, the results of any attempts to describe the pre-development state of the area, or the sources it has used to in such an attempt. • **Request/Recommendation** 1.That the EIS includes a description of a pre-industrial case (PIC) as one of the temporal boundaries of the cumulative effects assessment and describes the condition of each VC in a pre-industrialized state; i.e., without the effects of those projects and activities that are included in the cumulative effects assessment. 2.That the CEA be updated to compare the CEA results for each VC against the state of the PIC for that VC. 3.In the alternative, that the EIS provide justification for its conclusion that it would not be possible to describe the pre-industrial case, as required by the CEAA Reference Guide requires.[58] 41 CEAA 2012, s 4(i). 42 Amended Agreement, supra note 2, Appendix 1, s. 2.2. 43 Environmental Assessment Office, User Guide (2009, Updated 1020) at 26, online: <http://www.eao.gov.bc.ca/pdf/EAO_User_Guide_20100415.pdf>. 44 Taseko Prosperity Gold-Copper Mine Project EIS Guidelines (December 2008) at 14; Lower Churchill Hydroelectric Generation Project Environmental Impact Statement, Vol 1A at 9-18. 45 Joint Review Panel, Supplemental Information Requests – Shell Canada Limited Jackpine Mine Expansion Project, SIR 11 (May 2012) at 3-37. 46 Shell Canada Limited Jackpine Mine Expansion Project Supplemental Information Requests (May 2012), Vol 3 at 3-39. 47 Frontier Oil Sands Mine Project Environmental Impact Assessment, Vol 3 at 1-13, online: http://www.ceaaacee.gc.ca/050/documents_staticpost/65505/54021/volume3.pdf.	

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		48 Cumulative Effects Assessment Working Group and AXYS Environmental Consulting Ltd., Cumulative Effects Assessment Practitioners Guide, Prepared for: Canadian Environmental Assessment Agency (February 1999) at B8, online: http://www.ceaa-acee.gc.ca/Content/4/3/9/43952694-0363-4B1E-B2B347365FAF1ED7/Cumulative_Effects_Assessment_Practitioners_Guide.pdf.. 49 Shell Canada Limited Jackpine Mine Expansion & Pierre River Mine Projects Environmental Impact Assessment (December 2007), Vol 1 at 18-11. 50 Joint Review Panel, Supplemental Information Requests – Shell Canada Limited Jackpine Mine Expansion Project, SIR 11 (May 2012) at 3-37. 51 Letter from David Ash, Regional Director, Environment Canada to Jim Dilay, Chair, Joint Review Panel et al re Comment on the adequacy of information provided by Shell Canada in its Environmental Impact Statement (EIS) and Supplemental Information (16 December 2011), Attachment 1-1, online: http://www.ceaa.gc.ca/050/documents/53585/53585E.pdf. 52 Cumulative Effects Assessment Working Group and AXYS Environmental Consulting Ltd., Cumulative Effects Assessment Practitioners Guide, Prepared for: Canadian Environmental Assessment Agency (February 1999) at 15, online: http://www.ceaa-acee.gc.ca/Content/4/3/9/43952694-0363-4B1E-B2B347365FAF1ED7/Cumulative_Effects_Assessment_Practitioners_Guide.pdf. 53 Cumulative Effects Assessment Working Group and AXYS Environmental Consulting Ltd., Cumulative Effects Assessment Practitioners Guide, Prepared for: Canadian Environmental Assessment Agency (February 1999) at 18, online: http://www.ceaa-acee.gc.ca/Content/4/3/9/43952694-0363-4B1E-B2B347365FAF1ED7/Cumulative_Effects_Assessment_Practitioners_Guide.pdf. 54 Cumulative Effects Assessment Working Group and AXYS Environmental Consulting Ltd., Cumulative Effects Assessment Practitioners Guide, Prepared for: Canadian Environmental Assessment Agency (February 1999) at 16, online: http://www.ceaa-acee.gc.ca/Content/4/3/9/43952694-0363-4B1E-B2B347365FAF1ED7/Cumulative_Effects_Assessment_Practitioners_Guide.pdf. 55 BC Hydro, Letter to Mr. Brian Murphy (EAO) and Ms. Linda Jones (CEAA) re Site C Clean Energy Project – Response to Public Comment Period on the April 10, 2012 Draft Environmental Impact Statement Guidelines, dated June 26, 2012 at 3. 56EIS, vol 2, Table 10.5 at 10-14. 57 BC Hydro, Letter to Mr. Brian Murphy (EAO) and Ms. Linda Jones (CEAA) re Site C Clean Energy Project – Response to Public Comment Period on the April 10, 2012	

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		Draft Environmental Impact Statement Guidelines, dated June 26, 2012 at 4. 58 58 Federal Environmental Assessment Review Office, Reference Guide for Addressing Cumulative Environmental Effects (November 1994) at 141, online: http://www.ceaa-acee.gc.ca/Content/9/7/4/9742C481-21D8-4D1F-AB14555211160443/Addressing_Cumulative_Environmental_Effects.pdf. 59 EIS Guidelines, supra note 1, s 8.5.2 at 30.	
pub_0448-ag-001	Peace Valley Environmental Association & British Columbia Women's Institute	**7 Agricultural Effects Assessment Inadequate** **A. Baseline** Based on the 2011 Census of Agriculture, the EIS baseline is not reflective of the productive potential of the Peace River Valley farmland. The region has been in the shadow of the Site C dam for over half a century, which has adversely impacted the way Peace River Valley farmland has been farmed. Failing to take these impacts into account has rendered an accurate assessment of the productive potential of Peace River Valley farmland impossible. The EIS Guidelines require that the effects assessment be based on the best available information and methods. In this case, the best available information and methods for accurately assessing the potential agricultural operations, activities and options includes using a baseline to estimate the magnitude of public loss arising from the construction and operation of the proposed Project that reflects how the land was cropped before the shadow of Site C impacted farm decision-making. **Issues:** 1) The baseline used to estimate the magnitude of public loss arising from the construction and operation of the proposed Project should reflect how the land was cropped before the shadow of the Project impacted farm decision making and reduced production. However, the baseline used in the EIS is based on current production in the Peace River Valley, which undervalues the food production potential of the Project Activity Zone (PAZ) (vol 3, ss 20.2, 20.2.2.2 and 20.2.4.2).	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. The EIS Guidelines required consideration of an agricultural baseline that provides an understanding of the current and projected future agricultural land base (capability), operations and economic systems. As such, historical crop or land use lies outside the scope of the EIS. Future potential agricultural land use was not determined using the census. EIS Volume 3, Section 20.2.4 describes the methodology used in assessing agricultural utility, a term used in this assessment to reflect the likelihood of future agricultural use. It takes into account the agricultural capability of the land, and treats equally land which is currently developed and land currently undeveloped for agricultural use. Please see the Technical Memo on Cumulative Effects Assessment.

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pub_0448-ag-002	Peace Valley Environmental Association & British Columbia Women's Institute	2) The EIS must include descriptions of the baseline conditions that includes the following information: a. The relevant legal framework; b. Methods used to collect the baseline data; c. Sources of information; d. The extent to which information has been obtained from the public and has been considered; e. The extent to which Aboriginal traditional knowledge has been obtained and has been considered; and f. An overall baseline description.	EIS Volume 3, Section 20.1.1 describes the regulatory and policy setting. EIS Volume 3, Section 20.2 describes the methods for baseline data collection. EIS Volume 3, Section 20.2 describes sources of information used in baseline data collection to the extent it was available. EIS Volume 3, Section 20.2, page 20-6, lines 41 and 42 and page 20-7, lines 1 to 9 describe information collected from owners and or operators of agricultural operations, agricultural associations, agricultural industry representatives and government agencies. Where available and relevant, aboriginal knowledge was considered in the agricultural assessment. EIS Volume 3, Section 20.2 describes overall baseline conditions.
pub_0448-ag-003	Peace Valley Environmental Association & British Columbia Women's Institute	3) The EIS Guidelines specifically require that the Agricultural Baseline must provide an understanding of, among other things: a. Agricultural utility ratings to reflect the likelihood of future agricultural land use, which will be based on both land capability and constraints to agricultural use, including land use plans and designations; b. Current and expected future agricultural operations and practices; and c. Estimates of local and regional food production and consumption.	EIS Volume 3, Section 20.2.4 describes the methodology used to assign agricultural utility ratings. EIS Volume 3, Section 20, Table 20.31 summarizes current cropping and future cropping scenarios used in estimating foregone agricultural economic activity. EIS Volume 3, Section 20.2.9.2 and EIS Volume 3, Appendix D, Section 7.0 describe the food production and consumption baseline for the Peace Agricultural Region.

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pub_0448-ag-004	Peace Valley Environmental Association & British Columbia Women's Institute	4) The EIS Guidelines also require that the EIS assess potential impacts to agriculture related to the Project by, among other things: a. Describing effects to individual farm operations, infrastructure and farm activities; b. Describing changes to the agricultural resource base; c. Estimating changes in opportunities for potential new agricultural activity; and d. Identifying potential changes to local food production and food self-reliance. Each assessment must be determined by comparing the predicted future conditions with the Project against the predicted future conditions without the Project. In other words, the EIS Guidelines require that the Agricultural VC baseline enable an assessment ofthe future agricultural potential of the lands within the LAA, with and without the Project, such as the potential that certain lands would be used to produce certain crops in the future. Despite these requirements, as a result of the 2011 Baseline, the EIS fails to adequately assess the future agricultural potential of the LAA without the Project. The Flood Reserve was implemented in 1957 and has constrained agricultural land use, operations, economies and impacted the farming community ever since. BC Hydro notes that the acres farmed in the Peace Agriculture Region have declined in absolute terms and in relation to the rest of the Province over the past decade. From 2001 to 2011, the EIS reports that livestock and poultry inventories declined by 51%, area in beef production declined by 30%, dairy by 48%, tame hay by 35%, and honeybees by 59%. Production of ewes, goats and forage seed have also declined (see vol 3, s 20.2.2.72).	EIS Volume 3, Sections 20.3.5 and 20.3.6 describe potential effects to individual farm operations. EIS Volume 3, Sections 20.3.1 and 20.3.2 describe potential effects to the agricultural land base. EIS Volume 3, Sections 20.3.8 and 20.3.9 describe potential effects to agricultural economic activity. EIS Volume 3, Section 20.3.11 and 20.3.12 describe potential effects to regional food production and consumption. Current, or 2011 land use was not used to determine future potential land use, and a review of past land use would also not help determine future productive potential. Please also see the Technical Memo on Agriculture.
pub_0448-ag-005	Peace Valley Environmental Association & British Columbia Women's Institute	5) In addition to this general decline, farming in the Peace River Valley Flood Reserve lands was even more robust before proposals and activities related to Site C, such as the implementation of the Flood Reserve over 50 years ago, impacted farm decisionmaking. 65 In its 1983 review of Site C, the British Columbia Utilities Commission recognized that removing lands from the flood reserve would encourage further agricultural development in the region,66 and that basing an evaluation of potential cropping on current patterns of development would underestimate the full potential value of vegetable production in the Peace River Valley microclimate lands.67 Similarly, in order to accurately assess the agricultural potential, the baseline used to estimate the magnitude of potential losses arising from the construction and operation of the proposed Project must reflect how the land was cropped before the	Please see the response to pub_0448-ag-001.

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		shadow of Site C impacted farm decision-making and reduced production. Any assessment of the agricultural potential of the LAA (and in particular of the Peace River Valley lands) must take into consideration those impacts.	
pub_0448-ag-006	Peace Valley Environmental Association & British Columbia Women's Institute	6) As noted above, agricultural land use is only assessed as of 2011 and is based on field observations, recent air photographs and interviews with agricultural owners and operators which do not include questions regarding past or potential land use (vol 3, Appendix D at 27). Thus, the 2011 Baseline is inadequate for assessing the agricultural potential of the LAA or the potential impacts of the Project on potential agricultural land use, operations, economies and communities.	Please see the response to pub_0448-ag-001. EIS Volume 3, Appendix D, Section 4.1 describes the farm owner and or operator interview process and notes, in Section 4.1.1 that information on questions were asked related to historical and potential trends in agricultural land use, motivating factors in land use decision making and projected changes to land use if the Project proceeds.
pub_0448-ag-007	Peace Valley Environmental Association & British Columbia Women's Institute	Request/Recommendation 1) That the EIS include a historical agricultural land use baseline from as far back as can be reasonably determined in order to determine the food production potential of the LAA, which in turn is necessary for assessing the cumulative impacts of past projects and activities on agriculture in the RAA.	Please see the response to pub_0448-ag-001. The future agricultural productive potential of the LAA was determined using agricultural utility (which considers the physical capacity of the land, and potential constraints to land use, as described in EIS Section 20.2.4), and development of three future land use scenarios to estimate the associated foregone agricultural use of these lands (described in EIS Section 20.3.8.3). Three scenarios were presented for the potential pattern of future agricultural development. Please also see the Technical Memo on Agriculture.
pub_0448-ag-008	Peace Valley Environmental Association & British Columbia Women's Institute	**B. Climate** Consideration of climate for agriculture or the unique Peace River Valley microclimate is inadequate. The EIS fails to provide mapping of microclimate crop suitability or acknowledge the low confidence that can be given to the microclimate for agriculture analysis due to the limited data available. It does not consider the economic value of the Peace River Valley microclimate or the economic effect of the impacts caused by the reservoirs of the Project and past hydroelectric projects on that microclimate. Also, the climate change analysis is perfunctory and inadequate and its implications for the Peace River Valley are dismissed. **Climate for Agriculture** **Issues** 1) The confidence of climate interpretation for agriculture is limited by the reliance upon BC Hydro 1-year (2011) climate station data as the Peace River Valley	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. EIS Volume 3, Appendix D, Section 3.1 describes the assessment of climatic capability for agriculture. Climatic capability for agriculture ratings are reflected in the land capability for agriculture ratings. EIS Volume 3, Figure 20.2 Maps 1 through 25 show improved land capability for agriculture ratings. Areas shown as having an improved land capability for agriculture rating of Class 1 and 2 are, for the most part, areas of improved climatic capability of Class 1 and 2 respectively. These highly capable areas are suited for a wide variety of crops, as described in Section 20.2.3 Agricultural Suitability of Lands of the EIS. A determination of the range of crops that could be grown successfully at a specific location would require a site-specific evaluation of soils and climate, which is beyond the requirements of an agriculture assessment for the EIS, as it is the type of evaluation done for commercial farm operations

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		component of the determination of 30-year climate averages, which are based on upland data in a different climate zone (see vol 3, s 20.2.2.1.4 and Appendix D). 2) The EIS des not include mapping of climate characteristics that would clearly identify those Peace River Valley lands with unique microclimate for horticultural (heat-loving) crop suitability (vol 3, s 20.2.2.1.4, Figure 20.3). Such a map would also identify those Peace River Valley lands with unique biodiversity, which are also a result of these same microclimate characteristics. **Requests/Recommendations** 1) That the EIS include mapping of climate characteristics that clearly identify those Peace River Valley lands with (a) unique microclimate(s) for horticultural crop suitability and biodiversity. 2) That the EIS describe the confidence of the climate interpretation for agriculture, given the limitations of relying solely upon the 2011 climate station data as the Peace River Valley component of the determination of 30-year climate averages based on upland data from a different climate zone. 3) That the Proponent provide the rationale for its prediction of a minimal impact of the proposed reservoir (including the cumulative impact of the reservoir and past reservoirs) on agriculture microclimate characteristics with respect to crop and enterprise choice, seeding and harvesting management within the LAA and RAA.	planning. EIS Volume 3, Section 20.3.6, page 20-50, lines 9 to 36 describe potential effects resulting from changes in microclimate with additional information presented in EIS Volume 3, Appendix D, Section 3.2. Please see the Technical Memo on Cumulative Effects Assessment.

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pub_0448-ag-009	Peace Valley Environmental Association & British Columbia Women's Institute	**Unique Microclimate** **Issues** 1) The EIS does not consider the economic value of the unique Peace River Valley microclimate, which has the effect of underestimating both the crop potential of the land today and the productive public value of the land in the future should the Project not proceed and related land use restrictions be removed (see comments regarding Climate for Agriculture, above). 2) The EIS does not consider the economic effect of the impact of the Project reservoir and reservoirs of past hydroelectric projects on the Peace River Valley microclimate; as a result, changes in microclimate, such as changes in temperature, precipitation, wind, humidity, fog etc., and their impact on farm management practices, are also ignored (see comments regarding Climate for Agriculture (above) and Assessment of Agriculture Land Loss (below). **Requests/Recommendations** 1) That the EIS recognize the economic value of the Peace River Valley microclimate and build that value into the economic modelling and mitigation/compensation. 2) That the EIS assess the economic effect of the impact of the Project reservoir and of the impact of reservoirs of past hydroelectric projects on the Peace River Valley microclimate.	Please see the response to pub_0448-ag-008. The crop potential of land in the Peace River Valley is reflected in the land capability for agriculture which was assigned, as described in EIS Volume 3 Sections 20.2.2, 20.3.1, 20.3.2 and 20.3.3. EIS Volume 3, Section 20, Table 20.31 describes future agricultural development scenarios, two of which include vegetable production which would be dependent on the more favourable climate of the Peace River Valley, and which reflect increased crop diversity compared to existing cropping patterns. Please also see the Technical Memo on Cumulative Effects Assessment.

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pub_0448-ag-010	Peace Valley Environmental Association & British Columbia Women's Institute	**Global Climate Change** **Issues** 1) The BC Agriculture Climate Change Action Plan 2010-2013 predicts that changes to BC's climate "are likely to have consequences for food production [in the province,] through impacts to health and quality of crops, pasture, forests and livestock" and which are likely to result in socio-economic impacts. Despite this likely reality, and while the EIS implies that the risk of global climate change is significant compared to local climate change, it does not factor global climate change into scenario analysis. Rather, the climate change analysis is perfunctory and inadequate and its implications for the Peace River Valley are dismissed (vol 3, s 2.2.2.1.5). For example, there is no analysis or consideration of the potential increased importance of the Class 1 Peace River Valley agricultural lands to food security in the face of global climate change and the economic implications of global climate change are not addressed (see comments regarding Climate for Agriculture, above).	EIS Volume 3, Section 20.2.2.1.5 and Volume 3, Appendix D, Section 3.3 describe the potential effects of climate change on land capability for agriculture ratings. The relative proportion of high capability agricultural land in the Project activity zone was considered with potential future climate change, in comparison to the region as a whole that would also experience increased land capability for agriculture as a result of future climate change. Volume 3, Appendix D, Section 7.1.2.3, page 65, provides information regarding anticipated changes in provincial food self-reliance in relation to climate change. Please also see the Technical Memo on Agriculture.
pub_0448-ag-011	Peace Valley Environmental Association & British Columbia Women's Institute	**Request/Recommendations** 1) That the implications of global climate change on agricultural economics be assessed and described and the following information provided: a. The effects that global climate change will likely have on local, regional and provincial food security options in the future. b. The potential increased importance of Class 1 climate Peace River Valley agricultural lands to food security in the face of global climate change, including: i. increased uncertainties and risk, ii. climate change adaptation, and iii. potential reduction of current (imported) food sources.	Assessing how climate change may affect food production strategies and options at the local, regional and provincial levels lies outside the scope of the environmental assessment. Assessing how climate change might affect the relative importance of agriculture in the Peace Agricultural Region also lies outside the scope of the environmental assessment. Volume 3, Appendix D, Section 7.1.2.3, page 65, provides information regarding potential changes in provincial food self-reliance in relation to climate change. Please also see the Technical Memo on Agriculture.
pub_0448-ag-012	Peace Valley Environmental Association & British Columbia Women's Institute	2) An analysis of how climate change will likely impact the crop suitability of Peace River Valley (should the Project not proceed) and Peace Agricultural Region farmland.	Improved climatic capability for agriculture, and hence improved land capability for agriculture, is predicted for land within the vicinity of the reservoir and for the remainder of the Peace Agricultural Region. EIS Volume 3, Section 20.2.2.1.5. The associated crop suitability by improved land capability class is indicated in EIS Table 20.6. Volume 3, Appendix D, Section 3.3 describe the potential effects of climate change on land capability for agriculture ratings, indicating that a class level improvement may be expected to occur. See also the Agricultural Technical Memo.

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pub_0448-ag-013	Peace Valley Environmental Association & British Columbia Women's Institute	3) An analysis of how climate change will likely impact food production strategies and options at the local, regional and provincial levels.	Please see the response to pub_0448-ag-011.
pub_0448-ag-014	Peace Valley Environmental Association & British Columbia Women's Institute	4) An analysis and description of how the above impacts will likely change the relative importance of agriculture produced in: i. the Peace Agriculture Region, ii. the Peace River Valley in the Future Case Without the Project, assuming it takes into consideration the removal of all Project-related land-use restrictions, such as the Flood Reserve.	An assessment of how climate change might affect the relative importance of agriculture in the Peace Agricultural Region lies outside the scope of the environmental assessment. EIS Volume 3, Section20, Table 20.31 describes crop development in the future case without the Project, using three future agricultural development scenarios. Two of the scenarios assume vegetable production and all three assume full agricultural utilization of all land within the Project activity zone rating as having high or moderate utility, full grazing on Class 1 - 5 lands identified as having low utility, and grazing on half of the Class 6 and 7 lands over time. This represents a three-fold increase in area as compared with current use. The scenarios were not constrained by the flood reserve.
pub_0448-ag-015	Peace Valley Environmental Association & British Columbia Women's Institute	**C. Land Capability, Crop Suitability and Utility for Agriculture Interpretations** The EIS only superficially considers crop suitability within the climatically unique Peace River Valley. The EIS does not contain the mapping that is required to fully understand the scope, nature and significance of the potential impacts of the Project upon agricultural lands, and fails to provide adequate justification for the determination of agricultural utility. **Issues** 1) The unique microclimate of the Peace River Valley most directly manifests itself in crop suitability (the unique opportunity to produce specific heat-loving crops) rather than land capability (which is a reflection only of the range of crops). However, the EIS gives only superficial consideration to crop suitability within the climatically unique Peace River Valley. Table 20.6 is useful but not specifically applied to the Project Activity Zone. The proposed Project will impact specific agricultural lands in a variety of ways. Tabular data can not adequately reflect geographical relevance on the ground. Mapping of this data is essential in order to thoroughly understand the scope, nature and significance of the potential impacts of the Project upon agricultural lands. As no mapping of crop suitability is included in the EIS, this critical knowledge base is	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. Agricultural suitability is presented as a function of land capability for agriculture. EIS Volume 3, Section 20, Figure 20.2, Maps 1 through 25 present land capability ratings for land within the Peace River Valley between the Peace Canyon Dam and the Alberta border. Please also see the Technical Memo on Agriculture.

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		unavailable for interpreting the Project's potential impacts on agriculture.	
pub_0448-ag-016	Peace Valley Environmental Association & British Columbia Women's Institute	2) Over one-half (2,150 ha) of the 3,816 ha of Class 1-5 capability agricultural lands estimated to be lost within the Project Activity Zone have been discounted as 'low to nil utility' (vol 3, Table 20.29). The Proponent has not provided adequate justification for its determination of 'agricultural utility' for the purposes of the EIS. For example, regardless of high capability (and crop suitability), a significant acreage of land has been deemed 'low to nil utility', primarily based on the Land Resource Management Plan designation as a potential protected area that has yet to be created.	EIS Section 20.3.3.2 determination of agricultural utility was completed as defined in Section 16.2.3 of the EIS Guidelines which states: "Agricultural utility ratings, to reflect the likelihood of each area being used for agricultural production in the future. The rating will be based on land capability ratings, as well as constraints to agricultural use (such as location, access, parcel size, land ownership or tenure, and land use plans or designations)". This information was used as input to the projection of future agricultural development scenarios as described in EIS Section 20.3.8.2. See also response to pub_0448-ag-015. Please also see the Technical Memo on Agriculture.
pub_0448-ag-017	Peace Valley Environmental Association & British Columbia Women's Institute	**Request/Recommendations** 1) That the EIS include a thorough consideration of the crop suitability within the climatically unique Peace River Valley (including mapping of crop suitability within the PRV) sufficient to enable an adequate assessment of the Project's potential impacts on agriculture. This consideration should include: a. a description of the projected permanent agricultural land loss due to the Project that would be subject to the Compensation Fund and which includes: i. land capability for agriculture by improved rating as well as specific crop suitability ratings; and ii. calculation of agro-economic value of these lands assuming that each parcel moves to its highest potential agricultural use; and b. mapped representation of the above (see request #2 regarding Assessment of Agriculture Land Loss, below).	a) EIS Volume 3, Section 20.3.3 presents a summary and comparison of the permanent loss of agricultural lands by capability, project component and utility. Agricultural suitability is presented as a function of land capability for agriculture (Please also see the Technical Memo on Agriculture). Foregone economic value considers three reasonable agricultural development scenarios. The permanent land loss and foregone agricultural economic activity were both considered in proposing the Agricultural Compensation Fund approach. b) EIS Volume 3, Section 20, Figure 20.2, Maps 1 through 25 presents land capability for agriculture ratings, including both improved and unimproved ratings for areas where capability mapping was updated during the assessment.
pub_0448-ag-018	Peace Valley Environmental Association & British Columbia Women's Institute	2) Kenk and Cotic (1983) are cited as the technical reference manual for Land Capability for Agriculture and Gough et al (1994) for Land Suitability for Agriculture (vol 3, 20.2.4.1). It is requested that the technical classification reference for criteria/interpretation of utility ratings be given.	EIS Section 20.3.3.2 determination of agricultural utility was completed as defined in Section 16.2.3 of the EIS Guidelines which states: "Agricultural utility ratings, to reflect the likelihood of each area being used for agricultural production in the future. The rating will be based on land capability ratings, as well as constraints to agricultural use (such as location, access, parcel size, land ownership or tenure, and land use plans or designations)" Please see the Technical Memo on Agriculture for a description of the agricultural utility methodology.

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pub_0448-ag-019	Peace Valley Environmental Association & British Columbia Women's Institute	3) That the EIS describe how much land that has been described as 'low to nil utility' for agricultural purposes is within the ALR.	Please see the Technical Memo on Agriculture for additional information on agricultural utility. Table 20.18 notes that of the 6469 ha within the Project activity zone, 2775 ha is within the ALR. Table 20.19 notes that 1401 ha rated as having high or moderate utility is within the ALR. Therefore, the area rated as having low to nil utility within the ALR is estimated to be 1374 ha (2775 minus 1401). Low to nil utility ratings were estimated using the updated capability mapping, including slope analysis, and considering likely constraints to future agricultural use, such as the geographic location and proposed protected areas within provincial land use plans. However, much of this land was considered to be likely used for grazing lands within the scenarios of future agricultural land use without the Project as described in Section 20.3.8.2.
pub_0448-ag-020	Peace Valley Environmental Association & British Columbia Women's Institute	**D. Assessment of Agriculture Land Loss** The assessment of agriculture land loss as a result of the Project is problematic for many reasons. For example, crop suitabilities, the loss of agricultural use options and the geographical significance of agricultural land losses are not adequately considered. Additionally, summarizing the permanent loss of agricultural land within the PAZ using only unimproved land capability ratings underestimates both the loss and its significance. As no justification is provided for the failure to summarize the permanent loss using improved capabilities (contrary to the EIS Guidelines), that decision appears arbitrary. Also, agricultural lands that will become islands following inundation have not been considered lands that will be lost, despite the very high probability that they will not be able to be used for agricultural purposes. Accordingly, the EIS fails to adequately assess the potential agriculture land loss. **Issues** 1) The EIS Guidelines require that the EIS describe cause and effect pathways from the Project through to effect.70 This approach to CEAs is customary. The EIA of the Northern Saskatchewan Uranium Mines Project included pathway models to assess the effects of radionuclides71 and the proponents of both the proposed Bingay Main Coal Mine and the Coastal GasLink Pipeline Projects proposed including in the cumulative effects assessment "different forms of effects (e.g., synergistic, additive, induced, spatial or temporal) and identify impact pathways and trends."72 Despite this requirement, unique microclimate agricultural lands, which have specific crop suitabilities, are not tracked throughout the impact analysis and therefore are not identified as a specific aspect of agriculture land loss (see above). Isolation of these	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. Unimproved and improved capability ratings are presented in EIS Volume 3, Table 20.9 (dam site), Table 20.10 (reservoir), Table 20.12 (Highway 29 realignment), Table 20.13 (construction access) and Table 20.15 (erosion impact line and landslide-generated wave impact line). All islands (inundated, remaining or created) were included in the estimate of permanently lost agricultural land. Climatic capability for agriculture ratings are reflected in the land capability for agriculture ratings. EIS Volume 3, Section 20.3.3 summarizes the loss of agricultural land by capability. Please also see the Technical Memo on Agriculture.

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		unique and irreplaceable microclimate lands is critical for assessing the significance of impacts.	
pub_0448-ag-021	Peace Valley Environmental Association & British Columbia Women's Institute	2) The narrow definition of 'permanent land loss' does not include the permanent loss of agricultural use options on current and future production units (vol 3, s 20 Table 20.16). Further, the proposed Project will impact specific agricultural lands in a variety of ways. Tabular data can not adequately reflect geographical relevance on the ground. Mapping of this data is essential in order to thoroughly understand the scope, nature – and significance – of the potential impacts of the Project upon agricultural lands." To comprehensively and properly assess 'agricultural land loss' due to the Project requires mapped integration (interpretation of interrelationships) at least among the following data sets: a. climate capability for agriculture, b. agricultural land capability and suitability, c. ALR boundaries, d. present land use, e. land tenure and parcel configuration, f. the 56-year BC Hydro flood reserve boundary, g. preliminary statutory rights-of-way (impact lines), and h. location/nature of limitations upon crop options and farm management (building locations, machinery use, parcel configuration, etc.), including by individual farm/ranch unit.	Table 20.16 reflects the total area of land permanently lost to the Project, by land capability class 1 - 7. This is a standard presentation. Impacts to specific agricultural lands are presented in the description of changes to individual farm operations, in Sections 20.3.5 and 20.3.6 of the EIS. Consolidation of all the requested information on a single map would result in a map that is very difficult to view. To assist the readers of the EIS, agricultural maps were presented in several configurations as follows: Figure 20.2, Map 1 - 25: Land Capability for Agriculture. Maps include the Project reservoir and dam site, ALR boundaries, updated Land Capability for agriculture unimproved (improved) Figure 20.4, Map 1 - 16: Agricultural Utility. Maps include the Project reservoir and dam site, ALR boundaries, updated Land Capability for agriculture unimproved (improved), and assigned agricultural utility ratings. Figure 20.5, Map 1 - 11: Agricultural Land Use. Maps include Project reservoir and dam site, ALR boundaries, cultivated land in 2011. Figure 20.6, Map 1 - 10: Project Activity Zone components affecting agriculture. Map includes all Project components and activities, grazing leases, grazing licenses and ALR boundaries. a) Climatic capability for agriculture ratings are reflected in the land capability for agriculture ratings, including the rating changes from unimproved to improve. EIS Volume 3, Appendix D, Section 3.1 describes the assessment of climatic capability for agriculture. EIS Volume 3, Section 20.2.2.1.4 summarizes the analysis of climatic capability for agriculture ratings. EIS Volume 3, Section 20.2.2.1.2 describes the use of climate data in estimating land capability for agriculture. b) Agricultural suitability is presented as a function of land capability for agriculture in Table 20.6, with suitability matched to capability class. c) ALR boundaries are shown on the maps of EIS Volume 3, Section 20 (Figure 20.2, Maps 1 through 25); Figure 20.4, Maps 1 through 16: Figure 20.5, Maps 1 through 11 and Figure 20.6, Maps 1 through 10). d) A current ownership overview in the Project activity zone with estimated fee simple tenures, statutory rights-of-way and temporary tenures required for the Project are including in Volume 2 Appendix C Land Status, Tenure, and Project Requirement Maps f) The Order-in-council flood reserve boundary is included in figure 4.7 of the EIS. g) Maps and map sheet descriptions showing the impact lines is appended to Volume 2 Appendix B, Part 2 Preliminary Reservoir Impact 38 Lines.

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			h) Mapping of details of individual farm operations will be conducted during the developed of farm mitigation plans. Interviews with farm operators used maps that included Project component information. Farm mitigation plans are described in EIS Volume 3, Section 20.3.7.1.2.
pub_0448-ag-022	Peace Valley Environmental Association & British Columbia Women's Institute	3) The EIS only summarizes the permanent loss of agricultural land within the PAZ using unimproved land capability ratings, which has the effect of reducing the loss of Class 1 agricultural land to 0 hectares, whereas adding up EIS-provided figures on hectares lost to individual Project components based on improved ratings results in the permanent loss of 1,547 ha of Class 1 agricultural land.	Permanent agricultural land loss is presented using both improved and unimproved ratings. Improved capability ratings are presented in EIS Volume 3, Table 20.9 (dam site), Table 20.10 (reservoir), Table 20.12 (Highway 29 realignment), Table 20-13 (construction access) and Table 20.15 (erosion impact line and landslide-generated wave impact line). Please also see the Technical Memo on Agriculture.
pub_0448-ag-023	Peace Valley Environmental Association & British Columbia Women's Institute	4) The location and geographical extent (shape and size) of land remnants (islands above the reservoir) that are in the ALR and/or have the capability for agricultural land use should be known. However, such islands that would be created by the reservoir are not included in estimates of agricultural lands that would be permanently lost. Excluding the loss of these lands from the analysis of lands permanently lost has the potential effect of producing an artificially low prediction of permanent losses of agricultural lands.	All islands (inundated, remaining or created) were included in the estimate of permanently lost agricultural land. The agricultural map series shown on Figures 20.2, Figures 20.4, Figures 20.5 and Figure 20.6 all depict the reservoir shoreline, and therefore remaining islands. For example, Figure 20.2 Map 9 outlines an area of land that is to the south of Highway 29 that is not currently an island, which would become one with the reservoir. Please also see the Technical Memo on Agriculture.
pub_0448-ag-024	Peace Valley Environmental Association & British Columbia Women's Institute	5) Limiting comparisons of the Peace River Valley permanent land loss that is based on unimproved land capability for agriculture to the Peace Agricultural Region and BC underestimates the significance of the loss (vol 3, s 20.18 and Table 20.17). Notwithstanding the land capability for agriculture ratings, the Class 1 climate capability for agriculture lands within the Peace River Valley are the only Class 1 climate for agriculture lands north of Prince George.	Table 20.17 of the EIS provides the context for the permanently lost land, by capability class 1 - 7, in the context of the remaining agricultural land within the Peace River valley. There are 55,087 ha Class 1 - 7 land in the Peace River Valley in BC, of which 6,469 ha would be taken up by the Project. Please also see the Technical Memo on Agriculture.
pub_0448-ag-025	Peace Valley Environmental Association & British Columbia Women's Institute	**Requests/Recommendations** 1) That the EIS track the unique microclimate agricultural lands, including their specific crop suitabilities, throughout the impact analysis and describe the loss of those lands – including their crop suitabilities – as a specific aspect of agriculture land loss.	Climatic capability for agriculture ratings are reflected in the land capability for agriculture ratings and agricultural suitability is presented as a function of capability. EIS Volume 3, Section 20.3.3 summarizes the loss of agricultural land by capability.
pub_0448-ag-026	Peace Valley Environmental Association &	2) That the EIS describe the hectares of class 1 to 3 agricultural land in British Columbia, by Regional District, with agricultural climate and crop suitability ratings	Existing information was used where possible to make comparisons to the regional and provincial context, using available information. Please also see the Technical Memo on Agriculture.

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	British Columbia Women's Institute	equivalent to that found within the PAZ.	
pub_0448-ag-027	Peace Valley Environmental Association & British Columbia Women's Institute	3) That the EIS describe the following: a. the hectares of agricultural land, by land capability classification, improved and unimproved, in British Columbia; b. the hectares of agricultural land, by land capability classification, improved and unimproved, in BC by Regional District; and c. the hectares of agricultural land, by land capability classification, improved and unimproved, in the PAZ.	For the Project area, site-specific field studies were undertaken and used to present the requested information in the EIS. Existing information was used where possible to make comparisons to the regional and provincial context, using available information. Please also see the Technical Memo on Agriculture.
pub_0448-ag-028	Peace Valley Environmental Association & British Columbia Women's Institute	4) That the EIS include mapped representation and analysis of the projected 'permanent agricultural land loss' due to the Project that would be subject to the Compensation Fund. The analysis must include: d. land capability for agriculture by improved rating as well as specific crop suitability ratings; and e. calculation of the agro-economic value of these lands assuming each parcel moves to its highest potential agricultural use.	Please see the response to pub_0448-ag-021. EIS Volume 3, Section 20, Figure 20.2 Maps 1 through 25 show unimproved and improved agricultural capability ratings.
pub_0448-ag-029	Peace Valley Environmental Association & British Columbia Women's Institute	5) That the EIS describe the nature and extent of the permanent loss of agricultural use options on Crown and private lands with capability/suitability but that are not currently in use, which are located within and adjacent to (i.e., affected by) the preliminary stability impact line.	Please see the Technical Memo on Reservoir Impact Lines. EIS Volume 2, Section 11.3.2.1, page 11-56, lines 15 and 16 states "Other activities such as agriculture, grazing… could continue within the stability impact lines. Therefore, it would not be appropriate to characterise land within these areas as a permanent loss.
pub_0448-ag-030	Peace Valley Environmental Association & British Columbia Women's Institute	6) That the EIS provide the rationale for summarizing the permanent loss of agricultural land within the PAZ using only unimproved land capability ratings.	Please see the response to pub_0448-ag-022.
pub_0448-ag-031	Peace Valley Environmental Association & British Columbia	7) That the EIS include a summary of the permanent loss of agricultural land within the PAZ using improved land capability ratings.	Please see the response to pub_0448-ag-022.

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	Women's Institute		
pub_0448-ag-032	Peace Valley Environmental Association & British Columbia Women's Institute	8) That the EIS include remnants of lands (islands above the reservoir) that are in the ALR and/or have capability for agricultural use within the estimates of lands that would be permanently lost.	All islands (inundated, remaining or created) were included in the estimate of permanently lost agricultural land. Please also see the Technical Memo on Agriculture.
pub_0448-ag-033	Peace Valley Environmental Association & British Columbia Women's Institute	9) That the significance of the permanent loss of Class 1 climate capability for agriculture la;nds be assessed and described in the EIS.	Climatic capability for agriculture ratings are reflected in the land capability for agriculture ratings and agricultural suitability is presented as a function of capability. EIS Volume 3, Section 20.3.3 summarizes the loss of agricultural land by capability. Section 20.5.3 describes the determination of significance of effects to agriculture, and states that ``this permanent loss of land, in itself, is considered a significant residual effect``. It was determined that the Project's net effect on agriculture would not be significant, considering all four aspects of the agriculture VC and the effective implementation of proposed mitigation measures. The four aspects to be considered in the assessment, in accordance with the EIS Guidelines, are summarised in Section 20.4 as loss of agricultural land, effects to individual farm operations, changes to agricultural economies, and changes to local food production and consumption.
pub_0448-ag-034	Peace Valley Environmental Association & British Columbia Women's Institute	**E. Direct Losses to Farmers** **Issues** Potential losses to farm owner/operators and compensation and mitigation for those losses are not adequately considered in the EIS. Many of the measures described in the EIS as mitigation measures cannot accurately be described as such, and the EIS fails to provide adequate details regarding the Compensation Fund for an assessment of its efficacy to be possible. Moreover, the cost of those mitigation measures are not addressed. Accordingly, the EIS has failed to provide sufficient information required to assess the potential losses to farmers or the cost of those losses to the public. Land Losses 1) The proposal that the loss of land “cultivated in 2012” will be compensated at land value and in the case of severe impact, the Proponent will consider requests from the farmer to purchase the farm, which is effectively expropriation. Also, the proposal fails to consider that what was cultivated in 2012 may only be a portion of the	Please see the Technical Memo on Private Property - Project Requirements and Tenure.

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		productive but fallow land lost due to flooding, for which no compensation is proposed.	
pub_0448-ag-035	Peace Valley Environmental Association & British Columbia Women's Institute	2) The EIS provides no evaluation of the economic (public) cost to mitigate and/or compensate farmers for losses arising from the construction and operation of the Project, including: a. temporary losses, such as lands impacted by construction, disrupted traffic patterns, transmission systems etc.; or b. permanent losses, such as lands that would be flooded, or lands lost to farming (e.g., at the perimeter).	EIS Volume 3, Section 20, page 20-52, lines 10 through 15 describes proposed mitigation for construction related effects on individual farm operations. EIS Volume 3, Section 20.3.7.2 describes mitigation for operation related effects on individual farm operations.
pub_0448-ag-036	Peace Valley Environmental Association & British Columbia Women's Institute	3) Compensation and mitigation are to be based on closed-door negotiations between the Proponent and the affected farm owner/operator, which will deprive owners/operators of the bargaining power and the ability to know whether they are being treated fairly.	Please see the Technical Memo on Private Property - Project Requirements and Tenure. Agreements that are reached between BC Hydro and individual property owners are confidential in nature.
pub_0448-ag-037	Peace Valley Environmental Association & British Columbia Women's Institute	4) Compensation for loss that is based on land value does not recognize the investment the farmer has placed in that land (soils and fertility, strategic importance within the farming unit) or the economic value of its unique microclimate.	Please see the Technical Memo on Private Property - Project Requirements and Tenure.
pub_0448-ag-038	Peace Valley Environmental Association & British Columbia Women's Institute	5) Islands created by the Project are not included as permanently lost land (and so not subject to compensation), despite the fact that they may be removed from the productive land base due to prohibitively high costs to access them.	All islands (inundated, remaining or created) were included in the estimate of permanently lost agricultural land.
pub_0448-ag-039	Peace Valley Environmental Association & British Columbia Women's Institute	6) BC's northern grasslands are among the most productive in Canada. Loss of access would have economic consequences for individual farmers and for the sector. However, the EIS does not discuss the economic impact of the loss of potential future Crown grazing rights.	Please see the response to pub_0448-ag-014

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pub_0448-ag-040	Peace Valley Environmental Association & British Columbia Women's Institute	7) Statutory rights-of-way imposed across lands within and adjacent to stability impact lines will restrict farm management options (e.g., prohibiting irrigation or machinery use) restricting farmers' productive use of these lands. Despite this, the EIS fails to address the economic losses arising from the restriction of management options on lands within and adjacent to stability impact lines.	Please see the response to pub_0448-ag-029. The purchase of the statutory right of way would provide financial compensation to landowners for any restrictions on land use within these areas. Please see the Technical Memo on Private Property - Project Requirements and Tenure.
pub_0448-ag-041	Peace Valley Environmental Association & British Columbia Women's Institute	8) The EIS provides no measure of the economic (public) cost to mitigate the higher costs arising from the construction and operation of the Project, or an assessment of their cumulative effects. "Higher costs" may include (but are not limited to): a. Bisected operations, partitioned fields, new fencing and gates, changes to field drainage and irrigation, and wildlife damage; b. Changes in soil and subsoil water flows (local hydrology and groundwater), such as the impact of changes on irrigation capacity, management practices, cropping and farm returns; c. Changes in microclimate and to farm management practices arising from changes in temperature, precipitation, wind, humidity, fog, d. Slope Instability, such as the impact of slides and slumping on field and farmstead management and public safety and the loss of rights associated with imposition of statutory right of ways within and adjacent to stability impact lines; e. Noxious weed contamination; f. Constraints on resiliency (the capacity for strategic repositioning to take advantage of market opportunities), such as the loss of heat-loving croplands, loss of isolation needed for organic seed crops; g. Farm worker safety; h. Increased transportation costs (due to scale, a new road system, etc.); i. Reduced isolation and the introduction of new pests and diseases; j. The loss of biodiversity and its impact on farm practices (e.g. integrated pest management); k. Interference from non-farm uses; and l. The loss of carbon sequestration income/capacity.	EIS Volume 3, Section 20, page 20-52, lines 10 through 15 describes proposed mitigation for construction related effects on individual farm operations. EIS Volume 3, Section 20.3.7.2 describes mitigation for operation related effects on individual farm operations. Development of farm mitigation plans will address farm specific issues as described in EIS Volume 3, Section 20.3.7.1.2.
pub_0448-ag-042	Peace Valley Environmental Association & British Columbia	9) Many of the mitigation measures cited fall under sections of the EIS that do not reference agriculture and so cannot be considered mitigation for Project effects on agriculture.	Mitigation measures noted in EIS Volume 3, Section 20 will be used to mitigate effects on agriculture as appropriate.

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	Women's Institute		
pub_0448-ag-043	Peace Valley Environmental Association & British Columbia Women's Institute	10) As noted above, the EIS states that mitigation will occur through irrigation, drainage, topsoil relocation, the inclusion of lands in the ALR, and the development of Farm Mitigation Plans, which would include environmental management plans, traffic management plans, public safety management plans and biosecurity protocols if needed. As discussed below in Issue #2 under the "Agricultural Compensation Package to Address Residual Effects" subheading, drainage would not be necessary but for the Project, topsoil relocation is a normal 'best practices' approach, and ALR inclusion is not compensation, so none of those measures can be considered "mitigation" for the purposes of the Project. Additionally, environmental management plans, traffic management plans, public safety management plans and biosecurity protocols are part of basic farm management planning. Thus, the only actual mitigation suggested is irrigation.	In this EIS, the terms "mitigation" and "mitigation measures" both have the meaning defined for "mitigation measures" in Section 2(1) of CEAA 2012: "mitigation measures" means measures for the elimination, reduction or control of the adverse environmental effects of a designated project, and includes restitution for any damage to the environment caused by those effects through replacement, restoration, compensation or any other means. " Mitigation measures noted in EIS Volume 3, Section 20 are those intended to eliminate, reduce, or control the adverse effects of the Project on agriculture, and those intended to replace, restore or compensate for effects on agriculture.
pub_0448-ag-044	Peace Valley Environmental Association & British Columbia Women's Institute	**Requests/Recommendations** 1) That the EIS describe the economic cost to mitigate and/or compensate for the following losses arising from the construction and operation of the proposed Project: a. temporary land loss, such as lands impacted by construction, disrupted traffic patterns, the transmission system etc.; and b. permanent land loss, such as lands flooded and lands lost to farming at their perimeter.	EIS Volume 3, Section 20, page 20-52, lines 10 through 15 describes proposed mitigation for construction related effects on individual farm operations. EIS Volume 3, Section 20.3.7.2 describes mitigation for operation related effects on individual farm operations. Development of farm mitigation plans will address farm specific issues as described in EIS Volume 3, Section 20.3.7.1.2.
pub_0448-ag-045	Peace Valley Environmental Association & British Columbia Women's Institute	2) That the EIS provide a measure of the economic cost to mitigate the higher costs arising from the construction and operation of the Project, such as the costs described in Issue #8 above, and an assessment of the cumulative effects of those higher costs.	EIS Volume 3, Section 20, page 20-52, lines 10 through 15 describes proposed mitigation for construction related effects on individual farm operations. EIS Volume 3, Section 20.3.7.2 describes mitigation for operation related effects on individual farm operations. The detailed Project cost estimate includes the costs of mitigation; therefore, the proposed measures will not result in higher Project costs. Mitigation measures proposed are technically and economically feasible.

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pub_0448-ag-046	Peace Valley Environmental Association & British Columbia Women's Institute	3) That the EIS describe measures for ensuring compensation would reflect the annual profit each acre would generate when put to the highest use over the life of the farm owner/operator and the next generation (see comments regarding Agricultural Compensation Package).	EIS Volume 3, Section 20, page 20-62, lines 20 to 20 states, in reference to the agricultural compensation fund, that "… and the magnitude of the fund, will be developed through consultation with agricultural organizations, the ALC, the B.C. Ministry of Agriculture, and the local agricultural community".
pub_0448-ag-047	Peace Valley Environmental Association & British Columbia Women's Institute	4) That the EIS be revised to include islands created by the Project that are in the ALR and/or have agricultural potential and which are removed from the productive land base as among “permanently lost lands” and to take those islands into account in describing and calculating mitigation and compensation for permanently lost lands.	All islands (inundated, remaining or created) were included in the estimate of permanently lost agricultural land.
pub_0448-ag-048	Peace Valley Environmental Association & British Columbia Women's Institute	5) That the EIS describe the process for the development of Farm Mitigation Plans, and in particular how their development will ensure that farm owner/operators are treated fairly and have adequate bargaining power to enable them to receive full and adequate compensation, including specific measures to: c. ensure the openness, transparency and fairness of the process, d. make the results of farm-specific compensation and mitigation negotiations publicly available, and e. ensure the fairness of compensation for farm owner/operators.	Please see the response to pub_0448-ag-036.
pub_0448-ag-049	Peace Valley Environmental Association & British Columbia Women's Institute	6) That the EIS address the following: f. the economic impact of the loss of potential future Crown grazing rights; and g. the economic losses arising from the restriction of management options (rights) on lands within and adjacent to stability impact lines.	See also response to pub_0448-ag-014 and pub_0448-ag-029.
pub_0448-ag-050	Peace Valley Environmental Association & British Columbia Women's Institute	7) That the EIS be amended either to remove measures such as drainage, topsoil relocation, potential future inclusion of lands in the ALR, environmental management plans, traffic management plans, public safety management plans and biosecurity protocols as suggested mitigation measures, or provide the rationale for how those measures would constitute mitigation of Project effects, taking into consideration the points raised in issue #10, above.	Please see the response to pub_0448-ag-043.

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pub_0448-ag-051	Peace Valley Environmental Association & British Columbia Women's Institute	**F. Sectoral Losses** The EIS has failed to adequately assess the Project's potential impacts on the agricultural sector, and the significance of those impacts. For example, the EIS underestimates theeconomic significance of the land loss to the sector and does not consider potential economic impacts of land losses on the resiliency and capacity of the ALR. It also fails entirely to consider the economic cost of a loss of crop diversity, or the economic impact of changes to farm demographics and other agriculture-related socio-economic impacts. **Issues** 1) The assessment of land loss is based only on unimproved land capability for agriculture ratings (vol 3, s 20.3.3.1 and Table 20.16), which has the effect of underestimating the economic significance of the loss to the sector (see comment #3 under Assessment of Agriculture Land Loss, above).	EIS Volume 3, Section 20.3.3 describes the loss of land within the ALR. Please see the response to pub_0448-ag-009.
pub_0448-ag-052	Peace Valley Environmental Association & British Columbia Women's Institute	2) As the EIS has failed to consider the unique microclimate of the Peace River Valley, no consideration is given to the economic cost to the sector of a loss of diversity arising from the loss of heat-loving crops as a production option.	Please see the response to pub_0448-ag-009.
pub_0448-ag-053	Peace Valley Environmental Association & British Columbia Women's Institute	3) The construction of the dam limits the future for agriculture on some of the highest capability land in the province. This limitation could reduce the number of young farmers entering the sector, impeding intergenerational transfer of farms and reducing sectoral resiliency. However, the EIS fails to consider the economic impact of the Project on farm demographics.	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS.
pub_0448-ag-054	Peace Valley Environmental Association & British Columbia Women's Institute	4) The EIS does not evaluate many agriculture-related socio-economic impacts of Project, such as the economic impact of the Project on the farm community (caused, for example, from the loss of neighbours, numbers and collectivity), the economic and social costs associated with feelings of depression, disempowerment, and major shifts in future visioning as a result of Project impacts, and the economic effects of how the Project will impact household wellness, security, happiness and the social and economic fabric of the community.	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. The majority of the farms identified as being affected by the Project, would have only part of their farm area affected and would be able to continue farm operations, as described in Sections 20.3.5.2 and 20.3.5.3 of the EIS.

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pub_0448-ag-055	Peace Valley Environmental Association & British Columbia Women's Institute	5) The economic value of the unique Peace River Valley microclimate is not recognized by the EIS and consequently its importance to the ALR is also unrecognized. As a result, the EIS fails to consider the potential economic impact of the loss of farmland in the Peace River Valley on the resiliency and capacity of the ALR.	Climatic capability for agriculture ratings are reflected in the land capability for agriculture ratings. Land capability for agriculture is taken into account in development of the estimates of foregone economic activity, estimated using future agricultural land use scenarios. Therefore, the Peace River Valley climate is taken into account in considering the economic impact of the loss of farmland.
pub_0448-ag-056	Peace Valley Environmental Association & British Columbia Women's Institute	6) Potential employment losses, including losses to the self-employment, family employment and informal employment sectors (e.g., agricultural employment, which includes 0.91 indirect jobs per direct job and family labour) must be considered when assessing overall Project benefits (see e.g., vol 3, ss 20.2.8.2 and 20.3.8.7).	Section 20.3.8.7 describes the future employment that would be foregone with the Project that would have been associated with future agricultural development scenarios within the Project activity zone, at 3 - 4 person years, per year.
pub_0448-ag-057	Peace Valley Environmental Association & British Columbia Women's Institute	**Request/Recommendations** 1) That the EIS include an assessment of land loss based on improved land capability for agriculture ratings (see comments regarding Assessment of Agricultural Land Loss, above).	Please see the Technical Memo on Agriculture.
pub_0448-ag-058	Peace Valley Environmental Association & British Columbia Women's Institute	2) That the EIS include consideration of the economic cost to the sector of a loss of diversity arising from the loss of heat-loving crops as a production option as a result of the loss of lands within the unique microclimate of the Peace River Valley.	Please see the response to pub_0448-ag-052 Table 20.17 of the EIS provides the context for the permanently lost land, by capability class 1 - 7, in the context of the remaining agricultural land within the Peace River valley. There are 55,087 ha Class 1 - 7 land in the Peace River Valley in BC, of which 6,469 ha would be permanently taken up by the Project.
pub_0448-ag-059	Peace Valley Environmental Association & British Columbia Women's Institute	3) That the EIS describe the effect that a reduction in the number of farmers and operating farms will have on local farming infrastructure, such as local farm suppliers, farm services, and technical, financial, peer and community support.	Please see the response to pub_0448-ag-054. EIS Volume 3, Section 20, page 20-61, lines 20-61 describes total farm direct estimates which would be associated with foregone agricultural economic activity.

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pub_0448-ag-060	Peace Valley Environmental Association & British Columbia Women's Institute	4) That the EIS consider the socio-economic impacts of the Project on the following: a. farm demographics, such those caused by a Project-induced reduction in the number of young farmers entering the sector, impeding intergenerational transfer of farms and reducing sectoral resiliency; b. the farm community (caused, for example, from the loss of neighbours, numbers and collectivity); and c. how the Project will impact household wellness, security, happiness and the social and economic fabric of the community.	Please see the response to pub_0448-ag-054.
pub_0448-ag-061	Peace Valley Environmental Association & British Columbia Women's Institute	5) That the EIS describe the economic and social costs associated with feelings of depression, disempowerment, and major shifts in future visioning as a result of Project impacts.	Please see the response to pub_0448-ag-054.
pub_0448-ag-062	Peace Valley Environmental Association & British Columbia Women's Institute	6) That the EIS include a consideration of the potential economic impact of the loss of Peace River Valley microclimate land on the resiliency and capacity of the ALR.	See also response to pub_0448-ag-052. EIS Volume 3, Section 20.3.3 describes the permanently lost land within the ALR.
pub_0448-ag-063	Peace Valley Environmental Association & British Columbia Women's Institute	7) That the EIS describe employment opportunities provided by the Project as net employment opportunities.	Section 17 Labour market describes employment opportunities provided by the Project.
pub_0448-ag-064	Peace Valley Environmental Association & British Columbia Women's Institute	**G. Requirements under the Agricultural Land Commission Act (Agricultural Land Reserve**) The EIS fails to adequately describe the role of the ALR with regards to the Project. **Issues** 1) The EIS fails to contain a mapped indication of which lands will be proposed for exclusion from the ALR, for non-farm use for Project components within the ALR or for soil removal and filling within the ALR, including their location and acreage by land	EIS Volume 3, Section 20, Figure 20.6, Maps 1 through 10 show Project activity zone components affecting agriculture. Table 20.18 shows land ownership tenure, and ALR status of the areas within the Project activity zone, by capability. EIS Volume 3, Section 20, page 20-43, line 10 states "Soil relocation will be considered on a site-specific basis".

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		capability class and crop suitability.	
pub_0448-ag-065	Peace Valley Environmental Association & British Columbia Women's Institute	2) Notwithstanding the Proponent's general acknowledgement of its responsibility to obtain all appropriate regulatory approvals,73 and a specific acknowledgement of the Agricultural Land Commission Act, under which authority the Agricultural Land Commission would consider applications for exclusion of land from the ALR, non-farm use of land within the ALR and soil removal and filling within the ALR,74 there is an absence of reference to this authority/requirement throughout the EIS when discussing Project components within the ALR, most notably: a. Dam, Generating Station and Spillway site area (vol 3, s 20.3.1.2), b. Reservoir (vol 3, s 20.3.1.3), c. Transmission Line (vol 3, s 20.3.1.4), d. Hwy 29 realignment (vol 3, s 3.1.5), e. Construction Access (vol 3, s 20.3.1.6), f. Quarried and Excavated Material (vol 3, s 20.3.1.7), g. Statutory rights-of-way (impact lines) with restrictions on agricultural use (vol 2, Appendix C), and h. Vegetation clearing, debris management, site clearing and preparation all related to access roads for non-farm use (vol 1, Appendix A).	Required permits and approvals will be obtained for the Project prior to construction activities, as described in Table 8.1, Section 8.4 of the EIS. Please see the Technical Memo on Permitting for Construction and Operations.
pub_0448-ag-066	Peace Valley Environmental Association & British Columbia Women's Institute	**Requests/Recommendations** 1) That the EIS include a mapped indication of the following: a. which lands will be proposed for exclusion of land from the ALR, b. non-farm use for Project components within the ALR, and c. soil removal and filling within the ALR, including their location and acreage by land capability class and crop suitability.	EIS Volume 3, Section 20, Figure 20.6, Maps 1 through 10 show Project activity zone components affecting agriculture with ALR boundaries. EIS Volume 3, Section 20, Table 20.16 summarizes permanently lost agricultural land by Project component or activity and unimproved capability. EIS Volume 3, Section 20, page 20-43, line 10 states "Soil relocation will be considered on a site-specific basis".
pub_0448-ag-067	Peace Valley Environmental Association & British Columbia Women's Institute	2) That the EIS include specific reference to the requirement to obtain all regulatory approvals regarding applications for exclusion of land from the ALR, non-farm use of land within the ALR and soil removal and filling within the ALR, wherever such approvals would be required, in the relevant sections of the EIS.	See pub_0448-ag-065.
pub_0448-	Peace Valley	**H. Impact upon Agriculture within Preliminary Reservoir Impact Lines**	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and

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ag-068	Environmental Association & British Columbia Women's Institute	**Issues** 1) Second only to the reservoir itself, the preliminary statutory rights-of-way areas resulting from the various impact lines have the greatest potential impact on agriculture, both present and future. At least 106 private land holdings (comprising 178 legal parcels of land) plus substantial Crown lands, are and will be affected. The implications of the preliminary stability impact line and associated statutory rights-of-way on ± 9,600 ha have been seriously downplayed in the EIS, resulting in several key gaps: a. Other than building restrictions, no interpretation of the impact upon farm operations and opportunities (e.g., restrictions on crop range, irrigation, livestock and farm machinery use) (vol 3, s 20.3.2.1 and vol 2, Appendix C). b. It is unclear how slope stability mapping and landslide inventory data was interpreted to result in a dominantly straight line which does not appear to reflect the natural landscape pattern of surficial materials that may be at risk of sliding or slumping. This could seriously underestimate hazard risks, as well as other impacts such as field configuration (and agricultural usability) of remaining parcel segments (vol 2, s 11.2.3, Appendix C and Preliminary Impact Lines and Preferred Highway 29 Realignments Maps April 2012). c. Impact lines and associated statutory rights-of-way are described as “preliminary” and there are suggestions that these areas may actually increase over the long term, but monitoring and review is only proposed following the first five years of reservoir operation (vol 2, s 11.2.3 and Appendix B2). Given the serious hazard risks, surely the preliminary statutory rights-of-way call for the full appreciation of the precautionary principle, recognized under international and Canadian law.75 d. Landslide inventory and terrain stability mapping were carried out but there is no translation/interpretation of increased future risk to current farm operations and general public safety, of landslides and slumping as a result of the Project (vol 2, s 11.2.3.3, Appendix B Part 1 and Appendix B of Appendix B Part 2). Currently, even before considering potential impacts of the Project, farm operations are being carried out adjacent to 1,834 landslide complexes comprising 4,010 individual slides. Additionally, most of the slopes flanking the proposed reservoir shoreline have been mapped as unstable (Class V) or potentially unstable (Class IV) (vol 2, s 11.2.2.3 and Appendix G of Appendix B Part 2).	appropriate information is provided in the EIS. Please see the response to pub_0448-ag-029.

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pub_0448-ag-069	Peace Valley Environmental Association & British Columbia Women's Institute	**Requests/Recommendations** 1) That the EIS include interpretation of the impact upon farm operations and opportunities, including restrictions on: a. crop range, b. irrigation, c. livestock, and d. farm machinery use.	Please see the response to pub_0448-ag-029. Please also see the Technical Memo on Agriculture.
pub_0448-ag-070	Peace Valley Environmental Association & British Columbia Women's Institute	2) That the EIS describe how the Proponent commits to monitoring and review of lands within the impact lines and associated statutory rights-of-way for a period of time that matches the period of potential risks, assessed applying the precautionary principle. In the alternative, if such a description is not provided, that the Proponent provide a rationale for not committing to monitoring and review for the same period of time that, taking a precautionary approach, potential risks are likely to exist.	Please see the Technical Memo on Reservoir Impact Lines
pub_0448-ag-071	Peace Valley Environmental Association & British Columbia Women's Institute	3) That the EIS include a translation/interpretation of the increased future risk to current and future farm operations and general public safety of landslides and slumping as a result of the Project.	Please see the Technical Memo on Reservoir Impact Lines. Impacts to farm operations will be addressed as identified in the farm mitigation plans.
pub_0448-ag-072	Peace Valley Environmental Association & British Columbia Women's Institute	**I. Importance of Water to Agriculture** **Issues** 1) Long range information on changes to the groundwater regime, both in general and on specific farm/ranch units, is critical to managing potential impact. Despite this, there is no mapped indication of potential groundwater, hydrology and drainage pattern changes as they may impact farm/ranch properties, agricultural uses (crop range and suitability) and infrastructure (access, wells etc.) (vol 3 ,s 20.3.2.2). Further, the Groundwater Protection Plan (vol 5, s 35.2.2.12) makes only limited reference to the farm community or specific operations and groundwater monitoring is limited to five years after Project construction (vol 5, Table 39.2).	EIS Volume 3, Section 20, page 20-52, lines 10 through 15 describes proposed mitigation for construction related effects on individual farm operations, which will include effects on wells. EIS Volume 3, Section 20.3.7.2 describes mitigation for operation related effects on individual farm operations, including potential effects on groundwater elevations.

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pub_0448-ag-073	Peace Valley Environmental Association & British Columbia Women's Institute	2)Regarding surface water supply (including turbidity and sedimentation), the availability of sufficient amounts of quality water is necessary for domestic use, livestock watering and crop irrigation; irrigation water is particularly critical in order to realize the 'improved' land capability for agriculture ratings and the specific horticultural (heat-loving crops) enabled by this unique microclimate. However, despite a commitment to irrigation as part of the mitigation and compensation package, there is no indication or inventory of water quantity/quality available for agriculture, either as part of present or future requirements (vol 2, s 11.4 and vol 5, s 35.2.2.21).	EIS Volume 3, Section 20, page 20-42, lines 1 through 27 describes irrigation as a potential mitigation for the loss of agricultural land that could be funded by the Agricultural Compensation Fund, and provides a perspective on the amount of irrigation water which might be supplied from the reservoir. Water quality within the reservoir is described with respect to drinking water quality guidelines in EIS Volume 4, Section 33. BC Hydro is not the regulatory agency responsible for issuing water licences, however, it would respond to any water licence referrals from the applicable provincial agency.
pub_0448-ag-074	Peace Valley Environmental Association & British Columbia Women's Institute	**Requests/Recommendations** 1) That the EIS include mapped indication of potential groundwater, hydrology and drainage pattern changes as they may impact farm/ranch properties, agricultural uses (crop range and suitability) and infrastructure (access, wells etc).	EIS Volume 3, Section 20, page 20-52, lines 10 through 15 describes proposed mitigation for construction related effects on individual farm operations, which will include effects on wells. EIS Volume 3, Section 20.3.7.2 describes mitigation for operation related effects on individual farm operations, including potential effects on groundwater elevations. EIS Section 11.6 provides information on potential changes to the groundwater regime.
pub_0448-ag-075	Peace Valley Environmental Association & British Columbia Women's Institute	2) That the EIS describe how the Groundwater Protection Plan will address the farm community and specific operations.	Environment and safety management plans will be developed in consideration of agriculture as described in EIS Volume 5, Section 35. Please also see the Technical Memo on Environmental Management Plans. Development of farm mitigation plans will address farm specific issues, including groundwater protection, as described in EIS Volume 3, Section 20.3.7.1.2.
pub_0448-ag-076	Peace Valley Environmental Association & British Columbia Women's Institute	3) That the EIS describe how the Proponent commits to monitoring and review of groundwater for a period of time that matches the period of potential risks, assessed applying the precautionary principle. In the alternative, if such a description is not provided, that the Proponent provide a rationale for not committing to monitoring and review for the same period of time that, taking a precautionary approach, potential risks are likely to exist.	Potential effects on crop productivity resulting from Project-induced changes to groundwater elevations within 2 km of the reservoir will be monitored for at least 5 years prior to reservoir filling and up to 5 years after reservoir filling as described in EIS Volume 3, Section 20.7. Any changes to crop productivity resulting from Project-induced changes to groundwater elevations are expected to be able to be detected within 5 years of reservoir filling. If adverse effects on agricultural operations are confirmed, mitigation would be applied.

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pub_0448-ag-077	Peace Valley Environmental Association & British Columbia Women's Institute	**J. Impact of Land and Water Use Change upon Agriculture** As described below, despite the significance of potential impacts of land and water use change, some such changes are dismissed or ignored in the EIS, rendering it inadequate as a tool for assessing the Project's effects on agriculture. **Issues** 1) changes to livestock access/security and trespass management related to recreation use of the reservoir are complex issues not able to be addressed only on an individual farm operation basis. However, shoreline land and water use change, which has the potential for multifaceted impact upon individual farm/ranch units and upon agricultural opportunity in general, is thus far dismissed as '[to be] discussed with directly affected landowners' (vol 3, ss 20.3.7.2.4 and 20.3.7.2.5 and Table 20.28) or referenced to Reservoir Shoreline Monitoring and Management Plan (vol 5, s 35.3.1.3) within which no detail is provided and no reference to agriculture is made.	EIS Volume 3, Section 20.3.7.2 describes mitigation for operation related effects on individual farm operations, including potential effects of unauthorized public access to farm properties. Development of farm mitigation plans will address farm specific issues, including groundwater protection, as described in EIS Volume 3, Section 20.3.7.1.2.
pub_0448-ag-078	Peace Valley Environmental Association & British Columbia Women's Institute	2) A Traffic Management Plan is offered as the mitigation measure for the agricultural operation-specific effect of highway traffic and congestion (vol 3 Table 20.28), but there is no mention of agricultural considerations under the Traffic Management Plan commitment (vol 5, s 35.2.1.4).	Mitigation measures noted in EIS Volume 3, Section 20, including the Traffic Management Plan, will manage traffic related to Project activities. Please see the Technical Memo on Environmental Management Plans.
pub_0448-ag-079	Peace Valley Environmental Association & British Columbia Women's Institute	3) The approach to potential increased wildlife impact on farm/ranch operations and agriculture in general as a result of acknowledged loss of wildlife habitat due to the Project is inadequate (vol 3, s 20.3.7.2.1) This issue is not listed as a farm operation effect to be mitigated (vol 3 Table 20.28) nor is there any mention of agricultural considerations in the Wildlife Management Plan commitment (vol 5, s 35.2.2.24).	EIS Volume 3, Section 20.7 Monitoring and Follow Up describes proposed monitoring as follows for Project-induced changes in wildlife habitat utilization, for agricultural operations not already covered by an agreement with BC Hydro. The objectives of the agricultural monitoring programs would be to a) confirm if a Project induced change has occurred, and b) specify the adverse effect on agricultural operations, and c) determine appropriate mitigation measures where adverse effects have been identified. BC Hydro would implement the determined mitigation measures. Specific to wildlife damage, the following is proposed: Monitor Project-induced changes in wildlife habitat utilization in, and evaluate associated crop or feed storage damage, for agricultural operations within 5 km of the reservoir, to assess if there is an increase in wildlife depredation due to Project-related habitat losses. Monitoring will include pre-and post-reservoir filling field surveys, wildlife monitoring, farm operator interviews, and analysis of relevant records related to wildlife depredation. Wildlife monitoring will be undertaken as described in Section 14 Wildlife Resources.

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pub_0448-ag-080	Peace Valley Environmental Association & British Columbia Women's Institute	**Requests/Recommendations** 1) That the potential impacts of shoreline land and water use changes upon individual farm/ranch units and upon agricultural opportunity in general be addressed in the EIS.	The issue raised (changes to livestock access, security and trespass management) are addressed. EIS Volume 3, Section 20.3.7.2 describes mitigation for operation related effects on individual farm operations, including potential effects of unauthorized public access to farm properties, and potential unwanted livestock access to the reservoir. Development of farm mitigation plans will address farm specific issues as described in EIS Volume 3, Section 20.3.7.1.2.
pub_0448-ag-081	Peace Valley Environmental Association & British Columbia Women's Institute	2) That the EIS describe how the Reservoir Shoreline Monitoring and Management Plan will address agriculture, and in particular the potential impacts of shoreline land and water use changes upon individual farm/ranch units and upon agricultural opportunity in general.	Development of farm mitigation plans will address farm specific issues as described in EIS Volume 3, Section 20.3.7.1.2. These Plans will consider the Reservoir Shoreline Monitoring and Management Plan and will include additional shoreline related mitigation if appropriate.
pub_0448-ag-082	Peace Valley Environmental Association & British Columbia Women's Institute	3) That the EIS provide detail as to how the Traffic Management Plan is proposed to mitigate the effects on agricultural operations of highway traffic and congestion.	Please see the response to pub_0448-ag-078.
pub_0448-ag-083	Peace Valley Environmental Association & British Columbia Women's Institute	4) That the EIS include potential increased wildlife impact on farm/ranch operations and agriculture in general as a farm operation effect to be mitigated, and that a mitigation plan for such effects be described.	Please see the response to pub_0448-ag-079.
pub_0448-ag-084	Peace Valley Environmental Association & British Columbia Women's Institute	**K. Impacts on Public and Community** **Role of Agriculture and the Farm Community** 1) In the EIS, the Proponent claims that the EIS "demonstrates that globally recognized principles and practices for corporate social responsibility and sustainability have been incorporated into the planning of the Project."76 In its comments in response to comments on the EIS Guidelines, the Proponent committed to discussing sustainability 'where it is relevant to the assessment of the potential effects on a VC'.77 Despite these commitments, the EIS contains no assessment of the potential impact of the Project on the ability of the Peace River Valley farm community to fulfil its role as an integral part of the social fabric of a vibrant, resilient	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. The majority of the farms identified as being affected by the Project, would have only part of their farm area affected and would be able to continue farm operations, as described in Sections 20.3.5.2 and 20.3.5.3 of the EIS. Changes to the farm community are described in the EIS in the context of the changes to the regional agricultural economy.

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		and sustainable regional community.	
pub_0448-ag-085	Peace Valley Environmental Association & British Columbia Women's Institute	2) Further, none of the following words appear in vol 4, Social Heritage and Health Effects Assessment: “agricultural community”, “farm community” or “food security”.	Specific Project effects described in Volume 4, Social Heritage and Health Effects Assessment were evaluated as per the EIS Guidelines with no requirement to focus on distinct farm or agricultural communities. Changes to regional food production and consumption were assessed using measures of food self-reliance is described in Section 20 of the EIS.
pub_0448-ag-086	Peace Valley Environmental Association & British Columbia Women's Institute	**Request/Recommendation** 1) That the EIS assess the impact of the Project on the ability of the Peace River Valley farm community to fulfil its role as an integral part of the social fabric of a vibrant,resilient and sustainable regional community.	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. The majority of the farms identified as being affected by the Project, would have only part of their farm area affected and would be able to continue farm operations, as described in Sections 20.3.5.2 and 20.3.5.3 of the EIS.
pub_0448-ag-087	Peace Valley Environmental Association & British Columbia Women's Institute	**Losses to Public and Community** Many of the methodologies and much of the baseline data used for analyses of potential losses to the public and the farming community are either absent from the EIS, inadequately justified or unjustifiable, rendering the EIS inadequate as a tool for assessing the potential public and community losses caused by the Project. For example, the 2011 baseline and failure to consider the highly likely decision by farmers to use land for its highest options available should the Project not proceed and all land use restrictions be lifted, undervalues the potential benefits of the “no Project” scenario without adequate justification. Further, the EIS fails to consider the agriculture sector itself, the future importance of the Peace River Valley farming to the health and nutrition of peoples living in the Northwest Territories and the Yukon, and the impact of the Project on the ALR. It also fails to measure the potential economic effect of reduced food sufficiency and high access costs on nutrition, poverty, health and social costs or acknowledge its psychological and social costs on families and communities. The EIS Guidelines requires that all hypotheses and assumptions be clearly identified and justified, that analyses be transparent and reproducible, and that all significant gaps in knowledge and understanding related to key conclusions presented be identified along with the steps taken by the Proponent to address those significant gaps.78 These and other gaps are discussed below.	See also response to pub_0448-ag-014. Please also see the Technical Memo on Agriculture.

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		Issues 1) The long-term impact on the regional economy (loss of farmland over 50, 100, 150, 200+ years) is premised on an artificially low baseline (vol 3 Table 20.31), which results in an undervaluation of the potential benefits under the "no Project" scenario (see comments regarding Baseline, above).	
pub_0448-ag-088	Peace Valley Environmental Association & British Columbia Women's Institute	2) The long-term scenario analysis is based on EIS collapsed "utility ratings" derived solely from land capability ratings, which makes economic modelling of the "no dam" scenario inaccurate.	Please see the Technical Memo on Agriculture.
pub_0448-ag-089	Peace Valley Environmental Association & British Columbia Women's Institute	3) The EIS uses a 2011 baseline scenario and mechanically increases acres in each crop by 8-10% a year, adding one ha of vegetables per year. Further, there is no consideration of animal production (dairy, meat, eggs) in the scenario analysis. Absent the shadow of the Site C dam project, rational decisions by farmers can be expected to move the land to highest and best use. Given the Peace River Valley unique microclimate and comparative advantage at serving regional and northern food demand, such rational decision-making would include the production of heat-loving vegetables and berry fruits, potatoes, animal agriculture and the evolution of local processing and value-added facilities. Despite this likelihood, the model to estimate the future benefits assumes static cropping decisions that undervalue the economic potential of the land base.	Please see the response to pub_0448-ag-014.
pub_0448-ag-090	Peace Valley Environmental Association & British Columbia Women's Institute	4) The sensitivity analysis is inadequate. As noted above, absent the shadow of Site C, rational decision-making by farmers would be expected to increase agricultural diversity, the cultivation of heat-loving horticulture crops and the addition of animal agriculture and processing capacity to provide a local source of food to regional and northern communities. This scenario was never tested by the EIS. Moreover, the EIS states that the base case valuation is most sensitive to length of the period over which foregone benefits are calculated, area of vegetable production included and length of the period over which the full development of the agricultural potential of the Project activity zone is assumed to occur, yet only undertakes a perfunctory analysis of the first variable (vol 3, s 20.3.8.6).	Please see the response to pub_0448-ag-014. Remaining lands could support value added industries if economic conditions supported development of those industries. Table 20.33 summaries the sensitivity of the estimates of foregone agricultural economic activity over development periods of 50, 100 and 150 years. Additional information on net present value of foregone agricultural economic activity is described in Appendix D, Section 6.2.2.

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pub_0448-ag-091	Peace Valley Environmental Association & British Columbia Women's Institute	5) The EIS fails to provide justification for the following: a. The assumption that the thriving agribusiness sector that existed in the 1960s, before the Site C dam was first proposed, would not return if the shadow of the dam were lifted, and that farmers would not make rational economic decisions and move the land to its highest and best agricultural use; b. Using a social discount rate of 3.5% for the first 50 years, 2.5% for the second 50 years, and 1.5% thereafter (vol 3, 20.3.8.6). A social discount rate of 3.5 is extremely high. Stern, in his respected Review on the Economics of CarbonCredits,79 suggests a discount rate of 1.4% is far more appropriate. It is further questionable why the social discount rate is varied at the end of each 50-year period. (Paradoxically, it discounts the importance of the benefit in the first 50 years then assumes it will be of greater importance after that.) c. Using a sensitivity to variance in the SDR of plus/minus 0.5% (vol 3 s 20 at 55- 22). d. Basing the measure of economic activity lost (1.8 multiplier) on farm expenses rather than farm sales. Basing the assessment of secondary economic activity only on projected expenses and not on projected gross sales understates the economic impact of a no-dam scenario. Basing it on farm receipts would increase the measure of economic activity by 2.27 times today and by 2.43 times a hundred years from now. Baseline issues continue to undervalue the magnitude of both projections. e. Excluding family labour from the job creation assessment. The impact of the Project on the number of jobs created by the sector includes only hired labour. The EIS notes that for every one job created in primary agriculture there is 0.91 jobs created in the economy, but it excludes from consideration on-farm employment of family members, which has the effect of understating the impact on job creation and economic activity.	The analysis adopted the recommendations of recent work by Anthony Boardman of UBC and Mark Moore and Aidan Vingin of SFU on Social Discount Rates for Canada. The rate schedule used is substantially below the social discount rates recommended by current Canadian benefit-cost guidelines and is not far from the 3% hybrid rate used by the Ministry of Agriculture and Food in its 1981 Blue Paper evaluation of the effects of the Project on Peace River Valley agriculture. Varying the social discount rate, as described in Section 20.3.8.4, page 20-58, lines 21 through 23, illustrates the sensitivity of the net present value estimates to changes in the social discount rate. Sensitivity tests on either side of a value chosen for a key variable shows the sensitivity of the analysis outcome to movements in the value of the variable, and allows interpolation or extrapolation of the analysis outcomes for alternate values. Spending from the agriculture compensation fund will generate secondary economic activity Statistics Canada only provides data on paid labour; therefore, no analysis could be made of unpaid family labour. EIS Volume 3 Section 17 describes the labour market assessment.
pub_0448-ag-092	Peace Valley Environmental Association & British Columbia Women's Institute	6) The EIS fails to adequately assess the economic impact of the withdrawal of productive lands from the ALR, leaving uncertain the question of, should the Project proceed, whether farmers would have the critical mass, resources and natural capital to meet new challenges and potential.	EIS Volume 3, Section 20.3.3.2 describes the characteristics of remaining land, if the Project were implemented, in the Peace River Valley.

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pub_0448-ag-093	Peace Valley Environmental Association & British Columbia Women's Institute	7) The EIS fails to consider regional food resiliency and dismisses provincial food resiliency issues.	EIS Volume 3, 20.3.11 describes the effects assessment on food production and consumption, with additional information provided in EIS Volume 3, Appendix D, Section 7.0. This assessment estimated that about 1,500 hectares of land would be required to support 100% of the regional demand for market garden crops that are climatically adapted for the area, for a growing regional population over 100 years. There would remain more than adequate lands outside the Project activity zone to meet self-reliance needs for vegetable crops, with over 6,000 hectares remaining in the valley of high utility, Class 1 and 2 land, and over 3,000 hectares of class 3 land.
pub_0448-ag-094	Peace Valley Environmental Association & British Columbia Women's Institute	8) The Proponent dismisses the impact on local food security, citing globalization and increased trade as sufficient remedies (vol 3, ss 20.3.13, 20 at 65-29, 20.4.1 and 20 at 25.3), which suggests a misunderstanding of what is meant by self-sufficiency and food security. The concern is not the “self-sufficiency” of crops being currently cultivated but the ability of the land to support a range of market garden crops and animal protein to provide food self-sufficiency.	Please see the response to pub_0448-ag-093.
pub_0448-ag-095	Peace Valley Environmental Association & British Columbia Women's Institute	9) The EIS fails to address the question of food accessibility (price) or the impact of reduced access (price and supply) on local diet, nutrition and health costs).	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS.
pub_0448-ag-096	Peace Valley Environmental Association & British Columbia Women's Institute	10) The EIS fails to consider the potential Project impacts on food security (supply and access), nutrition and health in the Northwest Territories and Yukon.	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS.
pub_0448-ag-097	Peace Valley Environmental Association & British Columbia Women's Institute	**Requests/Recommendations** 1) That the EIS identify all hypotheses and assumptions relied on for the model to estimate future benefits, and provide justification for those assumptions.	EIS Volume 3, Section 20.3.8 describes the assessment of effects on agricultural economic activity, with additional information provided in EIS Volume 3, Appendix D, Section 6.0. Assumptions used in estimating the value of foregone agricultural economic activity are included in those sections.

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pub_0448-ag-098	Peace Valley Environmental Association & British Columbia Women's Institute	2) That the EIS include an assessment of the future potential benefits that assumes the lands would be used for their highest and best (most economically rewarding) agricultural use, along with the resulting value-added facilities.	Please see the response to pub_0448-ag-014.
pub_0448-ag-099	Peace Valley Environmental Association & British Columbia Women's Institute	3) That the EIS provide justification for the following: a. The assumption that the thriving agribusiness sector that existed in the 1960s, before the Site C dam was first proposed, would not return if the shadow of the dam were lifted, and that farmers would not make rational economic decisions and move the land to its highest and best use; b. Using a social discount rate of 3.5% for the first 50 years, 2.5% for the second 50 years, and 1.5% thereafter (vol 3, 20.3.8.6); c. Using a sensitivity to variance in the SDR of plus/minus 0.5% (vol 3 s 20 at 55- 22); d. Basing the measure of economic activity lost (1.8 multiplier) on farm expenses rather than farm sales; and e. Excluding family labour from the job creation assessment.	EIS Volume 3, Section 20, Table 20.31 describes future agricultural development scenarios used in estimating the value of foregone agricultural economic activity. Two scenarios include vegetable production, which is dependent on the more favourable climate of the Peace River Valley. All three scenarios include full utilization of land rated with a high or moderate utility. The analysis adopted the recommendations of recent work by Anthony Boardman of UBC and Mark Moore and Aidan Vingin of SFU on Social Discount Rates for Canada. The rate schedule used is substantially below the social discount rates recommended by current Canadian benefit-cost guidelines and is close to the 3% hybrid rate used by the Ministry of Agriculture and Food in its 1981 Blue Paper evaluation of the effects of Site C on Peace River Valley agriculture. Varying the social discount rate as described in Section 20.3.8.4, page 20-58, lines 21 through 23 is to illustrate the sensitivity of the net present value estimates to changes in the social discount rate. Spending from the agriculture compensation fund will generate secondary economic activity. Agricultural labour is included in the consideration of changes to the agricultural economy.
pub_0448-ag-100	Peace Valley Environmental Association & British Columbia Women's Institute	4) That the EIS assess how the loss of the Project lands would impact the resiliency of the existing ALR and the ability to craft a sound provincial food security strategy.	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS.
pub_0448-ag-101	Peace Valley Environmental Association & British Columbia Women's Institute	5) That the Proponent provide the basis for the following assumption: Overall, regional food self-reliance has not been examined in detail. Nonetheless, it is estimated that about 30% of the fresh equivalent weight of vegetables consumed cannot be grown in the region; for fruits and berries slightly over 96% of the products consumed cannot be grown in the Peace Agricultural Region. At maximum, this means that the Peace Agricultural Region is capable of producing 41% of the total fruits and vegetables consumed (at vol 3, s 20.2.9.2 at 26).	Supporting food production and consumption baseline information is described in EIS Volume 3, Appendix D, Section 7.0.

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pub_0448-ag-102	Peace Valley Environmental Association & British Columbia Women's Institute	6) That the EIS predict what would happen to nutrition and health outcomes if prices of nutritious foods escalate, and in particular describe the potential Project impacts on food security (supply and access), nutrition and health in the Northwest Territories and Yukon.	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS.
pub_0448-ag-103	Peace Valley Environmental Association & British Columbia Women's Institute	7) That the EIS describe whether the Peace Region has a strategic advantage in nutrition, quality and/or price, and what the implications would be for farmers and northern communities if this advantage ceased.	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS.
pub_0448-ag-104	Peace Valley Environmental Association & British Columbia Women's Institute	8) That the EIS include a consideration of the economic implications of a reduction in natural capital (local, regional and provincial).	EIS Volume 3, Section 20.3.3.2 describes the characteristics of remaining land, if the Project were implemented, in the Peace River Valley. Sections 20.3.8 and 20.3.9 describe the effects on the agricultural economy.
pub_0448-ag-105	Peace Valley Environmental Association & British Columbia Women's Institute	**L. Impact Management Plans** **Issues** 1) Management plans to mitigate effects on individual farm operations are biased towards the construction phase, and most plan descriptions make no mention of how they will address agricultural issues. For example: o Air Quality Management Plan (specifically the Dust Control aspect). For example, horticulture and forage crops are both susceptible to dust and air quality issues, which are not addressed. o Noise and Blasting Management Plan. For example, there are potential impacts on livestock in general but particularly intensive impacts on poultry, hogs, dairy operations and beef feedlots, which are not addressed. o Wildfire Management Plan. For example, risk management related to buildings, infrastructure, cultivated crops and grasslands is not addressed. o Public Safety Plan. For example, this Plan does not mention the involvement of the agricultural community.	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. Environment and safety management plans will be developed in consideration of agriculture as described in EIS Volume 5, Section 35. Please see the Technical Memo on Environmental Management Plans. Development of farm mitigation plans, described in EIS Volume 3, Section 20.3.7.1.2, will consider farm specific issues, such as air quality, noise and blasting, wildlife management and farm worker safety.

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pub_0448-ag-106	Peace Valley Environmental Association & British Columbia Women's Institute	2) Absent from the EIS is any effort or recognition of the need to integrate all impact management planning into a cohesive framework for agriculture, including perhaps, individual farm/ranch Environmental Farm Plans.	Development of farm mitigation plans will address farm specific issues as described in EIS Volume 3, Section 20.3.7.1.2. These Plans will consider other Environmental Management Plan (described in EIS Volume 5, Section 35) and will include additional mitigation measures if appropriate.
pub_0448-ag-107	Peace Valley Environmental Association & British Columbia Women's Institute	Request/Recommendation 1) That the EIS address agricultural impacts in descriptions of Management plans wherever appropriate.	Environment and safety management plans will be developed in consideration of agriculture as described in EIS Volume 5, Section 35. Please see the Technical Memo on Environmental Management Plans. Development of farm mitigation plans, described in EIS Volume 3, Section 20.3.7.1.2, will consider and be coordinated with other Environmental Management Plans.
pub_0448-ag-108	Peace Valley Environmental Association & British Columbia Women's Institute	M. Cumulative Effects Significant data gaps and flawed and unjustified methodology render the conclusion in the EIS that no potential cumulative effects on agriculture are expected implausible and prevent an accurate understanding of potential cumulative effects. 1) A purpose of CEAA 2012 is to encourage the study of the cumulative effects of projects and activities in a region and the consideration of those cumulative effects assessments in EAs.80	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. EIS Volume 3 Section 20.6 describes the cumulative effects assessment for agriculture. Please see the Technical Memo on Cumulative Effects Assessment.
pub_0448-ag-109	Peace Valley Environmental Association & British Columbia Women's Institute	2) A list of potential impacts upon a VC is critical to ensuring an understanding of the interrelationships and weighting of impacts and to assessing the adequacy of the mitigation and compensation packages designed to address Project effects upon agriculture. In other words, the accumulated impact on agriculture is more than the sum total of land lost to reservoir taking and use loss within statutory rights-of-way. It is the combined direct and indirect impacts of reservoir flooding, access and transportation changes, groundwater and surface water quality/quantity changes, land use changes and forced farm and ranch operation management modifications, both in the short and the long term. Despite this need, the EIS fails to provide a complete listing of the potential impacts of the proposed Project upon agriculture that would enable a comprehensive assessment of both the 'accumulated' and 'cumulative' impact.	Potential effects on agriculture are described in EIS Volume 3, Section 20.3. The assessment considered changes in four areas as follows: loss of agricultural land, effects to individual farm operations, changes to agricultural economies, and changes to local food production and consumption. For each of the four aspects, a summary of the effects and proposed mitigation measures is described in Section 20.4, and the residual effects remaining after mitigation are described and characterised in Section 20.5. Finally, cumulative effects of other projects that overlap spatially and temporally with the Project's residual effects on agriculture are described in Section 20.6

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pub_0448-ag-110	Peace Valley Environmental Association & British Columbia Women's Institute	3) Agriculture is not included as one of the VCs considered in vol 5, Table 37.24 (Summary of the Potential Cumulative Effects of the Project). Notwithstanding that both Agriculture and Harvest of Fish and Wildlife VCs are considered as “Renewable Resources” on which the Proponent has predicted no significant adverse residual effects will occur (vol5, s 37.4), the Harvest of Fish and Wildlife VC has been included in Table 37.24, whereas the Agriculture VC has been excluded. The exclusion of the Agriculture VC thus appears to be arbitrary.	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. EIS Volume 3 Section 20.6 describes the cumulative effects assessment for agriculture. Page 20-78, lines 4 through 7 state "The adverse effect related to the permanent loss of agricultural land does not have spatial or temporal overlaps with residual effects of any other current or reasonably foreseeable projects or activities and therefore no further assessment of cumulative effects to agriculture was conducted". For this reason agriculture was not included in Table 37.24 as noted.
pub_0448-ag-111	Peace Valley Environmental Association & British Columbia Women's Institute	4) The EIS effects assessment on agriculture has been based on four aspects: Agriculture Land Base, Agriculture Operations, Agricultural Economic Activity and Change in Food Production and Consumption. There is no consideration of the 56-year BC Hydro Flood Reserve as one of the ‘projects’ that could interact with Agriculture residual effects (vol 3, s 20.6 and Table 20.41).	The scope of the agriculture cumulative assessment is in accordance with the EIS Guidelines. The EIS Guidelines confirm that an agricultural baseline will provide an understanding of the current agricultural land base, operations and systems. Please see the Technical Memo on Flood Reserve.
pub_0448-ag-112	Peace Valley Environmental Association & British Columbia Women's Institute	5) The EIS states that the cumulative effects assessment of the Agriculture VC considers all other projects in the RAA (vol 3, Table 20.41), but then fails to provide a cumulative effects assessment of agricultural effects in the RAA.	The cumulative effects would occur within the LAA, in consideration of residual effects of other projects located within the RAA. In accordance with the EIS Guidelines, EIS Volume 3 Section 20.6 describes the cumulative effects assessment for agriculture. Page 20-78, lines 4 through 7 state "The adverse effect related to the permanent loss of agricultural land does not have spatial or temporal overlaps with residual effects of any other current or reasonably foreseeable projects or activities and therefore no further assessment of cumulative effects to agriculture was conducted". See Cumulative Effects Technical memo.
pub_0448-ag-113	Peace Valley Environmental Association & British Columbia Women's Institute	6) Agricultural land use is only assessed as of 2011 and based on interviews with agricultural owners and operators, field observations, recent air photographs (vol 3, s 20.2.5). Agricultural land use from as far back as can be reasonably determined through historical records should be provided in order to assess the cumulative impacts of past projects and activities on agriculture in the RAA.	The EIS Guidelines required consideration of an agricultural baseline that provides an understanding of the current and projected future agricultural land base (capability), operations and economic systems. As such, historical crop or land use lies outside the scope of the environmental assessment. Please also see the Technical Memo on Cumulative Effects Assessment.
pub_0448-ag-114	Peace Valley Environmental Association & British Columbia Women's Institute	7) The EIS fails to include an evaluation of the cumulative economic effect of the potential impacts of the proposed Project in the RAA and the province.	Please see the response to pub_0448-ag-112.

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pub_0448-ag-115	Peace Valley Environmental Association & British Columbia Women's Institute	Request/Recommendation 1) That the EIS provide a complete listing of the potential impacts of the proposed Project upon agriculture that would enable a comprehensive assessment of both the 'accumulated' and 'cumulative' impacts.	Please see the response to pub_0448-ag-109.
pub_0448-ag-116	Peace Valley Environmental Association & British Columbia Women's Institute	2)That the EIS include an assessment of what the effects of Site C on agricultural land use would be cumulatively with the effects of past, present and future projects in the RAA.	Please see the response to pub_0448-ag-112.
pub_0448-ag-117	Peace Valley Environmental Association & British Columbia Women's Institute	3) That the EIS include an assessment of what the effects of Site C on agricultural economics would be cumulatively with the effects of past, present and future projects in the RAA.	Please see the response to pub_0448-ag-112.
pub_0448-ag-118	Peace Valley Environmental Association & British Columbia Women's Institute	4) The EIS must address the question: "How has the 56-year Flood Reserve on Peace River Valley lands affected each of the four aspects of agriculture considered in the effects assessment (Agriculture Land Base, Agriculture Operations, Agricultural Economic Activity and Change in Food Production and Consumption) and what is the cumulative effect of the Flood Reserve plus the actual construction of the Project, including upon the socio-psychological culture of farming within the Peace River Valley and the broader community?	The EIS Guidelines required consideration of an agricultural baseline that provides an understanding of the current and projected future agricultural land base (capability), operations and economic systems. As such, historical crop or land use is outside the scope of the environmental assessment. Please also see the following Technical Memos: • Cumulative Effects Assessment • Flood Reserve

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pub_0448-ag-119	Peace Valley Environmental Association & British Columbia Women's Institute	N. Mitigation Measures to Address Project Effects on Agriculture The EIS does not provide sufficient information to assess the likely cost or adequacy of the proposed mitigation measures or justification for the assumptions relied on, as equired by the EIS Guidelines.81 Issues 1) There is a lack of substance to and integration of the various proposed mitigation measures and no demonstration of exactly how these measures will be successful in addressing the scope and complexity of Project impacts on agriculture, which have not themselves been adequately assessed, compiled or even estimated. 2) There is a domino effect between the above-identified issues gaps in the assessment (i.e, the scope and extent of potential Project impacts on agriculture, as well as the impact management plans and other measures intended to address those impacts) and the conclusion reached by the EIS that 'permanent agricultural land loss' is the only residual effect to which a compensation package need be applied.	EIS Volume 3, Section 20.4 summarizes the effects assessment and mitigation measures to address effects. The permanent loss of land is noted as the residual effect after taking into consideration proposed mitigation measures. The effects on agriculture have been assessed in accordance with the EIS Guidelines.
pub_0448-ag-120		*This line left intentionally blank for administrative purposes. Comment initially considered as a separate IR was combined with pub_0448-ag119.*	
pub_0448-ag-121	Peace Valley Environmental Association & British Columbia Women's Institute	Request/Recommendations 1) That the EIS include the Proponent's estimate of the cost of the proposed mitigation measures, including any assumptions regarding the scope, duration and geographic application of the mitigation measures.	EIS Volume 3, Section 20, page 20-62, lines 20 to 22 state "The administration and governance of the fund, and the magnitude of the fund, will be developed through consultation with agricultural organizations, the ALC, the B.C. Ministry of Agriculture, and the local agricultural community". Other mitigation measures are described in the relevant areas of Section 20 Agriculture, and summarised in Table 20.37. Please see the Technical Memo on Agriculture.
pub_0448-ag-122	Peace Valley Environmental Association & British Columbia Women's Institute	O. Agricultural Compensation Package to Address Residual Effects The EIS does not provide sufficient information to assess the likely cost or adequacy of the proposed Compensation Fund. Issues 1) Permanent loss of agricultural land' as the residual to which compensation would be applied fails to take into account the unique microclimate characteristics of the land that will be lost (see comments on Climate for Agriculture, Land Capability and Issue #1 of Assessment of Agriculture Land Loss, above).	Please see the response to pub_0448-ag-009. EIS Volume 3, Section 20, page 20-62, lines 20 to 22 state "The administration and governance of the fund, and the magnitude of the fund, will be developed through consultation with agricultural organizations, the ALC, the B.C. Ministry of Agriculture, and the local agricultural community".

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pub_0448-ag-123	Peace Valley Environmental Association & British Columbia Women's Institute	2) Notwithstanding the questionable conclusion of what constitutes 'residual' effects (vol 3, s 20.3.10.1.1 and Table 20.37; see also Mitigation Measures, above), the relevance and effectiveness of the Agricultural Compensation Package itself is questionable. For example: a. There is no local requirement for drainage except as a result of the Project. (i.e. no 'W' subclass in any land capability for agriculture ratings within the Project Activity Zone or adjacent) (vol 3, s 20.3.10.1.1, Table 20.37 and Figures Part 1 and 2). b. Topsoil relocation is a normal 'best practices' approach and, as such, does not merit mitigation status. Moreover, other than being listed in Table 8.1, no detail is provided on volumes, composition or destinations. Finally, topsoil relocation is not a particular local priority, given the high capability soils that dominate adjacent lands. c. Irrigation is a beneficial opportunity but the EIS does not consider whether there is appropriate quantity and quality of water to fulfil this commitment. d. ALR inclusion is not compensation. Under the Agricultural Land Commission Act, the ALC has the authority, after due process, to include appropriate lands within the ALR at any time. Inclusion is at the discretion of the ALC, not the Proponent. Moreover, a significant acreage of land with capability for agricultural use that might be proposed for inclusion within the ALR as part of Project compensation has been rated in the EIS as low-to-nil utility for agriculture. e. No dollar figure is specified for the Compensation Fund. Additionally, the EIS only provides a list of types of projects that the fund may support, and there is no direct relationship established between compensation and the specific nature and quality of the agricultural lands that would be lost. This point is important, as some hectares of agricultural land that will be permanently loss are more valuable than others, partly due to unique microclimate characteristics and crop suitability (see above) and partly due to the greater acreage of higher capability land identified through the more detailed mapping that was carried out.	a) Localized areas of poor drainage do currently exist for which drainage improvements may benefit productivity, as identified during farmer interviews. b) EIS Volume 3, Section 20, page 20-43, line 10 states "Soil relocation will be considered on a site-specific basis". c) EIS Volume 3, Section 20, page 20-42, Irrigation Improvements, describe irrigation as a potential mitigation that could be funded by the Compensation Fund and describe the amount of water that may have to be delivered to meet the moisture deficit, as an annual volume that could be supplied from the reservoir. Water quality within the reservoir is described in EIS Volume 4, Section 33 where it is predicted that water quality parameters in the reservoir would not exceed drinking water quality guidelines. As a holder of water rights, BC Hydro would be referred other water licence applications for comment by the provincial water licensing regulatory agency. d) EIS Volume 20, pages 20-43 and 20-44 describe the inclusion of land in the agricultural land reserve as a potential mitigation for the loss of agricultural land, including highlighting high and moderate utility land, by land capability, for BC Hydro and Crown lands in the Peace River Valley not affected by the Project, and not already within the ALR. BC Hydro will consult with government agencies (including the Agricultural Land Commission) and landowners to determine if there are opportunities to include agricultural capable land in the ALR. e) The permanent land loss and foregone agricultural economic activity were both considered in proposing the Agricultural Compensation Fund approach, which reflects the value of the land lost using the information presented in the EIS.EIS Volume 3, Section 20, page 20-62, lines 20 to 22 state "The administration and governance of the fund, and the magnitude of the fund, will be developed through consultation with agricultural organizations, the ALC, the B.C. Ministry of Agriculture, and the local agricultural community".
pub_0448-ag-124	Peace Valley Environmental Association & British Columbia Women's Institute	Request/Recommendation 1) That the Proponent explain how, given the expressed intent to assess the "potential effects of the Project on the capacity of renewable resources to meet the needs of present and future generations" (vol 5, s 37.4), the fact that permanent loss of agricultural land is the residual to which compensation would be applied is compatible with the conclusion reached that there would be "no significant adverse	EIS Volume 3, Section 20.5 describes the evaluation of residual effects on agriculture.

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		residual effects" on agriculture (vol 5, Table 37.25).	
pub_0448-ag-125	Peace Valley Environmental Association & British Columbia Women's Institute	2) That the Proponent provide greater detail and justification regarding the Compensation Fund, including: a. The amount of money the Proponent commits to be available in the Fund; b. The duration and timeline of the fund; c. Details regarding the trusteeship and administration of the fund; d. A non-discretionary list of mandatory types of projects which would be supported, and a set of mandatory guidelines for considering projects not expressly listed; e. An explanation of the direct relationship between the specific compensation projects and the impacts; f. A description of the role and responsibilities of the Proponent with respect to the fund;	EIS Volume 3, Section 20, page 20-62, lines 20 to 22 state "The administration and governance of the fund, and the magnitude of the fund, will be developed through consultation with agricultural organizations, the ALC, the B.C. Ministry of Agriculture, and the local agricultural community". Please also see the Technical Memo on Agriculture.
pub_0448-ag-126	Peace Valley Environmental Association & British Columbia Women's Institute	P. Compliance Monitoring and Reporting The EIS fails to describe how monitoring will be provided for the duration of risks caused by the Project. Issues 1) Several potential impacts, such as related to groundwater/surface water and slope stability/landslides may take decades to manifest themselves. A monitoring regime designed for only five years after operations begin is not adequate for a Project with a life span of 100 years (Vol 3, s 20.7 and Table 20.42, and vol 5, Table 39.2).	Please see the Technical Memo on Reservoir Impact Lines.
pub_0448-ag-127	Peace Valley Environmental Association & British Columbia Women's Institute	2) Despite obvious hazard risks to farm operations and public safety, the EIS contains no indication of an intention to monitor erosion, slope movement, slumping and landslides within preliminary statutory rights-of-way beyond the first five-year operational period (vol 5, Table 39.2 versus Vol 2, Appendix B Part 2 s 14.0).	Please see the Technical Memo on Reservoir Impact Lines.

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pub_0448-ag-128	Peace Valley Environmental Association & British Columbia Women's Institute	Requests/Recommendations 1) The EIS Guidelines requires that all hypotheses and assumptions be clearly identified and justified, that analyses be transparent and reproducible, and that all significant gaps in knowledge and understanding related to key conclusions presented be identified along with the steps taken by the Proponent to address those significant gaps.82 It is requested that the Proponent clearly identify and justify the following assumptions regarding monitoring Project-induced changes: a. that a distance of 5 km from the reservoir is adequate to monitor agriculture/wildlife interface (which is dependent upon terrain characteristics, wildlife movement corridors, species, habitat characteristics type of agricultural use and crop selection); b. that a distance of 2 km from the reservoir is adequate for groundwater monitoring (which is dependent on such aspects as surficial geology, specific soils, topography and surface drainage); and c. that a distance of 1 km from the reservoir is adequate for humidity change monitoring.	Project effects on wildlife were assessed 1 km beyond the erosion impact line as described in Section 14 of the EIS. The 5 km distance from the reservoir to monitor potential Project-induced changes to wildlife habitat utilization and associated damage to crops and stored livestock feed was based on the wildlife resources local assessment area and an additional buffer to ensure a comprehensive evaluation of potential effects. The cross-sectional groundwater flow models described in Volume 2 Appendix F Groundwater Regime Technical Data Report confirm that the 2 km distance is sufficient. Please see the Technical Memo on Reservoir Impact Line for information on monitoring groundwater. Based on further review of the microclimate assessment results in EIS Volume 2 Appendix K the distance from the reservoir within which crop drying conditions will be monitored will be increased to 3 km. This updated information has been added to the List of Errata and Updated Information for Section 20.7, line 27.

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pub_0448-ag-129	Peace Valley Environmental Association & British Columbia Women's Institute	Q. Risk The EIS fails to adequately analyse the economic impact of risks, such as slumping, climate change, higher fuel oil prices, increased concentration in agri-food markets and their impact on food costs. Moreover, there is no cumulative analysis of risks. Issues 1) The economic impact is not subject to a rigorous sensitivity analysis for risks, including the following: a. Risk of climate change. b. Risk of fossil fuel price escalation (i.e, transportation costs). The EIS fails to provide an economic analysis of the risk of climate change or consider the impact of transportation on food prices, nutrition and health care costs. c. Risk of an escalating population. The EIS modeling pegs population growth at 1.09% per year. Both BC and Alberta are experiencing higher job growth due to resource extraction. BC grew at 7.0% over the past 5 years, Alberta by 10.8% and Edmonton by a whopping 12.1%. Energy exploration in the Peace should peg growth rates closer to Alberta. EIS population growth estimates almost certainly underestimate the demand for food in the region. Further, the EIS fails to consider populations in the Yukon and Northwest Territories. d. Risk of market failure due to increasingly concentrated markets, and resulting impact on food prices, nutrition and health care costs. e. Risk of increased slumping (see comments regarding Agricultural Land Use, above). f. Risk of a shrinking food land base and foreign buy-up of farmland for food export or bio-fuels. The EIS does not consider the importance of the Peace River Valley land to the diversity, capability and resiliency of the ALR. g. Risk of food becoming more highly valued than energy exports. The EIS does not consider the potential cost of future dam decommissioning.	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. The risk analyses noted in this comment lie outside the scope of the environmental assessment. Please note that the 1.09% population growth rate used in the agricultural assessment was sourced, as stated in EIS Volume 3, Section 20, page 20-65, line 16, from BC Stats, which takes into account projected economic growth in the region.
pub_0457-001	Peacock, Adrienne	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* Site C is a poor deal for taxpayers and ratepayers because: • The energy from Site C is not needed in BC, is not “green” energy, will have a significant impact on rates and will not be needed in the foreseeable future. By contrast, the agricultural land will beneeded, and the habitat and cultural values will	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and

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		only increase with time. • BC Hydro's costs are out of control, thanks to recent government energy policies. o BC Hydro is already burdened with $40 billion in signed contracts to purchase private power. o It is power that BC Hydro does not need and the BC Utilities probably would not have approved. o BC Hydro will have to pay over 2X what the real value of the energy is, according to BC Hydro's latest forecasts, and the result will be significant losses each year, which will require rate increases. o BC Hydro already has a huge deferred debt, estimated at $2.1 billion in 2011 and expected to continue climbing to $4.7 billion by 2014, as described by the Ministry of Energy and Mines. Why should taxpayers and ratepayers be required to foot the bill to pay for power for very lucrative large industries? o According to the provincial government, Site C is needed because proposed liquid natural gas (LNG) projects require this energy. To provide that energy, BC Hydro will incur further huge losses. As SFU economist Marvin Shaffer has pointed out, "BC Hydro will lose tens of millions of dollars per year at each new mine if it provides power to them at the standard industrial rate" (Van. Sun, June 7, 2012). Why are we risking our coast and our jobs to supply fossil fuel to Asia? The LNG plants are being built to send natural gas to Asia, where, according to the Liberals, they will offset the use of dirty coal. But this same government is supporting the development of coal projects throughout BC, projects that will ship coal to China and even import Chinese migrant workers because there is a "true" shortage of workers in northern BC. It makes no sense.	industrial customers. The Project is needed whether or not any new LNG projects proceed. BC Hydro serves its customers, including oil and gas customers, pursuant to tariffs (rates) approved by the BCUC and in accordance with the legislated Heritage Contract. All methods of meeting need considered in the EIS portfolio analysis will result in financial obligations to BC Hydro. The comparison of financial attributes between the Project and alternative generation options is provided in Section 5.5.4.3, while the effect of the Project on ratepayer costs is provided in Section 7.1.3. As stated in 7.1.3, "… the Project is expected to result in lower long-term costs to ratepayers than alternative resource options." As a result, the Project would result in a lower financial obligation to BC Hydro than the other available alternative resource portfolios considered. Please see the Technical Memo on Project Costs.
pub_0457-002	Peacock, Adrienne	In 1982, the BC Utilities Commission examined the Site C dam proposal and rejected it as a poor investment for BC taxpayers and ratepayers. The "Clean Energy Act" of 2010 removed BCUC oversight of Site C, and thus avoided a rational review and possible rejection of Site C by the BCUC. They also prevented public hearings into Hydro's proposed rate increases (when they ordered the commission to accept whatever Hydro proposed) and then backed off and decided to cap rate increases, all without the oversight of the BCUC. What is the foregone opportunity cost of Site C? o The province should not incur a debt of $8 billion plus to subsidize big profitable industries, when the energy is not needed by citizens of this province. If the province wants to spend $8 billion to stimulate the economy, why not spend it on	The Project was not rejected in 1982. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the Project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). The role of the BCUC is described in Section 1.2, page 2 of the EIS Guidelines and Section 7.1.3, page 7-4 of the EIS: • Section 1.2 of the EIS Guidelines, which sets out the purpose of the EIS, states: "The EIS is not intended to constitute a Certificate of Public Convenience and Necessity for the Site C Project. The Site

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		truly green energy by funding conservation projects that are job intensive and save huge amounts of energy, one house, and one business at a time? o There is an enormous need for education and training in many of the alternative energy areas, for example, plumbers skilled in designing and constructing geoexchange systems.	C Project is exempt from the requirement for a Certificate of Public Convenience and Necessity as per section 7 of the B.C. Clean Energy Act"; • Section 7.1.3 of the EIS describes the role of the BCUC with respect to the Project, which is to review the costs associated with the Project should it proceed in the context of BC Hydro's revenue requirements: "Costs associated with generation projects are recovered from ratepayers based on the revenue requirements collected by BC Hydro, as regulated by the [BCUC] … The manner of cost recovery is determined by the BCUC …". All methods of meeting need considered in the EIS portfolio analysis will result in financial obligations to BC Hydro. The comparison of financial attributes between the Project and alternative generation options is provided in Section 5.5.4.3, while the effect of the Project on ratepayer costs is provided in Section 7.1.3. As stated in 7.1.3, "… the Project is expected to result in lower long-term costs to ratepayers than alternative resource options." As a result, the Project would result in a lower financial obligation to BC Hydro than the other available alternative resource portfolios considered. Please see the Technical Memo on Project Costs for an additional description of the financing of the project. Section 5 of the EIS contains the analysis of the need for and alternatives to the Project. Please see the Technical Memo on Alternatives to the Project.
pub_0457-003	Peacock, Adrienne	Preserving agricultural land is a matter of self-sufficiency and fairness. • Over 13,000 acres of prime agricultural land will be lost if Site C is built; 7,800 acres of class 1 and 2 farmland, the only prime farmland north of Quesnel. This land would have to be removed from the Agricultural Land Reserve and would be the largest removal a government has ever made. • This Peace Valley warms up about a month earlier than the uplands and is capable of producing valuable vegetable crops, even tomatoes and melons. If BC Hydro's flood reserve was removed, the Peace River flats could produce food for the whole northern region. • It's a case of equity; with the decline of farmland and recognition of the health and climate benefits of a 100-mile diet, it is unfair to remove such excellent farmland land from production. Northerners should have access to locally produced food, just as Southerners do.	EIS Volume 3, Section 20, Table 20.16 summarizes permanently lost agricultural land within the Project activity zone by capability, which includes consideration of the valley climate. This summary includes land which is currently developed and land which is currently undeveloped for agricultural use. EIS Volume 3, Section 20.2.4 describes the methodology used in assessing agricultural utility, a term used in this assessment to reflect the likelihood of future agricultural use. It also includes land which is currently developed, and land currently undeveloped, for agricultural use. The permanent loss of land rated as having high or moderate utility is summarized in EIS Volume 3, Section 20, Tables 20.19 and 20.20. Please see the following Technical Memos: • Agriculture • Flood Reserve

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pub_0457-004	Peacock, Adrienne	The majority of First Nations and residents are vehemently opposed. • The Peace River waters and adjoining lands are critical as part of First Nations' historical, social, cultural and spiritual identity and provide vital resources. • In September 2010, over 33 First Nations signed a joint declaration in opposition to the Site C dam.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to pub_0246-002
pub_0457-005	Peacock, Adrienne	There are significant geological stability issues in the Valley. • Residents are concerned about slope stability; a recent geotechnical study stated that "The valley's steep slopes make it prone to landslides like the one that blocked the river... in 1973".	Please see the Technical Memo on Reservoir Impact Lines.
pub_0457-006	Peacock, Adrienne	The wildlife habitat losses will be significant for the whole northeast. • The Peace River Valley is home to over 20 threatened species, including grizzly bears, bull trout and red and blue-listed species like fishers and Northern Myotis bats. Site C would forever remove critical wintering and .birthing habitat. • The Peace region is also one of the most important wildlife corridors in the Yellowstone to Yukon Conservation Corridor Initiative (Y2Y). Site C would cut the Y2Y corridor in half at its narrowest and most vulnerable point. Wetlands that support migratory flocks, including swans, will be sacrificed to provide energy we don't need.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the Technical Memo on Movement of Grizzly Bears and Large Carnivores.
pub_0460-001	Peck, Robert T.	*The commentator submitted a letter with comments contained in form_0004-001 to form_0004-022 and in submission pub_0537-001 to pub_0537-004.*	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to form_0004-001 to form_0004-022 and in submission pub_0537-001 to pub_0537-004.
pub_0461-001	Forrester, Nedra	*The commentator submitted a letter with comments contained in form_0004-001 to form_0004-022 and in submission pub_0537-001 to pub_0537-004.*	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to form_0004-001 to form_0004-022 and in submission pub_0537-001 to pub_0537-004.

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pub_0462-001	Forrester, E.B.	*The commentator submitted a letter with comments contained in form_0004-001 to form_0004-022 and in submission pub_0537-001 to pub_0537-004.*	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to form_0004-001 to form_0004-022 and in submission pub_0537-001 to pub_0537-004.
pub_0463-001	Sashaw, Keith	It is my pleasure to provide comments on behalf of the Association of Consulting Engineering Companies – BC (ACEC-BC) on the Environmental Impact Statement provided by BC Hydro on the proposed Site C Clean Energy Project ("the Project".). The Association of Consulting Engineering Companies British Columbia, (ACEC-BC) is British Columbia's provincial association of consulting engineering firms, representing 90 of BC's consulting engineering companies that provide engineering and other technology-based intellectual services to the public and private sectors. Our members employ over 8,000 people in British Columbia, and contribute some $2.9 billion in annual revenue to the BC economy. As the association representing the consulting engineering community in BC, we take a great deal of interest in projects that contribute to the planning, development and delivery of infrastructure projects in BC. Our members are engaged in some manner in all infrastructure projects that take place in the Province, providing expertise and knowledge on engineering issues. In fact many of our members have been engaged in most of the engineering and environmental studies that have been undertaken to date on this particular project. Our association has had a positive and collaborative relationship with BC Hydro for many years, working on issues that encompass all areas of the BC Hydro engineering business – generation, distribution, transmission, sustainability/environmental, Power Smart, as well as on issues that improve the overall engineering profession. Our members have had many presentations on the Site C Clean Energy Project and have been supportive of this project for many reasons. Our association strongly supports the comment made recently by the Canada West Foundation that "Canada's governments should not hesitate to maintain a high level of investment in infrastructure. Sustained and strategic investment in public infrastructure is essential to Canada's long-term economic growth and it's critical to the quality of life enjoyed by	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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		Canadians." We believe this is especially the case with a project such as the Site C Clean Energy Project. The Ministry of Jobs, Tourism and Skills Training of the Province of BC publishes the Major Project Inventory, which tracks major projects in the Province of British Columbia that are over $15 million (Cdn.) capital cost, or $20 million in the Lower Mainland – Vancouver area. In the most recent edition, it was noted that the available capital cost of proposed project is estimated at approximately $156.3 billion, up from $131.2 billion in the previous quarter. Many of these projects, such as mines, mills, energy projects require a long term supply of reliable power. When one looks at the anticipated growth in population, this issue becomes even more salient. We therefore concur with the comment in the EIS that the Project is justified in that the public interest is being served by delivering long term, reliable electricity to meet growing demand. Aside from the economic development imperative of developing the Site C Clean Energy Project, we are satisfied with the process of providing expert review and input. The EIS notes that "following industry practice for large scale hydroelectric projects, the Project has established an international Technical Advisory Board that has provided technical advice on the Project engineering and design. The members of the Site C Technical Advisory Board are globally recognized for their knowledge and experience with the design of hydroelectric projects around the world. The Technical Advisory Board meets to review key design milestones and will continue to provide input to the Project as it progresses through implementation and final design." We are fully supportive of this approach and are confident that the process will ensure the latest engineering practices are utilized to mitigate risks that may be associated with the Project. As noted earlier, many of our members have already been engaged in the process and have provided significant knowledge, expertise and input into the Project. Given the above, ACEC-BC is fully supportive of the Site C Clean Energy Project and would encourage its development, subject of course to any specific recommendations coming out of this environmental process. Please feel free to contact me if there are any questions or you require any additional information.	

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pub_0465-001	Peck, Ross	**Comments to CEAA re Environmental Impact Statement filed Jan 2013-on BC Hydro's Site C project:-April 2-2013** Before I address specific components of the Environmental Impact Statement (EIS) on BC Hydro's Site C Energy Project (hereafter the Project), I would like to comment on the consultation aspects of the process from the perspective of individual. Although BC Hydro(hereafter the proponent) appears to have had unlimited resources to prepare their submissions, there is no support for the public or individuals to respond. I recognize that some organized groups familiar with the process have received a degree of funding support, but individuals find themselves with limited time, background and capacity to adequately respond. As the process goes on it becomes more and more difficult to "participate". Being able to fully respond to a 15,000 pages of EIS documentation is somewhat daunting, and relying only on the proponent generated Executive summary has considerable risks. Although I have made an effort to attend the various open houses and events on the Project, and provide input at all opportunities, the format, venue, and processes all weigh heavily on the side of the proponent. From my perspective, the proponent has not provided a clear understanding of the full impacts of the Site C project to the general public, and has not provided meaningful or facilitated opportunities for the public to participate in the environmental assessment process. Family members have owned land within the Site C reservoir area for 50 years, and our current home base is along the Peace River at the mouth of Farrell creek, which is depicted in the photo on page 13 of BC Hydro's Environmental Impact Statement. Although the seven other agricultural parcels of land that we own in the Peace River valley will be impacted by the proposed Project at various levels, I will primarily address comments to the effects and proposed mitigation measures that relate to this specific area in the context of a number of the valued components that the proponent has identified. The Peace river valley has been my home for the past 13 years, and it is where I live, work and recreate, and the project would effect many aspects of my daily life. I continue to be amazed at the values inherent in the Peace river valley, and wonder how any rational process could recommend the destruction and devastation of such a special place	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro has provided regular and publicly-available Project updates, information sheets, field study notices, public consultation notifications, consultation guides, brochures and videos regarding the technical and environmental studies and activities taking place in the Project activity zone since 2007. This information has been posted at the Project website and in the community consultation offices, via the Project's public stakeholder mailing list, and, where appropriate, through the media. The public also had an opportunity to provide input through the Project's toll-free line, public inquiries program, Project website, public open houses, public consultation feedback forms and other submissions, and stakeholder and property owner meetings. BC Hydro has provided multiple opportunities for the public to comment and participate in the environmental process for the Project. Since 2007, the Project team led or participated in more than 500 consultation meetings, presentations, local government meetings, community events or open houses. BC Hydro has also responded to approximately 3,000 inquiries received via email, in-person at the consultation offices, or through written submissions, which are in addition to information requests made as part of the environmental assessment process. In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. Please also see Section 9.1 of the EIS (Public Information Distribution and Consultation).

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pub_0465-002	Peck, Ross	**Fish and fish habitat**. From the perspective of a fly fisherman, the loss of fish and fish habitat resultant from changes from a river to a reservoir is a major concern. The photo depicts a highly used fishing site, as well as critical fish spawning and rearing habitat along Farrell Ck.(EIS Vol 2-Section 12, Table 12.8) This will all be destroyed under the proposed reservoir. The extensive list of mitigation measures identified(many questionable in regards to effectiveness) cannot disguise the fact that a totally different fishery would occur in the reservoir. Loss of Arctic grayling, migratory bull trout and mountain whitefish species are acknowledged in the EIS-Vol 2, Sec 12, but the importance of those losses in a regional context is ignored. Upstream reservoirs have had severe impacts on these species, and Site C will add detrimental impacts that could question the viability of these species in the Peace system. With cumulative industrial impacts, pristine wilderness river fishing opportunities have been decreasing at an accelerated rate across the region, and the loss of these opportunities on the Peace river from the Project would be very significant and are not adequately addressed in the EIS.	Changes to fishing opportunities during Project operations are described in Section 24.4.2 and Section 7 of the EIS. While there would be some change in fish composition, the Project will have some beneficial effects on recreation and aquatic productivity with the change from a river to reservoir environment. Fishing opportunities would be expected to increase over baseline conditions, as the Site C reservoir would support increased boating and angling use, and would continue to support sport fish.
pub_0465-003	Peck, Ross	**Vegetation and Ecological communities**. One ecological community of specific concern, viz 'old and mature riparian and flood plain forests", can be seen along the Farrell Creek in the photo. Often dominated by old growth cottonwood and white spruce, these riparian sites contain incredible wildlife habitat values for species that range from migratory warbler bird species to bats and fishers. These vegetation communities have very specific ecological requirements and can not be re established on upland sites. Clearing of 83km of the main stream Peace as well as the tributaries, would result in a direct loss of a significant portion (in excess of 40%) of these habitat types in the Local Assessment Area (LAA.) (EIS- Vol 2, Sec 13, Table 13.8 and associated text). As well as these riparian forests, the losses of wetlands (e.g. Watson Slough-EIS Vol 2, Sec 13, 13.3.2.1.) and other rare ecosystems such as tufa seeps are identified-EIS-Vol 2, Sec 13.4). The EIS does not adequately address these losses and no mitigation measures proposed can restore these communities, which in turn would lead to a significant loss in the species associated with them. Many of these are already rare or listed species.	The loss of riparian floodplain forests and the loss of wetlands are two factors that contributed to the finding of a significant residual effect on vegetation and ecological communities in the EIS (Volume 2, Section 13, Subsection 13.4.1, page 13-34). Loss of riparian floodplain forests also contributed to the finding of significant residual effects on wildlife resources, due to potential effects on listed species (Volume 2, Section 14, Subsection 14.5.3, page 14-87. Mitigation measures for vegetation and ecological communities are described in Section 13.2.2 of the EIS. BC Hydro will work with appropriate regulatory authorities to develop this plan for rare plants. BC Hydro's mitigation measures include planning and implementing construction activities in a manner that seeks to maintain the hydrology of adjacent wetlands, particularly where known rare plant occurrences are present.
pub_0465-004	Peck, Ross	**Wildlife Resources:** The EIS is severely lacking in the analysis of effects on wildlife resources. Part of this is in terms of scale, both spatial and temporal. The species specific focus analysis undertaken, totally miss the impacts on the overall ecological	The scope of the wildlife resources effect assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS.

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		system. The Peace river valley provides critical habitats for resident and migratory species, and these vary from season to season and year to year, and having these diverse valley habitats being replaced by a reservoir would significantly decrease the diversity of habitats and there use. For example, in the 13 years I have lived in the valley moose populations and abundance have fluctuated considerably. Winter severity on upland ranges influence moose migratory behaviour to riparian habitats, but these trends may not be documented in the short term study approach taken. For example during the severe winter of 2007- 4 moose (2 cows/2 calves) resided in the riparian habitat along Farrell Creek and on riparian habitats adjacent across the Peace river, for an extensive period. The telemetry studies in mild winters of 2010-11 that are used by the proponent to evaluate the Project impact on moose would have missed these sort of uses and the importance of these particular habitats during severe conditions. For example, I note in the EIS-Volume 2, Appendix R, Terrestrial Vegetation and Wildlife Report, Part 7, Mammals, p 156 (page 136 of 347), table 1.4.6, the moose (sample of 20 animals- 6 of whom died during the course of the study) that were subsequently monitored; were captured between Jan 25-28 of 2010. This particular sample, limited in time and number, would also fail to pick up late seasonal migrants that don't normally arrive in the valley until the Feb/March time frame (a common occurrence). As well, the cumulative impacts of industrial development in the Northeast BC has the potential to disrupt connectivity between various wildlife populations, and the EIS has failed to address the additive effects of the Project on effected species. I see no analysis in the EIS on the importance of the Peace Valley in relation to its importance as staging areas for migratory species. As I write this (March 31/13), the first of the northern bird migrants are starting to arrive and flocks of Canada geese and various duck species can be observed in the area depicted by the photo. The Peace river provides a critical resting and refuelling stop for various migratory species and I see no analysis in the EIS on the potential impacts of a Project reservoir (versus river) environment on migratory species, other than those that nest here. A pair of bald eagles has nested annually near the Farrell Creek confluence, one of many permanent nest identified with the Peace river valley. The Project identifies short term mitigation strategies in terms of maintain nest integrity as long as possible during construction activities(EIS Vol 2, Sec 14, Table 14.22), but the long term implications of reservoir related habitat changes are poorly addressed in EIS mitigation measures. Another area that is not adequately addressed in the Project EIS	Please see the Technical Memo on Spatial Boundary Selection for an overview of how assessment areas were established. BC Hydro has proposed comprehensive mitigation measures and will continue to work with applicable regulatory authorities to ensure that appropriate mitigation measures for wildlife are applied. Please also see the following Technical Memos: • Cumulative Effects Assessment • Permitting for Construction and Operations

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		is analysis of the impacts of climate change on various wildlife habitat features and an evaluation of the different resilience of river versus potential reservoir habitats for wildlife species The mitigation measures presented for wildlife resources are severely lacking. Many of the proposed measures involve replacing habitat elements that currently occur naturally with artificial or constructed components. “Artificial dens, nest boxes, bat roosting features, artificial piles of coarse wood debris, fisher den boxes, supplemental wildlife feeding, nesting platforms” etc all suggest a very altered wildlife environment post Project.(EIS Exec Summary, p 47-49) There is no analysis in the EIS that maintaining wildlife resources in these manners are either feasible or acceptable to the public. There seems to be an assumption inherent in the analysis by the proponent, that if the species is not at risk, or if it exists outside the project area, there is a lesser degree of vigilance in regards to potential Project impacts. This appears to be a result of the species specific form of analysis taken by the proponent, with a primary goal of establishing mitigation measures at a species level. I would suggest that a more appropriate level of analysis would be expansion beyond the LAA to include cumulative impact analysis at regional and populations levels.	
pub_0465-005	Peck, Ross	**Current use of land and resource for traditional purposes.** The Farrell Creek confluence depicted in the photo has been identified as a “high value place” by local Aboriginal Groups. Documented archaeological sites in the area, confirm a long history of First Nation use. Non aboriginal users have also a long history of use of the area. The Farrell Creek area is one of many ‘well established use sites’ along the Peace River that receives extensive use, and there appears to be little effort to identify or mitigate for these in the EIS. A number of these sites or areas are located on islands along the Peace river and would be completely destroy by inundation. LRMP planning processes recommended protected area status for the islands and south bank of the Peace river, due to the inherent recreational, traditional use and conservation values (Peace Boudreau Protected area). Implementing mitigation options along a reservoir shoreline that will take considerable time to stabilize will be very challenging, and it will be impossible to restore the conditions and opportunities offered by the current sites along the river.	The assessment on the potential effects of the Project on the current use of lands and resources for traditional purposes in Section 19 of the EIS took into consideration the potential for change in access to areas used for hunting, fishing and trapping purposes and for other cultural uses during both construction and operation phases of the Project. In Section 19.4.6 Effects Assessment - Change in Cultural and Traditional Uses of the Land, Farrell Creek is referenced as one of three places considered in the assessment as having the highest special importance based on baseline information considered and the reported high value attached to these places by Aboriginal groups. The EIS describes changes to the areas available to public use, and changes to access to these areas in the Harvest of Fish and Wildlife Resources (Section 24), Outdoor Recreation (Section 25), and Navigation (Section 26) VCs. Please also refer to the following Technical Memos: - Environmental Management Plans - Flood Reserve

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pub_0465-006	Peck, Ross	**Agriculture.** The Project has many potential impacts in regards to maintenance of viable agriculture operations, and many of the obvious potential effects are listed in EIS-Vol 3. Sec 20, Table 20.1-20.3. Disruptions on daily activities and lifestyle will be major, but almost impossible to quantify at this stage. Project activities such as road relocation and **r**eservoir clearing will severely impact normal daily activities, such as trips to town for mail or parts, or even moving farm machinery from one parcel to another. Apart from actual flooding of land many of the impacts are long term and may take considerable time to manifest. An example in the photo would be the hayfield/pasture that the overlooks the river. With a reservoir scenario, wind erosion and sloughing would increase, and loss of exposed land and fence lines would occur over time. Responsibility for evaluating and compensating the impact and potential of delayed impacts on Agricultural operations should rest with the proponent, and should remain a long term commitment, rather that the minimum of 5 year post reservoir filling suggested in this EIS. Mitigation measures addressing project effects on Agriculture operations (e.g EIS Vol 3, Sect 20, Table 20.37) recommend a development of a variety of Environmental Management Plans and an Agricultural compensation fund. Owner/operators of agricultural operations have limited capacity, resources and time to participate in these processes, and support for these initiatives are an area that the proponent has not addressed in the EIS. For the project to proceed, a considerable amount of Agricultural Land Reserve land would require designation changes to “non farm status” The EIS is very deficient on explaining how this process would occur, the role that current landowners would play in that process, mitigation and compensation for the loss, and the implications to other lands with the LAA and the region. The suggestion to designate lands with lower capability to replace the Class 1 and 2 agricultural lands being flooded is not a valid option from either a landowner or public perspective.	Section 4.4.6 of the EIS states: "Most of the new highway segments and bridges would be located away from the existing highway, enabling construction to take place with minimal effect to the existing highway and traffic. Temporary detours would be necessary where portions of the new highway overlap the existing highway. At these locations, traffic flow would be managed, and could include sections of alternating single-lane traffic controlled by flag persons or short-term closures. Standard traffic control measures, such as signage, road markers, and flag persons, would be used for guiding traffic during construction." Potential effects, including changes to access, to agricultural operations during construction and operations will be addressed with Farm Mitigation plans as described in Section 20.3.6.2.2 of the EIS. Development and implementation of Environmental Management Plans is a responsibility of BC Hydro, and its contractors, as described in Section 35 of the EIS. Please also see the Technical Memo on Environmental Management Plans. Development and implementation of monitoring is the responsibility of BC Hydro and its contractors. Monitoring programs are proposed to be carried out at minimum for the periods specified in the EIS. As described in Section 20.3.9.1.1, the administration and governance of the an agricultural compensation fund, and the magnitude of the fund, will be developed through consultation with agricultural organizations, the ALC, the B.C. Ministry of Agriculture, and the local agricultural community. Section 20.1.1 of the EIS identifies the land area that would be temporarily or permanently occupied by the Project that is in the Agricultural Land Reserve, and would need to be approved as either “non farm use” or would need to be excluded from the ALR. The consideration for inclusion of land in the ALR is described in Section 20.3.4.1.2 of the EIS. BC Hydro will consult with government agencies and landowners to determine if there are opportunities to include agriculturally capable land in the ALR. This would include lands currently owned by BC Hydro.

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pub_0465-007	Peck, Ross	**Harvest of Fish and Wildlife Resources.** Within and adjacent to the photo, I seasonally harvest fish and wildlife for substance and recreational purposes. Under a Project scenario there would be considerable changes in hunting and fishing opportunities, as suggested in EIS Vol 3, Sec 24. Currently I can walk or canoe from my property to a harvesting site which gives a reasonable chance of success. Under construction and post project environments this will not be possible, and considerable additional effort, time and resources will be required to maintain a similar level of success, not to mention the direct impacts of the Project on fish and wildlife populations and their habitat. There are minimal mitigation measures advanced in Vol 3, Sec 24, and they will not address the impacts of the Project on Fish and wildlife harvesting opportunity. I strongly disagree with statements such as those in EIS Vol 3, Sec 24.4.8; "… that an increase in use of harvesting areas attributable to the Project is not considered an adverse effect" and those in Vol 3, Sec 24.4.6; "…that no effects on hunting opportunities are expected as a result of operations and therefore no mitigation is proposed" . When the impacts of the Project are combined with the ongoing pace of industrial development in the Peace river region the ability to harvest Fish and Wildlife resources will continue to erode. The Proponent must recognize that the Project will be additive to this erosion in the EIS.	Measures that support recreational shoreline use, boating access, and water based navigation (Volume 3 Section 25 Outdoor Recreation and Tourism; Volume 3 Section 26 Navigation) will mitigate construction (including reservoir inundation) effects on hunting and fishing opportunities. The cumulative effects of the Project have been assessed.
pub_0465-008	Peck, Ross	**Outdoor recreation and tourism.** From daily observation of river activity from our homesite, I see considerable use of the current recreational potential of the area. (in spite of limited access, boat launches, pull offs and day use areas) Riverboats, canoes and kayaks are persistent presence up and down the river, and fishermen, hikers and day users find Farrell Ck a convenient access corridor to the Peace river(See table 25.6, Vol 3, Sec 25). A key value is the relative wilderness nature of the Peace river valley, that is readily accessible to the local resident. The drive down Highway 29 along the Peace River valley is one of the most scenic in British Columbia. All these values would be severely compromised in the construction stage, and could never be fully restored by "developing new reservoir recreation infrastructure". The potential of the current recreation and tourism opportunities in the Peace River valley has never been fully realized or evaluated, and comparing it with an "enhanced" scenario post Project in the EIS is an invalid comparison. With road reconstruction and reservoir clearing, the current tourism uses of the valley and Hudson's Hope area will drop considerably over the period of disruption, and the proposed mitigation measures fail to address these issues. The EIS-Vol 3. Sec 25.5. summarizes potential	The Project would not alter the relative nature of recreation on the reservoir as compared to the river environment because it won't change the land use setting around the reservoir, and the area would continue to be readily accessible to local residents given mitigation measures proposed in Section 25 Outdoor Recreation and Tourism, and further described in Volume 3, Appendix E, Recreation Mitigation Plan. Changes to recreation and tourism infrastructure during operations are described in Section 25.5 of the ESI as positive because new reservoir access infrastructure would be in place, with enhanced features over current boat launch areas that would include docks and day use areas, and because the types of water-based recreation opportunities would increase on the Site C reservoir as a result of greater potential for access by a variety of boat types.

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		effects and mitigation measures and acknowledges, even with mitigation, "…there would be a residual adverse effect on outdoor recreation and tourism"	
pub_0465-009	Peck, Ross	**Heritage resources.** The page 13 photo contains palaeontological, archaeological and historical sites that have been identified in the analysis of heritage resources (EIS, Vol 4, Sec 32). These all have the potential of being destroyed or severely compromised as a result of the Project. For example, the location and remains of a 100 year old residence of the area's first homesteader and namesake (Henry Farrell) would be inundated. Additional impacts would occur as a result of Highway 29 relocation at the Farrell Creek location. Post project shoreline erosion would continue to impact heritage values, well beyond the 1st five years of operation, and development of long term monitoring protocols are essential and are not recognized in the EIS. The loss of significant heritage resources would occur as a result of the project, and much of this loss would be irretrievable.(EIS-Vol 4. Sec 32.3.) A detailed heritage site mitigation strategy requires broad input that would include local heritage groups, residents and First Nations.	The mitigation strategy for heritage resources is described in Section 32.3.3 of the EIS. A detailed mitigation plan for archaeological sites protected under the Heritage Conservation Act will be developed with the BC Archaeology Branch, as a component of Project permitting. BC Hydro anticipates that the final mitigation plan will be developed following consultation with Aboriginal groups, heritage stakeholders, and discussions between BC Hydro and the BC Archaeology Branch.
pub_0465-010	Peck, Ross	**Visual Resources.** A key finding related in the EIS summary document is that "the change in the visible landscape from a river valley to a reservoir could be considered either a positive or negative change". I am not sure if this is a voting opportunity, but I come down strongly on the negative side, considering the expression of natural processes I see daily in the river valley from our property. In line with a key mitigation measure "…to paint permanent buildings to blend in with the environment", at shoreline recreation sites should not the Proponent also be required to provide large screen video images of what the valley once looked like?!(solar powered of course). Yes, this can go from the sublime to the ridiculous!! **Site C is not a valid option, 15,000 pages only begin to address the impacts on all the "valued components", and many effects can not be mitigated or compensated for. The Project should be taken off the table and lets start having serious discussions about less disruptive future energy options. Thank you considering my comments**	Thank you for your comment.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0472-001	Darnell, Ruth Ann	Thank you for the opportunity to comment on the EIS in my limited capacity to follow the formal format. I appreciate your coming to Fort St. John. 1. The process is INTIMIDATING in that when I have been to an open house, I have been met with many Hydro employees and am on overload after a few stops. The written document of 15,000 that I see in the Public Library is off putting. I have been fighting for almost 40 years to preserve the valley so what of others in the public that do not have even the limited background that I have?	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0472-002	Darnell, Ruth Ann	2. Since the B.C. government took the BCUC out of the oversight on this proposed Site C project, will the proponent show the FULL COST and the burden that will be put on the taxpayers of British Columbia? B C Hydro is working on a boat launch at Taylor and there was an article in the Alaska Highway News there was a cost overrun of $1.5 million so far. How much more over will their estimates be of the building of the dam?(I doubt that $8 billion will be the final cost.)	As stated in Volume 1 Appendix F Part 1, the Project cost estimate includes "... an appropriate level of contingency to reflect uncertainty in future conditions." As a result, BC Hydro expects Project costs "… to be within the bounds of the current capital cost estimate in ordinary market conditions." Please see the Technical Memo on Project Costs for a description of the Project cost estimate.
pub_0472-003	Darnell, Ruth Ann	3. Historically, the proponent has stated that Site C was the only option and that their demand forecast showed that it is needed. Please have the B C Hydro give thorough JUSTIFICATION for this proposed project with proper costing for alternatives.	The analysis of alternatives is provided in Section 5 of the EIS. Please also see the Technical Memo on Alternatives to the Project.
pub_0472-004	Darnell, Ruth Ann	4. I ask that the proponent show that the MICRO CLIMATE in the Peace Valley is given its full due. My husband and I have personal knowledge of what a treasure for growing food this valley is. With the valley being under the flood reserve for so many years, the valley lands have not begun to be used to their potential. There must be full accounting given. With climate change coming, this valley will be crucial for food security in the future when primary wealth will be food and water.	Changes in microclimate as a result of the Project are Described in Section 11.10 of the EIS. As noted in Section 20.3.7.2.2, "reservoir-induced local climate effects on agriculture are anticipated to be limited to possible effects on crop drying within 1 km of the reservoir". Please see the following Technical Memos: - Flood Reserve - Agriculture
pub_0472-005	Darnell, Ruth Ann	5. The Peace Valley is crucial to the WILDLIFE in the area. The Islands are used for birthing and the migratory birds need this system for them to survive. I ask that detailed assessment of this aspect be done that includes all animals, birds and fish. I am certain that there are other areas that need to be fleshed out but the above are my main issues.	The scope of the wildlife resources effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. Please see Section 14 on Wildlife Resources.

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pub_0473-001	Wilson, Heather M.	Please find herewith my response to BC Hydro's Environmental Impact Statement for the Site C Project. As a resident of the Hudson's Hope area, it is my belief that construction of this proposed dam would be a crime against future generations in the Peace River Area. The region is already challenged by industry, and farmers are burdened by continual invasion of their land, and destruction of their ability to grow the bounteous crops that the Peace Region has historically produced. This is a rich farming area, and the Peace River Valley in particular is blessed with a micro-climate, enabling seeding to be undertaken earlier and with a later frost, providing a longer growing season than the rest of the region. I have been gardening on the banks of the Peace River for 40 years, and can overwinter Zone 5 plants, whereas the land outside the valley can only overwinter Zone 2 and 3 varieties. Nowhere in the Environmental Impact Study is this fact fully identified, therefore the potential productivity of the unique valley land seems to have been ignored. In my opinion, the loss of almost sixteen thousand acres of this precious land is unconscionable, particularly the Class 1 and 2 agricultural land, which is the only land of this value in the north of the Province. Every day we hear that crop production throughout the world is being threatened by climate change, making the potential for food production critical, and loss of this land by flooding would be destroying a precious resource which could help to mitigate this situation in the future. Since Site C was first proposed, the Valley has been under a flood reserve with restrictions on what farmers could do with their land. No study has been done showing how the Valley could have developed without the threat of Site C, and I believe this should be part of the EIS.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Climatic capability for agriculture ratings are reflected in the land capability for agriculture ratings. EIS Volume 3, Section 20.3.3 summarizes the loss of agricultural land by capability. Please also see the following Technical Memos: - Agriculture - Flood Reserve

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pub_0473-002	Wilson, Heather M.	I also have not been able to find any mention in the Environmental Impact Study of the concerns raised by First Nations and other bodies regarding the downstream effects to the Peace-Athabasca Delta, and feel these have been ignored. These impacts are critical to not only the First Nations but to Government Agencies and Environment Canada also, and must be taken into account. The Environmental Impact Study only describes downstream effects as far as Vermilion Chutes, Alberta.	The EIS describes the implications of the Project on downstream aquatic habitat conditions. For example, Section 12.4.2.2 Downstream Habitat Changes address the potential effect of the Project on fish habitat downstream of the Project, and considers physical conditions of the habitat, including surface water regime (Section 11.4), water quality (Volume 2 Appendix P:Part 2 Hydrodynamic, Water Quality, and Productivity for the Site C Project), thermal and ice regime (Section 11.7), and fluvial geomorphology and sediment transport (Section 11.8). Extensive consideration to downstream productivity changes is provided in Appendix P Part 3 Aquatic Productivity Reports: Future Aquatic Conditions in the Peace River. The effects of the Project on Current Use of Lands and Resources for Traditional Uses are found in Section 19 of the EIS and in Volume 1 Appendix H Aboriginal Information Distribution and Consultation Supporting Documentation. Please also see the following Technical Memos: • Peace Athabasca Delta • Spatial Boundary Selection
pub_0473-003	Wilson, Heather M.	I believe the cost of this proposed project at $7.9 billion is too high for the taxpayers of British Columbia to cover, when less expensive alternatives are being encouraged and developed in other Provinces. In conclusion, I feel BC Hydro has not adequately assessed the environmental, social, and economic effects of building this proposed dam.	All methods of meeting need considered in the EIS portfolio analysis will result in financial obligations to BC Hydro. The comparison of financial attributes between the Project and alternative generation options is provided in Section 5.5.4.3, while the effect of the Project on ratepayer costs is provided in Section 7.1.3. As stated in 7.1.3, "… the Project is expected to result in lower long-term costs to ratepayers than alternative resource options." As a result, the Project would result in a lower financial obligation to BC Hydro than the other available alternative resource portfolios considered. Please see the Technical Memo on Project Costs. The environmental assessment has been conducted in accordance with the EIS Guidelines.

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pub_0474-001	Heuer, Karsten, Y2Y	*This submission includes three items: (1) cover letter by Karsten Heuer, President of Yellowstone to Yukon; (2) Comment on the EIS of the Project by Clayton Apps; and (3) Curriculum Vitae of Clayton Apps. The cover letter by Karsten Heuer introduces the attached comment by Clayton Apps and summarizes the information outlined in Mr. Apps' submission. BC Hydro has responded to the detailed comments in Mr. App's submission.* <u>Scope of Review</u> Thank you for the opportunity to comment on the Site C EIS submitted by BC Hydro. Site C is a major development within a region associated with tremendous natural values and diversity but also subject to a massive and growing human "footprint" given settlement, industrial and other development. This "Peace River Break" region is central in the greater ecological region of the Yellowstone to Yukon (Y2Y) Conservation Initiative. The mandate of Y2Y relates to maintaining and restoring functional ecological connectivity throughout the Rocky Mountain biome, and the Peace Break region is an integral but highly threatened component within the greater Y2Y ecoregion and vision. Thus, my review and comments on the Site C EIS have focused primarily on the natural integrity of the greater region as reflected in broad-scale ecological connectivity. I have focused particularly on wide-ranging terrestrial species that serve as indicators for the integrity of ecological communities and associated natural processes. <u>General Concerns</u> My overarching concern with the Site C EIS is the limited spatial and temporal scope that has been considered. The Regional Assessment Area (RAA) is described as "the area within which projects and activities – the residual effects of which may combine with residual effects of the (Site C) Project – are identified and taken into account in the cumulative effects assessment." The boundaries of the Regional Assessment Area (RAA) have direct implications on the degree to which cumulative effects on wildlife (especially wider-ranging species) has the potential to be addressed adequately. The fact that the RAA had been increased from what had been suggested in the original EIS Guidelines, and is now defined by five Wildlife Management Units that encompass all of the development's components and activities, is an improvement. However, I do believe that a much broader regional scope is required in order to truly consider the Project in the context of existing population-level impacts to many species, especially those that range widely, occur at low densities, and/or are unevenly distributed. I	BC Hydro is aware of the interest expressed by the Yellowstone-to-Yukon group with respect to the movement of concern has been raised over the potential for the Project to interrupt north-south and east-west movement of grizzly bear, fisher, wolverine and lynx. Please refer to the comments below in pub_0474-002, 0474-004, 0474-005, 0474-006, 0474-007, 0474-008, and -0474-009. Please see the following Technical Memos: - Movement of Grizzly Bears and Large Carnivores - Caribou - Spatial Boundary Selection - Cumulative Effects Assessment - Uncertainty and Precaution Please refer to Section 14.1.4 for the selection of key indicator species and to Table 14.2 for the rationale for exclusion of suggested species.

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		believe that the RAA should either have been expanded much further, or that there had been a third, much larger assessment area in addition to the defined RAA and local assessment area (LAA). At present, the RAA does not even consider the massive existing population-level impact that has undoubtedly occurred for many species as a result of the W.A.C. Bennett Dam impoundment. I am surprised that a cumulative effects assessment of the Site C development would not have been designed to consider the impacts of all existing dams on the Peace River at least. I believe that this and the many other existing, pending and future (simulated based on reasonable assumptions) impacts need to be accounted for at a population scale that is relevant and appropriate to conservation planning for wide-ranging species (terrestrial and aquatic). Related to the fact that the RAA was, in my judgement, too small in spatial extent is the fact that wide-ranging terrestrial species were virtually excluded from this assessment. The rationale for their exclusion was that certain species were too rare or generally did not occur within the RAA. As noted, I believe the RAA should have been far larger and species such as wolverine, lynx and woodland caribou should have been considered in addition to fisher, grizzly bears and wolves. For the latter three species, it is my opinion that fishers are the only species that was subjected to assessment that was reasonably informative, though considered only at the LAA level. That is, the LAA fisher assessment was supported by field study and survey. The assessments for wolves and grizzly bears are cursory at best. For none of these species, nor any other wide-ranging species, was there any attempt to quantify and objectively evaluate cumulative impacts in the defined RAA. My more detailed comments specific to the statements and conclusions of fishers, wolves and grizzly bears are provided below.	
pub_0474-002	Heuer, Karsten, Y2Y	<u>Species Exclusions (rationale summarize in Table 14.2)</u> The assessment excluded consideration for lynx and wolverine, two important indicator species for broad-scale ecological connectivity. Stated rationale (Table 14.2) was that "Individuals are rare or not occurring within much of the LAA. The Project is not expected to have a result in a change in the population in the LAA." For lynx, the rationale for exclusions is that lynx are "a species whose population and density is strongly linked to cyclical fluctuations in prey (especially snowshoe hare). Since changes to snowshoe hare are not expected, the same is assumed for Canada lynx." First, there obviously will be a direct loss of hare habitat within the LAA, particularly considering that riparian and floodplain habitats can be quite suitable and conducive	The scope of the wildlife resources effects assessment is in accordance with the EIS Guidelines and appropriate information is included in the EIS. Please see the following Technical Memos: - Movement of Grizzly Bears and Large Carnivores - Caribou - Spatial Boundary Selection

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		to supporting hares. Second, the statement once again ignores the fact that both lynx and wolverine are wide-ranging and impacts should be considered in terms not only of absolute loss or alienation of foraging habitat but also the potential to move through landscapes with reasonable security even if foraging habitat value is relatively low. Whether or not the "population" is expected to be influenced is irrelevant since the home range of one individual will far exceed the area of the LAA (1 km buffer around project features, though total area does not appear to be provided). Caribou are apparently excluded because they are "not found in the Peace River valley, so they will not be directly affected by the proposed reservoir or dam. Where Project components do occur in recognized caribou herd ranges (e.g., West Pine Quarry), a review of existing data has determined that there will be no direct Project interactions on caribou, and that sites can be operated in such a way as to have no indirect interactions on caribou." I agree that caribou are unlikely to attempt dispersal through the LAA, though this is not outside the realm of possibility given woodland caribou dispersal movements that have been observed elsewhere. In the least, I would have expected that cumulative impacts to caribou would have been assessed at the RAA level (and ideally a broader, regional scale as previously noted). I am unsure how the species can be justified for exclusion even at the RAA level given that "project components do occur in recognized home ranges". Is not the "review of existing data" to determine whether or not the project will have interactions with a species what an EIS is supposed to provide in an objective and transparent manner? Obviously, a subjective assessment has been rendered, but there is no way for the public to consider the validity of this assessment.	

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pub_0474-003	Heuer, Karsten, Y2Y	Fishers To begin, it is clear that the Site C development is not being considered in the context of cumulative impacts to the larger regional fisher population. The assessment is restricted to those individuals associated with the local assessment area (Peace River Valley directly affected by project infrastructure). This cannot be considered an independent population, and I am concerned that cumulative (including existing) impacts to the larger regional fisher population are not being taken into consideration. There appears to be no attempt to account for impacts to fishers even within the defined RAA. Within the LAA, I am concerned that the impacts to fishers are being understated. For example, consider the following statement (pg 14-39, lines 3-4): "The filling of a reservoir has the potential to impede movement of individuals but this is not anticipated to be a concern for the population." Nothing is presented here, or in the relevant appendix, to support this statement - not even the professional opinion of a fisher researcher/biologist. This paragraph (pg 14-38, line 37) in fact begins by identifying several types of features (including reservoirs) that "may act as filters or barriers to fisher movement, preventing population expansion and gene flow (Naney et al. 2012)." Hence, I am unclear why it would necessarily be concluded that there are no potential population-level implications from the creation of the reservoir. Regarding section 14.3.2.6.3 - I am confused as to the intent of statements regarding home range overlap and their relevance to conclusions about disturbance and displacement during construction and operations. Obviously, land clearing would in the very least "displace animals out of their traditional home ranges". I think it would also be safe to say that this would reduce the potential of the landscape to support fishers. That is, simple displacement assumes that animals are simply shifting their space-use. When in fact, individuals may not persist given the territoriality described and possibly limits to local carrying capacity. Regarding section 14.5.1.1.6 - I question the "low" confidence assigned to the localized impact to fishers. Apparently this is because BC Hydro believes the loss of denning sites can be mitigated. However, I believe the proven effectiveness of such actions to be dubious. In fact, Volume 2, Appendix R, pg 88 states that "the extent of the effects of developing the Project on reproductive dens for fishers is unclear	The assessment of the effects and the cumulative effects of the Project on wildlife resources is in accordance with the EIS Guidelines and sufficient information is provided for the assessment. Volume 2, Appendix R, Part 7 describes investigations on fisher. The fisher study completed for the Project found that fisher densities were considerably lower than other studies conducted in the regional area. The reason for this is unknown, but it believed there are other factors limiting habitat carrying capacity. Fishers were found to be highly mobile, and genetic analyses suggest that fishers in the region were connected historically and further that fishers populations continue to have overlap in their distribution, despite numerous anthropogenic disturbances. The Level of Confidence is characterized as Low for habitat alteration and fragmentation given the uncertainty in the fisher population response to mitigation and how other anthropogenic influences may influence mitigation efforts. The Low Level of Confidence was not assigned because BC Hydro feels that the loss of den trees can be mitigated. A Low Level of Confidence suggests that the effectiveness of mitigation or scale of the effect is poorly understood, accordingly, follow-up monitoring was recommended (see Volume 2, Table 14.18). Habitat loss is reflected in the effect of Habitat Alteration and Fragmentation, but it is recognized that it can also lead to displacement. Volume 2, Appendix R, Part 7, Section 4.3.3 stated that the effect of disturbance and displacement will be greater for females which have smaller home ranges and have specific requirements for den trees, especially where they overlap the reservoir. The size of the individual home ranges of study animals and the lack of intrasexual exclusion will reduce the risk of displacement due to habitat loss. Section 14.7 of the EIS describes the requirement for monitoring and follow-up. Follow-up programs will be required to verify the accuracy of the effects assessment, and to determine the effectiveness of measures implemented to mitigate adverse effects on Wildlife resources, including fisher. Please see the Technical Memo on Uncertainty and Precaution.

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		because it is not known whether there are enough suitable den sites outside of the proposed reservoir footprint that can sustain the local population." Moreover, the statement also seems to ignore the absolute loss of foraging and movement habitat that will occur. While denning/resting sites may be limiting under normal/natural circumstances, clearly other habitat components are also necessary at minimum levels. Regarding section 14.5.1.2.6 - I question whether the magnitude of disturbance and displacement for fishers should be characterized as "low". The habitats flooded may well be some of the highest quality in the region. Even if the population impact in the LAA is 10%, this is a permanent loss to landscape carrying capacity that is on top of existing losses that have mounted from other human activities (including the Bennett and Peace Canyon Dams). Moreover, the fragmentation effect (which I believe has been downplayed as noted above), could easily magnify the population-level impacts. Regarding section 14.5.1.3.6 - Once again, I question how the probability of mortality can necessarily be assessed at "low" for fishers given the obvious loss and alienation of habitat. It seems to me that there will be almost certain mortality followed by a permanent loss in landscape carrying capacity. Finally, I am perplexed by the statement that one of the tree dens used by a radio-marked female fisher within the LAA would need to be removed. Is this to suggest that only one tree den will be lost? Obviously we are talking about a sample that is unlikely to be representative of the local population. Sampling data (if adequately representative) should be used to infer the potential for den sites or habitat conditions relevant to other life history traits, and it is these inferences that I believe should form the basis for assessing impacts.	

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pub_0474-004	Heuer, Karsten, Y2Y	Large Carnivores (14.3.1.6.5, pg 14-40) - The fact that "resident grizzly use within much of the Project activity zone is considered scarce to non-existent" does not necessarily mean that there are no potential impacts to this species that can be attributed to the development. If one were able to consider the distribution of the larger population at an appropriately relevant population scale (i.e., beyond the presently defined RAA), one would be better able to assess the potential of the local landscape to facilitate foray and/or dispersal movements that can be significant to the connectivity, stability and resilience of the regional population. Regarding localized mitigation for disturbance and displacement specific to large carnivores (Table 14.16): - First, these are measures that pertain more to mortality risk than "disturbance and displacement". In fact, they are exactly as shown in the following Table (14.17) that addresses mitigation measures for mortality. With respect to disturbance and displacement, I would hope that mitigations are possible to facilitate localized habitat use and movement by these and other species within and through the LAA, perhaps through some type of spatial and/or temporal partitioning of construction activities. Regarding measures to minimize mortality risk, I would suggest that the provisions include a "no firearms" policy that is monitored and enforced by the environmental monitor, in addition to the management of attractants. Moreover, a major potential-impact for wildlife from a large development such as Site C is the large camps that they require during construction at least (and in some cases operation). I believe it will be difficult to impossible to discourage or prevent workers from dispersing to the surrounding landscape, potentially with motorized vehicles (including off-road) and potentially with firearms, an impact I believe is both likely and significant Finally, there is no mention of the much improved access that the reservoir itself will create. Navigating the Peace River by river-boat at present provides much less opportunity to observe, discharge firearms, and disembark to land than will be possible from a prop-boat within a reservoir/lake. In both the main document and in Volume 2, Appendix R, pg 173 I have read the statement that "data from DNA studies do not indicate fragmentation within northern grizzly bear populations (Proctor et al. 2012)". I find this statement misleading in the context of evaluation of potential Site C impacts and the associated regional analysis	Advice provided by the Provincial grizzly bear specialist (Tony Hamilton) was that patterns of recorded grizzly bear mortalities suggest that there are currently no physical barriers to bear movements in northeastern BC and that movement is limited to bear conflicts with people and associated bear mortalities. Based on the extent existing anthropogenic disturbance (e.g., dams, liner developments, towns, ranches, roads, highways, etc.) and the incremental change in the density of anthropogenic disturbance (measured by road density) mitigation measures were focused on limiting bear mortality as a result of the Project. Mitigation to reduce mortality is provided in detail in Volume 2, Appendix R, Part 7, Section 3.3. As stated in the EIS Section 39, Human-Bear Conflict Management Plan is required to effectively mitigate mortality. This plan will be prepared with input from provincial government specialists and implemented prior to the commencement of Project construction. Based on the mitigation recommended it was concluded that there were no residual effects for grizzly bears.

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		area. As a coauthor of the cited monograph, I am aware that the metaanalysis on which it was based was at a broad inter-provincial scale and that there was no intent nor data to evaluate the potential for population fragmentation within the Peace River region let alone at the much finer scale that would correspond to the RAA. We have an obvious mismatch of scales here and I find the Proctor et al. monograph to be irrelevant for any meaningful inference specific to the defined RAA, or even the larger Peace region. Similarly, I do not see pertinence in the statement that there are no physical barriers to bear movement in northeastern BC. The same could be said virtually everywhere across grizzly bear range (i.e., what constitutes a "physical barrier" and at what scale?). What is relevant is whether there is genetic and/or demographic population connectivity, and I believe it is reasonable to expect measurable grizzly bear population fragmentation associated with the Peace River Valley and environs that most bear biologists would conclude is largely a function of past and existing human influence on bear movements (behaviour) and mortality risk. Why is there no Disturbance and Displacement (14.5.1.2) or Mortality (14.5.1.3) characterization for large carnivores? I do not believe that the relative "rarity" of occurrences or movements of a given species should necessarily justify their exclusion from consideration. This is especially true for species, like top predators, that normally occur at low densities with distribution that is often disjunct. For these species, periodic, rare or ephemeral movements through landscapes that would not otherwise support resident individuals may have important conservation implications to the larger regional population.	
pub_0474-005	Heuer, Karsten, Y2Y	<u>Road Density Evaluation (pg 173 of Simpson et al. - Part 7 Mammals, Terrestrial Vegetation & Wildlife)</u>: Simpson et al. (reference above) conducted a road density analysis as an approach to evaluate the potential for impacts associated with Site C development on grizzly bears. I have some concerns about the methods employed and thus the validity of inferences drawn from the results. To begin, the authors describe that road data were compiled from available digital sources. But they also describe that they included access tracks added from GPS files recorded during fisher field work. This obviously adds existing linear features for the area associated with the Site C development footprint, yet such additional features were not represented across the larger analysis area. Moreover, it seems there was some type of qualitative process employed to	The analysis of road density is accurate and does not over represent the density of roads. Each road provides an opportunity for an interaction with humans and bears and there are a number of access roads that are not well represented on TRIM or other readily accessible map sources. The density analysis provides a visual (maps) and tabular representation in the change in density resulting from the creation of permanent linear features.

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		judge whether a GPS-logged "access track" did or did not correspond to a feature represented in an existing digital inventory. Hence, it is difficult to know with confidence whether or not road features were over-represented within the Site C development area. Finally, it would appear there was no attempt to weight roads and other linear access features according to their type, traffic type and speed, and/or accessibility. It seems to me that an existing rough quad trail through the trees would be treated the same as a major industrial and highly accessible paved and permanent road facilitating all types of easy public/industrial access. Road density analyses have major limitations to begin with, and I believe are even less useful when features are not differentiated or weighted according to their obvious functional differences. Therefore, it is not surprising that the authors conclude from their analysis that: *"The Project will have relatively little long-term or permanent effect on overall road densities in the LAA. The majority of the changes in road density due to the Project will involve increases in road density in areas that are already over the 1.2 km/km2 threshold and are thus unlikely to be used by grizzly bears."* Would this conclusion be justified if there were not the potential for over-representation of linear transportation features, and if features were weighted appropriately (e.g., according to traffic volume and/or type)? Finally, the methods describe a moving window analysis of road density that used a 500 m radius. This means that road density is being calculated over 0.79 km2, which is virtually meaningless for a species that ranges over hundreds of km2 and may encounter roads at a scale of 30 - 100 km2 on a daily basis given typical movements. In fact, the maps themselves (1.6.45 & 1.6.46) clearly show densities that correspond directly with individual road features. Just because a density threshold is described in specific units (e.g., per km2) does not mean that is the appropriate scale across which to calculate that density. The scale applied should have some ecological relevance to the species being considered. Notwithstanding my comments above regarding differentiation among linear feature types, cursory review of these maps suggests to me that baseline road density may in fact be well lower than stated and the Site C development does not necessarily increase road densities only in areas that are already beyond the "threshold".	

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pub_0474-006	Heuer, Karsten, Y2Y	Cumulative Effects Assessment Under 14.6.2 (line 24-25) it is inferred that only projects and activities "for which spatial information is available" would have been considered in this assessment. This leaves me wondering what and how many existing impacts are not represented in the analysis due to the fact that spatial data are either inadequate or lacking. I would expect that given the scope and budget for the Site C development, provisions could have been made to ensure that every and all human activities, uses, and developments (not to mention habitat attributes) could have been properly inventoried and described. Regarding the effectiveness of Peace River Boudreau Lake proposed protected area as a potential positive offset to cumulative impacts (14.6.2.3) - It should be noted that the potential effectiveness of this proposed protected area would depend very much on its management designation. Provincial parks do not always result in a net benefit in the conservation of ecological resources. Moreover, the portion of the 67 km2 that does in fact overlap with the flood zone should be excluded in any statement of the area that would in fact be protected. In the characterization of residual cumulative effects (14.6.4), lines 38-39 describe the species for which the development is likely to result in a residual cumulative effect of habitat alteration and fragmentation, disturbance, displacement and mortality. This appears to be limited to songbird species at risk, non-migratory birds, raptors, bats and fisher. Given my previous comments, I contend that some wide-ranging carnivores and possibly caribou are being overlooked in this statement.	The scope of the cumulative effects assessment for wildlife resources is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. Please see the following Technical Memos: -Uncertainty and Precaution -Cumulative Effects Assessment

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pub_0474-007	Heuer, Karsten, Y2Y	<u>Determination of Significance of Residual Cumulative Effects</u> Please consider the following paragraph (14.6.5): *"The Project is likely to result in a significant adverse effect in the alteration and fragmentation of habitat for some key indicators (see Section 14.5). Consequently, the cumulative effect of the Project on habitat for those species is also significant. The anticipated residual effects of habitat alteration and fragmentation to wildlife resources from all other future projects and activities combined are also considered significant, even if the Project is not constructed. This occurs because effects associated with other projects and activities that involve road construction, forestry, land clearing, etc. are not fully mitigable, and the future loss of suitable habitats for species at risk is expected to further elevate provincial or federal listings."* I am not quite sure what the intent of the above statement is. It seems to be suggesting that existing cumulative effects are already, and will continue to be, significant. But I am not clear on whether the proponent feels that these impacts are acceptable or that the additional residual impacts from the Site C development are acceptable, and if so, why. I have seen nothing presented regarding any quantitative analyses of impacts across the RAA, nor the presentation of any associated thresholds for concluding significance. I see no way of independently corroborating conclusions regarding significance (e.g., that there is or is not potential for localized extirpation). Moreover, what are the implications of significance, and whether or not it is Site C that pushes cumulative impacts beyond the threshold of significance?	As per Volume 2 Section 14.5.2 a significant effect could threaten the extirpation of a key indicator, or result in considerable reductions to habitats or habitat use associated with a key indicator that may in turn further elevate provincial or federal listings and cause the key indicator to be a management concern. The characterization of the residual cumulative effects was completed in accordance with the EIS Guidelines and is described in Section 14.6.4.

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pub_0474-008	Heuer, Karsten, Y2Y	Monitoring and Follow-up In reference to pg 14-102 (lines 21 - 25) and pg 14-103 (lines 3 - 6) - I agree that realized impacts to fishers should be monitored specific to the LAA. But I do believe that the expected effects to fishers should not be considered of "moderate" (habitat loss or fragmentation) or "low" (loss of den/resting sites) magnitude reflecting low confidence in predictions and mitigation success. I believe that, given the weight of evidence, independent experts would conclude that the expected local effects should be assumed as "high" at least. I agree that monitoring should occur across the LAA and that there should be more comprehensive population survey across the larger regional population (at least RAA or greater). Population survey and monitoring should also apply to other wide-ranging terrestrial carnivores at a relevant regional population scale (possibly by way of collaboration among industry stakeholders). Finally, I think it would be appropriate for the proponent to outline adaptive management options for fishers and possibly other species specific to the LAA, the implementation of which would depend on monitoring results.	The Magnitude of the effect of habitat alteration and fragmentation to suitable fisher (reproductive) habitat was characterized as Moderate based on the percentage of habitat lost within the LAA (following the quantitative measure outlined in Table 14.18 (Volume 2). The Low rank for Magnitude described on page 14-103 is in reference to the effect of Mortality. Both effects have a Low Level of Confidence in the characterization of the effects - as such, monitoring is proposed. As per Section 14.7, follow-up programs will be required and a wildlife resources follow-up plan will be developed for wildlife resources, including fishers. BC Hydro will work with appropriate regulatory authorities in the development of monitoring and mitigation.

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pub_0474-009	Heuer, Karsten, Y2Y	Leadership Finally, I would like to draw attention to the following statement (14.6.3): *"It should be noted that BC Hydro is not the lone organization contributing to the decline in wildlife resources, as many of the other projects or industries mentioned above also contribute to the overall decline. Recovery efforts could be undertaken at the regional level collaboratively with other projects. BC Hydro has limited authority to guide regional initiatives to support the diversity and persistence of wildlife resources. This would be better guided by the provincial government."* Fundamental to the concept of cumulative effects assessment is the notion that there is a limit or threshold to acceptable environmental degradation that reflects broad social goals and values. While the EIS appears to contain no quantitative assessment of broader-scale (RAA or broader) cumulative effects on terrestrial wildlife, the above statement appears to acknowledge that wildlife resources are unacceptably impacted (assuming that a continual decline in wildlife resources is not in the public interest). The statement properly indicates that recovery efforts are best guided by the provincial government. I would suggest that the primary step toward such recovery and proactive conservation for the future is to apply limits to the plethora of industrial development, including Site C, that is obviously exceeding levels that can be reasonably assimilated without compromising the population stability and resilience of (at least) wide-ranging terrestrial species.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The scope of the wildlife resources effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS.
pub_0475-001	Hurst, Kate	*The commentator submitted a letter in the standard form suggested by the Sierra Club, and provided additional comments as shown below:* Thank you kindly for considering my thoughts on the proposed Site C Energy Project. While I can appreciate the economic need for our government to pursue projects that assist in the development and sales of natural resources, I don't believe that those pursuits should bring more potential for harm than good. Our country's First Nations have an inherent right to exist and florish in their culture and to enjoy the quality of life they had sustained for thousands if years. Yet, our government continues to prey upon their lands and resources, all the while First Nations communities are becoming sick and dying from the chemicals used in the oil and gas industry, contaminating the lands and water that they depend upon to survive. To use some of the last pieces of peace river wilderness in order to supply	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Sierra Club, located after this table. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The potential effects of the Project on traditional use of the land are described in Section 19 (Current Use of Lands and Resources for Traditional Purposes) of the EIS. The potential for the Project to impact treaty rights is described in Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements of the EIS. Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address

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		power to oil and gas projects, would be both morally and ethically wrong. I have little faith in our environmental regulatory system, especially when it seems that our government takes environmental policy directives from the oil and gas industry and implements them through omnibus legislation. I have little faith at all. However, it is you who will make recommendations which have the potential to affect generations to come. Your decision can and will influence the oilsands access to abundant energy resources. This, in turn, would turn a green energy company like BC Hydro into a major carbon enabler, at a time when it is evermore critical to reduce our emmissions. British Columbia's citizens and First Nations have overwhelmingly opposed this project for decades. We, as a province, are more than able to sustain our economic and environmental economies by continuing to diversify our clean energy portfolio, all the while considering the impacts the decisions we make will have on future generations of Canadians. On your children. On your grandchildren. I am hopeful that you will consider my thoughts when assessing the viability of this proposal. Below is a letter prepared by the people at the sierra club, which contains factual references which should also be considered in your assessment. Respectfully, I apologize if this letter is poorly written, I have typed it using my iphone and you know how difficult those tiny keypads can be.	future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers.
pub_0476-001	North Peace Rod and Gun Club	**RE: Comments on the Site C Clean Energy Project Draft Environmental Impact Statement.** The North Peace Rod and Gun Club representing 789 sportsmen in the Fort St. John area of the North Peace have strong concerns on the adequacy of the draft Environment Impact Statement for the Site Clean Energy Project. Outdoor Recreation is generally recognized as a very high value in the Peace River region and in the project area; as the total numbers of members in the North Peace Rod and Gun Club attests. Additionally the attractiveness of the wildlife resources for residents of British Columbia not resident in the Peace is well known. We submit that the assessment has provided insufficient information to assess the potential impacts of the project on the wildlife (both fish and wildlife) resources and	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS - Section 25 (Outdoor Recreation and Tourism) - Section 14 (Wildlife Resources) - Section 24 (Harvest of Fish and Wildlife Resources) Please also see the Technical Memo on Cumulative Effects Assessment. The scope of the effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS.

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		the recreation and use of fish and wildlife by our members and other members of the BC Wildlife Federation. In general we believe that this project's proposed impact area is insufficient to identify and document the project's impact and must be expanded to include not only the complete habitats of the wildlife that use the Peace River Valley but include the cumulative effects and restrictions on the current populations, habitats, and habitat use caused by BC Hydro's WAC Bennett and Peace Canyon projects. Additionally we believe that the assessment cannot be adequate if it does not consider the effects on wildlife and wildlife recreation of the projected changes in micro-climate caused by the proposed Site C dam and whether wildlife can successfully adapt to these changes. Please also find attached below more detailed comments as part of our submission. We request that these issues be addressed and appended to the acceptance of the Site C Clean Energy Project Draft Environmental Impact Statement prior to acceptance.	

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pub_0476-002	North Peace Rod and Gun Club	Comments on BC Hydro's Environmental Impact Statement for the Site C Clean Energy Project (January 2013) Scope of Review The proposed Site C Clean Energy Project (hereafter the "proposed project") is a major development that will affect wildlife and wild land recreation values in the Peace River Valley. The North Peace Rod and Gun Club (NPR&GC) wishes to ensure that the Environmental Impact Statement (EIS) provides sufficient information on the magnitude of the proposed project impacts on the wildlife and wildlife based recreational values of the region so the NPR&GC can adequately assess the project to provide comment to the review. More specifically, this review considered the adequacy of the January 2013 EIS submitted by BC Hydro in addressing the following: 1) potential wildlife loss and impacts upon local/regional/provincial wildlife supply, 2) estimates of potential recreational losses, including those related to the role of climate change adaptation/mitigation, and 3) adequacy of inventory and planning information related to wildlife recreation. **Comments and Concerns** 1) The spatial boundaries of the impact assessment areas are too conservative. In addition to the impact of the W. A. C. Bennett and Peace Canyon dams on wildlife resources , the proposed project will increase regulation of water flow within the Peace River and therefore within the Mackenzie River system beyond the British Columbia/Alberta border. The effects of the proposed project on surface water regimes, water quality, groundwater regimes, thermal and ice regimes, methyl mercury, and aquatic ecosystems should be considered downstream to the Mackenzie Delta, Northwest Territories.	Please see the following Technical Memos: • Spatial Boundary Selection • Cumulative Effects Assessment • Methylmercury
pub_0476-003	North Peace Rod and Gun Club	2) The baseline data provided suggests that there is a low probability of occurrence of blue listed grizzly bears within the proposed project assessment areas (Simpson et al. 2013). However, members of the NPR&GC indicated that regular sightings of grizzly bears have been made in these areas. Although the proposed project will likely have little long-term effects on road densities within the assessment areas (Simpson et al. 2013), the proposed project will form a barrier to the movement of bears through the Peace River Valley and may result in loss of bears through problem wildlife control actions. Grizzly bears killed in problem wildlife control actions result in lost harvest opportunities for the NPR&GC and outfitters. The impact assessment should include	Mitigation to reduce mortality is provided in detail in Volume 2, Appendix R, Part 7, Section 3.3. Please also see the response to pub_0474-004.

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		scientific population estimates and current habitats used by grizzly bears.	
pub_0476-004	North Peace Rod and Gun Club	3) Resource selection function (RSF) habitat models were an important part of the assessment of potential impacts of the proposed project on ungulates (moose, elk, mule deer, and white-tailed deer; (Simpson et al. 2013). However, the methods provided lack sufficient information to assess how the RSF models were actually generated; applications of some procedures (i.e., determination of the most parsimonious seasonal models) appear to be inconsistent with accepted practices described in published literature. In order for the NPR&GC to assess the validity of the seasonal ungulate relative probability of habitat use models/maps presented by (Simpson et al. (2013) the following information is required: i) an explanation of how habitat availability was assessed and included in RSF analyses, ii) an explanation of the type of logistic regression analyses conducted (population level or individual based random-effects), and iii) a list of candidate models tested for each season to identify the most parsimonious RSF models (Johnson, Seip & Boyce 2004; Wasser et al. 2011), and iv) the results of analyses conducted to assess the predictive capacity of the most parsimonious RSF model selected for each season (Boyce et al. 2002). The NPR&GC is concerned about the loss of ungulate habitats within and adjacent to the proposed project area and particularly the impact of the loss of these habitats during severe winters. Population assessments, boundaries of impact assessment areas, habitat models, and populations models must revised to consider these periodic winter effects.	The effects of loss of ungulate habitat within and adjacent to the proposed Project area is assessed in Volume 2, Section 14.3.1.6.4 and in Appendix R, Part 7. Resource selection function analysis was conducted at the population level. One model was evaluated with reported values for Hosmer-Lemeshow, Wald Chi-squared and pseuo R squared.

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pub_0476-005	North Peace Rod and Gun Club	4) Baseline information on recreational sites, types of activities undertaken, and facilities/amenities available is provided (Volume 3 Appendix E Outdoor Recreation Mitigation Plan). The outdoor recreation mitigation plan presented is limited to and supports change from river- to reservoir-based activities. In order for the NPR&GC to determine if or how their land-based recreational activities will be affected by the proposed project they require: i) historic information on degree and magnitude of recreation changes resulting from the WAC Bennett and Peace Canyon projects ii) spatial models showing the distribution by type of land-based recreational activities currently undertaken in the area, and iii) spatial models showing where these activities could be conducted after the Project is completed. This is information is particularly important given that "significant adverse effects on fishing and hunting opportunities would occur if the changes are beyond historic norms (magnitude), result in the reduction of catch limits in the LAA or bag limits in management units in the LAA (geographic context), occur over the long term (duration), and are such that anglers and hunters cannot respond and adapt their fishing and hunting locations to take advantage of alternative opportunities in the PRRD (context)"(Volume 3 Section 24.6.2). What is the potential magnitude and geographic scale of the adaptation required or anticipated?	The scope of the outdoor recreation assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. Interviews were conducted with outdoor recreation groups, tourism operators, and representatives of relevant local, provincial and federal government ministries. Field work was completed in 2008 to 2009 (LGL 2010) that included surveys with over 600 anglers and over 5,000 recreational users over a 17.5 month period, and field documentation of recreation sites, and further field work in 2012 was undertaken to document vessel transits past the dam site. BC Hydro consulted with the public in spring 2012 about the preliminary effects on outdoor recreation, including seeking feedback on proposed mitigation measures (as described in Section 9 of the EIS and supporting appendices). The consultation, observation baseline information provides a sufficient overview of current conditions related to outdoor recreation and tourism within the LAA. The majority of the Peace River and its shoreline would remain available for public recreation activities throughout Project construction as compared with the baseline conditions, considering the limitations described in Section 25 of the EIS. The Community Recreation Fund will be available to support development of additional use areas during this period.

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pub_0476-006	North Peace Rod and Gun Club	5) Volume 3 Section 24 states that "*An increase in the use of harvesting areas attributable to the Project is not considered an adverse effect. The Fish and Wildlife branch of the Ministry of Environment manages fish and wildlife harvesting. It is a management objective of the Ministry of Environment to increase participation in fishing and hunting at a provincial level (B.C. Ministry of Forests, Lands and Natural Resources Operations, Environmental Assessment Coordinator 2012b pers. comm.). As a result, mitigation measures by BC Hydro are not warranted.*" In order to assess the impact of the proposed project on their fishing and hunting at the local level, the NPR&GC needs to know how the increased participation in fishing and hunting will be managed to ensure that their hunting/fishing opportunities and success rates are not adversely affected. Wildlife populations are limited and increased use of an area should not necessarily be viewed as a positive outcome of the proposed project (Table 24.21 Volume 3 Section 24); use of areas and fish and wildlife resources should be locally and regionally sustainable. Further the document does not address issues related to the effects of the redistribution of fish and wildlife harvesting and other non-reservoir based recreational activities on fish and wildlife resources or users in other areas.	The BC Ministry of Environment is responsible for the management manages hunting and fishing activity in accordance with their mandate. Some new residents who hunt and fish would likely become members of local recreation clubs, to the same extent existing residents do.
pub_0476-007	North Peace Rod and Gun Club	6) Information on the number and distribution of fish and wildlife harvested by all resource users (aboriginal and non-aboriginal people) must be identified and integrated into one data base so that the magnitude, patterns of use and, economic value of the current harvest can be assessed. Reliable/accurate estimates of the total harvest for all species in combination with estimates of population size are required to assess the future impacts of the proposed project, other developments, and climate change, etc. on these resources.	Data about effort and harvest is available from the province at the spatial resolution of a management unit.
pub_0476-008	North Peace Rod and Gun Club	7) The economic value of fish and wildlife resources will be underestimated if the actual harvest is underestimated. The value of these resources should include that of the meat and parts that are used by the harvester and not just monies generated through sales of licenses, etc. Subsistence harvesters also contribute to local economies spending money on meat processing, equipment (boats, gear, etc.) and supplies (food, fuel, etc.) to hunt.	The scope of the harvest of fish and wildlife resources effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS.

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pub_0476-009	North Peace Rod and Gun Club	8) Baseline conditions were provided for some mammal indicator species (Simpson et al. 2013), however, there was a notable absence of baseline data for small mammals (i.e., mice, vole, squirrels, and chipmunks). Therefore it is impossible for the NPR&GC to assess whether there are rare or uncommon species of small mammals that occur within the impact assessment areas and the impact that the proposed project would have on these species at the local, regional, and provincial level. The addition of a small mammal section is requested.	The scope of the wildlife resources effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. The key species groups were determined by considering the following: -Federal and provincial species at risk -Regional species of interest -Migratory Bird Convention Act -Provincial species at risk -Species of regional management concern -Species of interest to Aboriginal groups -Nests protected year-round under Section 34 of the BC Wildlife Act -Harvested species -Species of public interest
pub_0476-010	North Peace Rod and Gun Club	9) Proposed measures to mitigate the impacts of the proposed project on a variety of species are provided throughout the various documents. An integrated mitigation plan must be developed to enable an assessment of: i. the magnitude of the monitoring and mitigation required, ii. the potential interactions between biological, social and economic mitigations proposed, iii. the cost of implementing the plan, and iv. the likelihood that the plan will be successful. The integrated mitigation plan must identify BC Hydro as the agency responsible for funding and implementing the plan until the proposed dam is decommissioned. This plan must be available for review and comment before the EIS is finalized.	Monitoring and mitigation will vary with each valued component. Costs of mitigation measures are included in the detailed Project cost estimate, and mitigation measures will have varying levels of effectiveness. For that reason, where there is some uncertainty about the efficacy of the mitigation measure, monitoring is proposed. Please see the following Technical Memos: - Environmental Management Plans - Uncertainty and Precaution
pub_0476-011	North Peace Rod and Gun Club	10) Many comparisons show that recreational activities in the Peace contribute only a small amount to the Provincial total. However, large population bases will likely have more individuals undertaking an activity (i.e., hunting or fishing) but when numbers are considered as a proportion of total population size the per capita rate may be quite small. For example, population A may have 1,000,000 people of which 1,000 are active fishermen while population B has 1,000 people of which 500 are active fishermen. Population A has twice as many fishermen as population B. However, the per capita rate for population A is 1 fisherman per 1,000 people while that for	The scope of the harvest of fish and wildlife resources effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. Provincial data are presented in the baseline for information. Comparison of participation rates or other indicators with other areas of the province was not a factor in the effects assessment.

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		population B is 500 fishermen per 1,000 people—clearly fishing is a more important activity for people in population B than for population A. User rates should be documented on the basis of past use and applied on a per capita basis as standardized as per capita rates. Outdoor Recreation is generally recognized as a very high value in the Peace River region and in the project area; as the total numbers of members in the North Peace Rod and Gun Club attests. Additionally the attractiveness of the wildlife resources for residents of British Columbia not resident in the Peace is widely accepted. Use of provincial based participation rates as proposed is unacceptable. Real numbers for participation rates by local and non-local hunters in the region are required for an acceptable assessment. Boyce, M.S., Vernier, P.R., Nielsen, S.E. & Schmiegelow, F.K.A. (2002) Evaluating resource selection functions. Ecological Modelling, 157, 281-300. Johnson, C.J., Seip, D.R. & Boyce, M.S. (2004) A quantitative approach to conservation planning: using resource selection functions to map the distribution of mountain caribou at multiple spatial scales. Journal of Applied Ecology, 41, 238-251. Simpson, K., Simpson, T.K., Simpson, L., Andrusiak, L., Hilton, S., Kellner, M., Klafki, K., Mattson, I. & Creagh, A. (2013) Part 7. Terrestrial vegetation and wildlife report. Site C Clean Energy Project. Report to BC Hydro, Vancouver, BC. 347. Wasser, S.K., Keim, J.L., Taper, M.L. & Lele, S.R. (2011) The influences of wolf predation, habitat loss, and human activity on caribou and moose in the Alberta oils sands. Frontiers in Ecology and the Environment, 9, 546-551.	
pub_0477-001	Boon, Ken and Arlene	The North Peace Fringe Area, Official Community Plan By-Law No. 1870, 2009 (OCP) was completed in order to guide future development. It is defined as “a general statement of the broad objectives and policies of the local government respecting the character of existing and proposed land use and servicing requirements in the area covered by the Plan.” Much of the proposed Site C dam project and its impacts would take place within the boundaries of the OCP. It has been brought to our attention that the EIS does not acknowledge the existence of the OCP, or the effect this Project will have on it. The following are direct quotes from the OCP: - **Broad Policies (16, d, III)** “protect the highest most productive lands for the purpose	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. There are several plans that overlap with the Project activity zone under different levels of government. The province, through its land and water use planning processes, has recognised the hydroelectric use of the river among other management objectives, for example as demonstrated in their acceptance of the Peace River Water Use Plan, and the above mentioned Dawson Creek and Fort St. John Land and Resource Management Plans. These processes each included opportunities for participation by stakeholder, government and First Nation representatives. Examples of plans that cover the Project activity zone include:

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		of future agricultural food production." - **Objective (3.2.1,1)** "To support the general objectives of the Provincial Agricultural Land Commission, in preserving the agricultural land base for future food production and food security." - **Policies (10.3 Policy 14)** "As areas become known or verified as environmentally sensitive, the necessity to protect such area may be considered, due to their biological diversity and key importance as habitat and wildlife connectivity, and alternative sites for future land use development should be a priority." - **Policies (10.3 Policy 15)** "To recognize that the Peace River is one of 20 rivers in BC proclaimed as a 'BC Heritage River' in order to provide greater emphasis on river related values during land use planning processes, to raise awareness of the importance of a healthy river system, to help protect the special values of the river and to build a stronger public support for and involvement in stewardship of the river." - **Objectives (14.2, 3)** "To discourage the clearing of steep slopes or river banks because of the detrimental effect related to soil erosion and the siltation of watercourses." These are just a few quotes from the OCP that highlight examples of where the Site C dam is not compatible with the sustainable vision of the objectives and policies of the OCP. The EIS is inadequate in that it does not acknowledge the OCP, nor does it adequately address the above issues from the OCP. 1. How will the EIS address areas where the impacts and proposed mitigation measures for the Project do not comply with the OCP? 2. How will the EIS address the above specific objectives and policies from the OCP that are not compatible with the Project? Although the OCP is the result of regional planning and government, it is approved and signed by the Minister of Transportation and Infrastructure and the Minister of Community and Rural Development.	- The Province has held Flood Reserve over Crown land lying within the proposed area of the reservoir (EIS Section 4.1.3) since 1957. The majority of land in the Project activity zone consists of provincial Crown land. Please also see the Technical Memo on Flood Reserve. - The Dawson Creek and Fort St John LRMPs were included in EIS Section 4.1.5 that describes current land use management for the Project activity zone. During these planning processes, the potential for the Project was taken into account, including the OIC 2452 reserve, in the recommendations resulting from these plans. - The North Peace Fringe Area Official Community Plan, which includes Policy 13 "Public Utility Uses are permitted throughout the Plan area" (Section 11.3.1). With respect to local government bylaws, Section 32 of the Hydro and Power Authority Act, R.S.B.C., 1996, c. 212, states that, except as otherwise provided under that Act, BC Hydro is not bound by any statute or statutory provision of British Columbia (EIS Section 8.4, page 8-12, lines 22-26). Although the Local Government Act does not therefore apply to BC Hydro, BC Hydro does engage with local governments to understand, and where feasible to address, their issues, concerns and interests in relation to its activities and operations. A summary of local government issues raised is included in the EIS, as well as BC Hydro's consideration or response, in Volume 1 Appendix G Part 2 Regional and Local Government Liaison Program Summary and Issues and Interests Tracking Table.

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pub_0478-001	Peace Valley Landowners Associations	The following comments reflect an initial effort to identify key deficiencies in the submitted Environmental Impact Statement (EIS) for the proposed Site C Project, considering especially matters related to basic evaluation and decision criteria, the treatment of need and alternatives especially demand-side management options, the consideration of benefits as potential grounds for finding adverse effects justifiable in the circumstances, and the identification and evaluation of cumulative effects. **1. Basic criteria for evaluating the Project and alternatives** *The issue:* The fundamental role of the EIS is to demonstrate that the proposed project is desirable (i.e. in the lasting public interest) in comparison with the reasonable alternatives, and that significant adverse effects will be avoided or mitigated or are clearly justified in the circumstances. This expectation is broadly recognized in the proponent's approach in the EIS and in the underlying planning documents (e.g. in BC Hydro's Draft Integrated Resource Plan 20121) upon which much of the EIS' discussion of need and alternatives apparently rests. Satisfactory performance of this fundamental role for the EIS logically requires a defensibly comprehensive and consistently applied set of criteria for comparative evaluation of the potentially reasonable options. The initial presentation of principles in the EIS recognizes that, to meet BC Hydro's own policies, the analysis in and underlying the EIS must be comprehensive in a way that serves sustainability objectives (EIS, p.1-2). Moreover, the agreement establishing the joint review of the EIS and proposed project requires the assessment to address "environmental, economic, social, health and heritage effects" including cumulative as well as individual effects (BC and Canada, Site C Agreement, Appendix 1: Joint Review Panel Terms of Reference, Part II: Factors to be considered in the Cooperative Environmental Assessment, 2.1, p.14).2 It follows that to be acceptable the analysis in the EIS must • adopt a clear and comprehensive set of evaluation criteria covering the mandatory environmental, economic, social, health and heritage factors in a way that serves sustainability objectives, and • apply these criteria in the comparative evaluation of potentially reasonable options (the alternatives leading to the preferred alternative being identified as the Project). *EIS deficiencies:*	The analysis of alternatives in Section 5 is in accordance with the EIS Guidelines. An environmental assessment is not required for alternatives to the Project. Section 4.2 of the EIS Guidelines provides that the proponent will "Develop criteria to identify the major environmental, economic, and technical costs and benefits of the alternatives." Environmental and economic development attributes were developed for resource options as a way of characterizing and comparing, at a high level, different portfolios. These high-level environmental footprints and economic development attributes are used for comparison of resource options across provincial-scale portfolios, and act as proxies for more detailed environmental, social, and heritage effects of potential projects. Since detailed site-specific information is unknown for the majority of the potential sites in the database, these attributes are not appropriate, or intended to be used, for individual site-specific resource option evaluations and comparisons. The request for a regional evaluation of attributes is not relevant to the environmental assessment. The BC Hydro system is an integrated system that serves load throughout the Province, and provides benefits to all BC Hydro customers. Please also see the Technical Memo on Alternatives to the Project.

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		(i) The EIS does present a range of demand-side management (DSM) and supply options and outlines how they were evaluated to identify the Project as the preferred alternative. However, the comparative analysis of the options does not cover the full range of "environmental, economic, social, health and heritage effects." The analysis of options in the EIS rests on consideration only of "financial, technical, environmental and economic development attributes" (EIS Executive Summary, pp.8-9; EIS, pp.5-2, .5-28, 5-38ff, etc.), excluding social, health and heritage considerations. Moreover, the selected considerations do not provide any basis for consistent attention to cumulative effects or long-term effects3 or the interactions among effects, all of which would be required in a reasonably comprehensive analysis that serves sustainability objectives. The comparison of options appears to rely fully on analyses done in BC Hydro planning work that was not designed to meet the EIS role requirements outlined above. The description of project decision-making process in EIS s.3.1 on the project governance process, and in EIS s.3.1.1 on the multi-stage decision-making process, gives no indication of a comparative evaluation of the alternatives using consistent criteria for evaluation (EIS, pp.2-3ff). The EIS includes the findings of the BC Hydro planning process without considering how they might be influenced by application of a more complete set of criteria. That approach does not provide a sufficient basis for selection of the Site C project for completion by 2021 as the preferred alternative. The EIS s.5.5.1 (pp. 5-38ff) offers five points in support of the approach taken. Of the five points, three focus on grounds for adopting a broad set of evaluation criteria. The other two are evidently meant as rationales for the limited approach used in BC Hydro planning and in the EIS. Of points meant to support a limited approach, the first rationale relies on a 2007 general policy document from the Canadian Environmental Assessment Agency, which urges attention to "environmental, economic and technical factors" and neglects social, health and heritage considerations. But this neglect reflects the federal law's peculiar definition of environmental effects (often considered to exclude direct social, health and heritage considerations), rather than the explicitly broader range of considerations that is recognized in the BC Environmental Assessment Act (s.6(1)(a)) and in the agreement for this joint review. The federal document's narrow range of factors to be considered therefore does not apply to the Site C review. The remaining, potentially more serious rationale relies on s.4.2 of the Site C EIS Guidelines. It states, "The EIS Guidelines provide that BC Hydro	

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		will describe the major financial, technical, environmental and economic development attributes of the supply-side alternatives to the project." In fact, the relevant statement in the EIS Guidelines does not apply only to the supply-side alternatives and does not include financial attributes. The EIS Guidelines require "criteria to identify the major environmental, economic and technical costs and benefits of the alternatives" (s.4.2, p.15). They do not restrict the criteria set to these three categories of concern and the EIS does not treat the statement as restricting consideration to environmental, economic and technical matters. In the EIS, BC Hydro also considered financial matters, which it presents in a separate, additional category. Just as BC Hydro found it appropriate to add consideration of financial considerations in its planning and in the EIS reporting of evaluation of alternatives, the EIS and its review are fully able to add consideration of social, health and heritage factors. Such an addition is in our view necessary. The EIS Guidelines require that "[t]he analysis must be done to a level of detail which is sufficient to compare the proposed project with its alternatives" (Guidelines, s.4.2, p.16). Given the underlying principles to be applied, this requirement can only be met adequately by comprehensive assessment in the service of progress towards sustainability, in which the alternatives are considered using the same basic criteria set as is required for the evaluation of the Project's effects in this review. More generally, adoption and consistent application of a comprehensive set of criteria for evaluation is needed to meet obligations to the public interest, including the special interests of aboriginal people who would likely be affected by many of the alternatives and to whom the relevant authorities bear a duty to consult and accommodate. (ii) Within the financial, technical, environmental and economic development effects categories covered in the evaluation of DSM and supply side options, the selected attribute considerations are inadequate and sometimes badly misused. The BC Hydro planning documents (esp. BC Hydro, Draft Integrated Resource Plan 2012, s.3.2, pp.3-2ff) report reliance on a narrow set of indicators, selection of which was influenced heavily by preference for simplicity and quantification (see the criteria for environmental attribute selection in IRP 2012, p.3-6). They miss key considerations in energy option selection. The following examples are illustrative: • The chosen environmental attributes (IRP 2012, pp.3-7, 3-8) provide little basis for judging whether the activities associated with an option would add significantly to	

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		existing ecosystem stresses. • The climate change related attributes cover some GHG emission issues but give no attention to the significant differences in the vulnerability of options to climate change effects. • The selected economic development attributes (IRP 2012, pp.3-9) fail to distinguish clearly between the employment-related effects of a brief boom of construction jobs in a remote location (e.g. Site C) and a much longer and better distributed flow of jobs closer to population centres (e.g. from most DSM initiatives and most small-scale renewable energy options). The EIS accepts the Clean Energy Act jobs objective – "to encourage economic development and the creation and retention of jobs" (EIS, p.5-24) – as a criterion but states, at best misleadingly, that the Site C Project would meet that criterion: "The Project is a job intensive capital project that will create employment in B.C. during the construction period" (EIS, p.5-24) even though the jobs would be almost entirely limited to the development/construction phase and only a tiny minority would not be retained in the operation phrase. • Even taken together, the selected attributes do not provide a basis for considering the adaptability and resilience merits of more diverse and flexible options compared to large single facilities. • The selected attributes do not cover a sufficient range of factors and interactions to facilitate weighing different implications for Aboriginal interests. The Site C EIS devotes a full volume to consideration of Aboriginal interests but that volume includes nothing about the comparative evaluation of alternatives. These criteria and indicator deficiencies undermine the basis for persuasive assessment of the options and a credible determination of a preferred alternative. (iii) The discussion of Site C Project benefits (EIS, s.7, pp.7-1ff) adopts yet another set of considerations: financial, economic, environmental, social and sustainable development. Here too it would be more appropriate to adhere to one, comprehensive, sustainability-serving set of criteria to facilitate comparison of alternatives and consideration of whether proposed trade-offs may be justifiable in the circumstances. *Additional information requested:* Provide a comparative evaluation of the Project and the potentially reasonable alternatives using a consistent and comprehensive set of criteria that apply the sustainability principle and cover "environmental, economic, social, health and	

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		heritage effects" and their interactions, with attention to cumulative as well as individual effects. The evaluation of each option and the relative merits of the various options should include (though not be limited to) the likelihood that the option(s) would add to or reduce • existing and/or anticipated ecosystem stresses, • inequities in the distribution of wealth and opportunity (overall and among regions, demographic groups, etc.), • financial and other burdens on future generations, • lasting jobs and other livelihood opportunities, • risks to human health, • contributions and vulnerability to climate change, • adaptability and resilience of the electric power system and other socio-ecological systems that the power system affects, • public and institutional learning (including capacity building for effective participation in energy decision making, innovation and application), • establishment of a culture of conservation and efficiency, • recognition and accommodation of Aboriginal rights and interests, and • positive and adverse interactive effects among the considerations above The evaluation should also include explicit identification of the trade-offs involved in each option and in the selection of one as the alternative preferred over the others.	
pub_0478-002	Peace Valley Landowners Associations	**2. Anticipation, acceptance and accommodation of rising energy demand** *The issue:* The EIS discussion of need for a supply-side undertaking or portfolio of supply-side undertakings rests on willingness to accommodate continued expansion of electrical energy demand in the province through the entire planning period (to 2031). This approach to energy demand, and consequently to the evaluation of options to meet that demand, is (i) clearly incompatible with the commitment to sustainable development or sustainability that is embraced both in the purposes of the federal assessment law and in the proponent's own initial statement of principles at the beginning of the EIS;4 and (ii) exacerbated by an approach to demand anticipation that accepts accommodating	As recognized by the statement made in the comment, "BC Hydro has proposed a DSM package that would address a significant portion of the anticipated increase". Indeed, there is a need for new energy resources in F2017 (table 5.6), but with the implementation of BC Hydro's current DSM target, the need for new energy resources is pushed out by 7 years to F2024 (table 5.8). In other words, with BC Hydro's current DSM target, there will be no need for new resources for a 7 year period, and a reduced need for new resources after that timeframe. As described in Section 5.2.2.2 of the EIS, Demand Side Management (DSM) is BC Hydro's preferred option for addressing BC Hydro customers' future needs. However, BC Hydro has a legislated service obligation in the Utilities Commission Act (refer to page 5-3 of the EIS) and all potential alternatives including DSM must be reviewed through the service obligation lens. Thus BC Hydro must balance DSM's relatively low cost and environmental benefits against the risk that anticipated DSM energy and capacity savings do not materialize (referred to as DSM delivery risk and described in Section 5.2.3 of

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		load growth if it cannot be mitigated through conventional DSM efforts, and that too easily rejects more ambitious demand-side management opportunities. *EIS deficiencies:* Concerning point (i) above: Any serious commitment to sustainability entails acceptance of a need for sharply increased efficiencies in energy and material use, reduction of stresses on the biosphere, and a focus on ensuring sufficiency for the poor. Many aspects of the implications of a commitment to sustainability have been debated since 1987 when the World Commission on Environment and Development (WCED also known as the Brundtland Commission) report5 was released and embraced. However, the core insights of the Commission and subsequent global initiatives (the Environment and Development conferences in Rio and following6, Millennium Ecosystem Assessment (MEA)7, UNEP Global Environmental Outlook reports8, FAO hunger reports9, etc.) have been confirmed and deepened over the past quarter century of deliberation and experience. The well-documented key factors include the crucial importance of reducing human-caused stresses on the biosphere if we are to maintain the foundations for supporting human and other life (MEA, WWF10, etc.); the interdependence of needed economic, social and environmental actions to ensure lasting wellbeing (WCED, ISO 2600011, etc.); the need to ensure essential livelihood foundations and opportunities to all, especially those now suffering deprivation, including the roughly 1 billion people currently undernourished (FAO); and the need to achieve a many-fold improvement in energy and material efficiencies (probably at least four times the current level of benefits per unit of energy and material resources) to reduce human stress on the biosphere while providing enough for all (WCED12, von Weizsacker et al.13). While BC has the advantage of low reliance on carbon-intensive electricity sources, its existing energy and material demands, and associated pressures on ecosystems and ecological services, contribute to regional ecological decline and to the larger global problem of deepening unsustainability. The province consequently shares responsibility to act vigorously to decouple expansion and extension of economic prosperity from increases in energy/material demand and associated ecological impact. While there have been important efficiency improvements in many activities and sectors since the Brundtland Commission's 1987 call for substantial efficiency gains, there have been more significant increases in biospheric pressures due to the rapid rise of global resource extraction over the past 25 years.14 Today, even more	the EIS). For additional information, please see the Technical Memo on Demand-side Management. With respect to "backcasting", the 2012 Load Forecast was prepared in accordance with the BCUC's Resource Planning Guidelines (provided as Volume 1 Appendix D Part 2), and was developed using the same methodological approach approved by the BCUC in past long-term resource plan proceedings. For additional information, please see the Technical Memo on Project Need.

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		than in 1987, a serious commitment to progress toward sustainability entails a much more aggressive efforts to achieve efficiencies and to reduce energy demand than is evident in the EIS discussion of need and demand. Despite the clear obligation for very significant reductions in energy demand in wealthy jurisdictions, the approach to evaluation of options documented in the EIS accepts continued expansion of energy demand in BC through the entire period of forward planning for the purposes of alternatives assessment. The EIS anticipates load growth before DSM of roughly 2%/yr to 2031 (63,200 to 78,400 GWh) – approximately a 25% increase in load over the period (EIS, table 5.1, p.5-6 and table 5.3, p.5-8). BC Hydro has proposed a DSM package that would address a significant portion of the anticipated increase (EIS table 5.9 p.5-15) but the shortfall would be large enough to require substantial additional supply. This is a key rationale for the proposed Site C project. The proposed DSM package is modestly more ambitious than current efforts but less ambitious than DSM options 4 and 5 (EIS, p.5-35ff), which were screened out (see the discussion of DSM in point 3, below). Concerning point (ii) above: The planning process reported in the EIS appears to rely largely on forecasting that projects from past trends, anticipates new demands, and then chooses among options for meeting or mitigating those demands.15 That approach is broadly sensible where the dominant current trends are generally desirable and to be maintained or accommodated with modest adjustments. It is unsuitable, or at least insufficient, where the current trends are towards deeper unsustainability. An approach that accepts the need for power utilities and other key players in energy and material use to cut overall demand would complement this forecasting approach with backcasting. Essentially, backcasting involves identifying appropriate targets (e.g. for efficiency enhancements and demand reduction) and other parameters to outline the characteristics of a desirable future (e.g. for 2031) and then examining how best to move from the current situation to a future with these desirable characteristics.16 In contrast to forecasting approaches, which are designed to accommodate business-as-usual with minor adjustments, backcasting approaches are designed to help delineate new paths. The results are necessarily more demanding and in some ways less predictable than those of the forecasting approach. But while both convenience and predictability are, within limits, legitimate concerns in energy planning, the key objective of energy decision making is to encourage and facilitate progress towards a	

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		more desirable and durable future, however inconvenient and minimally predictable that may be. Even within the forecasting approach adopted by BC Hydro and reported in the EIS, some elements suggest an inclination to anticipate especially rapid demand growth in some areas (e.g. in the oil/gas and mining sectors) and to discount demand reduction possibilities in others (e.g. the EIS assumes "no significant changes in average commercial end use efficiency" (p.5-7) and assumes new load from electric vehicles but includes no discussion of electric vehicles as storage devices (p.5-16); see also the DSM discussion below). *Additional information requested:* (i) Present a comparative analysis of the potentially reasonable options for reversing electrical energy demand growth (and consequently eliminating the need for additional supply-side projects) during the plan period, using the consistent and comprehensive set of criteria described in the additional information note at the end of point 1, above. (ii) Show how an initial backcasting exercise could help delineate feasible paths to viable and desirable futures characterized by (among other considerations) lower energy demand. (iii) Where appropriate, delineate the need for initiatives by other public sector authorities. Include attention to • the most promising areas of technological and structural advance; • the areas of greatest potential for fostering complementary advances in the private sector and civil society; • awareness and learning that would help build a culture of conservation and efficiency; • openings to foster multiple, mutually-reinforcing, fairly distributed and lasting gains.	

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pub_0478-003	Peace Valley Landowners Associations	**3. Demand-side management** *The issue:* As noted above, significant demand reduction, achieved in large part by efficiency improvements of various kinds, is needed to comply with the sustainability principle established in the EIS. The impact reductions required for sustainability gains are not limited to electrical energy demand and are not achievable by initiatives taken by BC Hydro alone. At the same time, the pressures for transition to more sustainable behaviour (and associated institutional and physical structures) already apply well beyond the energy sector and are likely to increase significantly over the planning period covered by the analysis reported in the EIS. It is therefore reasonable both to anticipate and to push demand reduction initiatives in many sectors, including those recognized as existing or potential electricity customers. The key issue in this context is how much demand-side reduction can be achieved through a combination of BC Hydro initiatives and reasonably anticipated initiatives by others (using the full suite of DSM tools including but not limited to codes and standards, rate structures and promotional and/or educational programs), plus other individual and collaborative efforts that BC Hydro can play a role in developing and delivering. Inevitably there will be uncertainties that make planning difficult. But these uncertainties are better treated as reasons for more emphasis on flexibility, diversity, experimentation and learning in DSM than as reasons for relying instead on supply-side options that are certain to bring more adverse effects, less well distributed benefits, probably higher financial costs, and delayed progress to a more durable future. *EIS deficiencies:* As noted above, the EIS accepts an approach to DSM that would permit further demand growth. The EIS recognizes three main DSM tools: codes and standards, rate structures and programs (EIS, s.5.2.2.2, p.5-13) plus supporting initiatives. The proposed DSM target – 7,800 GWh/yr (1,400MW: exec sum p.6) by 2021 and 11,200 by 2031 (p.5-14) – is called “aggressive” and is to be continually reviewed to ensure it is “achievable and cost-effective” (pp.5-13, 5-21). However, DSM option 3, would deliver more – 9,200 GW/yr of energy and 1,400 MW of capacity (peak reduction) by 2021 (p.5-20), with some modest increase in uncertainties, but at a low cost per MWh (see below). And significant additional reductions would be delivered by DSM options 4 and 5, which were screened out of the resource planning process, despite significant	BC Hydro has identified a “DSM centred portfolio” because BC Hydro is pursuing its current DSM target, which is described in Section 5.2.2.2 of the EIS. Analysis of potential DSM options beyond BC Hydro's current DSM target can be found in in Sections 5.4.2.3 and 5.4.2.4 of the EIS. DSM Option 5 reverses electrical energy demand growth (and consequently eliminating the need for additional supply-side projects for the entire planning period (to 2031). BC Hydro concludes that DSM Option 4 and Option 5 are not viable for the reasons set out in Section 5.4.2.3 of the EIS: - DSM Options 4 and 5 present government and customer acceptance issues arising from BC Hydro’s reliance on aggressive and untested tactics. - DSM Options 4 and 5 entail significant delivery risk, especially with respect to capacity savings, and could jeopardize BC Hydro’s ability to serve its customers. As a result, Options 4 and 5 have not been included in the Section 5.5 portfolio analysis. Please see the Technical Memo on Demand-side Management. Please see the response to pub_0478-004 with respect to comments made regarding Burrard Thermal Generating Station.

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		advantages, chiefly because of uncertainties about effectiveness. The EIS notes that DSM option 3 would cover needs to 2026, with only program initiatives involved – i.e. no additional codes and standards or rate structure changes, but "on its own is not an alternative to the Project" (p.5-20). In light of the considerable advantages of DSM over supply-side options, the EIS ought to draw sufficiently from DSM option 4 and 5 components to provide a DSM-centred portfolio (including as necessary other components for contingency purposes and for any additional needed capacity for leveling of supply from intermittent power sources) that would be a full alternative to the Project. A positive contribution to sustainability would be better assured by a portfolio with sufficient DSM reverse the anticipated trend of ever-increasing electricity demand and would begin to build a culture of efficiency and conservation consistent also with increasing prosperity. But for the purposes of reasonable identification and comparison of alternatives, the EIS should also include one or more portfolios in which a combination of DSM with option 4 and 5 components plus small scale supply initiatives would obviate need for the Site C project. The more ambitious DSM options 4 and 5 were screened out and not examined in the EIS' comparison of alternatives, largely due to uncertainties about effectiveness – "deliverability risk" (LRP 2012 appendix 9A, s.3.1.1 p.9A-21). However, the LRP document reports the cost-effectiveness of advanced energy-focused DSM to be an order of magnitude greater than the average for new supply.17 The document also notes an impressive list of other DSM strengths, including that DSM portfolios avoid the adverse environmental effects of new supply options, could reduce GHG emissions through associated cuts in natural gas consumption, serve economic development objectives through creation of lasting jobs, offer a comprehensive and flexible diversity of components serving the range of customer groups, are mutually complementary, gain through learning, and help to build a lasting culture of conservation and efficiency (LRP 2012, pp.9A-21,22). Concerning capacity-focused DSM, the LRP document reports options with costs roughly half of the average for new supply (LRP, p.9A-23). These options would cut generation needs by shaving peak demands, but also deliver other DSM benefits including lower environmental footprint than supply options. Again because of uncertainties about effectiveness, BC Hydro has apparently chosen not to count on capacity-focused DSM options for resource planning (or, consequently, for	

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		consideration in the evaluation of alternatives in the EIS). Nonetheless, the LRP document recommends implementation starting in 2014. If such capacity-focused DSM implementation does proceed it would seem likely to have some near term beneficial effects in demand reduction. The EIS reports concern about DSM delivery risk due to limited experience, model uncertainty etc. (EIS, s.5.2.3, pp.5-18-5-19). While these risks are important, they should not be considered crippling. The LRP document identifies a range of tools for mitigating delivery risk (LRP 2012, appendix 9, s.4, pp.9A-26ff), some of which rely simply on the depth and diversity of available DSM options for back-up and mutual support. A particular consideration, noted in the EIS is that DSM uncertainties may be high in BC because it is a "low rate environment" (EIS Exec Summary, p.6; EIS, p.5-19). Possible responses to this concern include important considerations not explored in the EIS, in part because DSM options 4 and 5 were screened out. One apparent implication is that somewhat higher rates, specially targeted to encourage peak and overall demand reduction, would encourage stronger responses to efficiency programs, lower the risk of DSM failure and increase confidence in positive DSM results. They might also increase revenues (depending on positive and negative secondary and tertiary effects). And they could help correct the misleading economic message of pricing at rates below the marginal cost of new supply – a practice that essentially provides a public subsidy for new demand and undermines DSM objectives. Finally, the EIS argues that Site C is needed for back-up or contingency reasons, including needs to ensure sufficient supply capacity if DSM efforts are less successful than desired. Reliance on Site C for this purpose neglects the potential availability of the existing Burrard thermal facility for contingency purposes. This is regrettable when the Burrard option would seem to be several billion dollars less expensive. Moreover, because of its GHG emissions, the Burrard option would be unattractive enough to be a genuine last resort back-up, which would maintain incentives for effective DSM efforts. See the discussion below concerning constraints of current policy. *Additional information requested:* (i) In line with the actions set out in the additional information section for point 3 on	

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		DSM, identify how much demand-side reduction could be achieved through mobilization of the full suite of DSM tools (including but not limited to codes and standards, rate structures and promotional and/or educational programs) applied in a combination of BC Hydro initiatives and reasonably anticipated initiatives by others, plus other individual and collaborative efforts that BC Hydro can play a role in developing and delivering. The analysis should recognize costs and uncertainties as well as anticipated benefits and adverse effects. (ii) Incorporate DSM options 4 and 5 (or other equivalent or superior DSM option packages with these and additional components) as potentially feasible options for the purposes of comparing portfolio alternatives to the Site C project. (iii) Provide DSM-centred options that include • a portfolio with sufficient DSM to reverse the anticipated trend of ever-increasing electricity demand; and • a portfolio in which a combination of strong DSM including option 4 and 5 components, plus small scale supply initiatives, would obviate need for the Site C project.	
pub_0478-004	Peace Valley Landowners Associations	**4. Constraints of current policy** *The issue:* The proposed Site C project involves a major commitment. It is capital-intensive ($7.9 billion estimated capital cost18) and has a lengthy lead time, a long anticipated life and essentially no reversibility. While it promises operational flexibility, and hence is attractive as a complement to intermittent power sources, it is an expensive means of smoothing intermittent power delivery and far too costly an undertaking to be built only for broader back-up purposes. Once built, it would be a big generation facility that would reduce pressures for more effective DSM. Insofar as capacity is needed for smoothing intermittent power delivery and providing contingent capacity because of risks of especially low water at other hydro facilities or unexpectedly low DSM success, it is prudent to consider the full range of potentially more suitable – especially less costly and more flexible – options for addressing back-up capacity needs. That evaluation should not be unduly constrained by current policy preferences and should be included in the present review of options as alternatives to the proposed Project. In a planning and assessment process covering an immediate 20-year planning period and considering the desirability of a project with a much longer life expectancy, it is	The B.C. Environmental Assessment Office, the Canadian Environmental Assessment Agency, other government agencies and indeed any Joint Review Panel must recognize existing legislative parameters. Thus consistent with Section 4.2.1 of the EIS Guidelines, BC Hydro identified those potential resources that are legislatively barred in Section 5.4.2.1 of the EIS, including Burrard Thermal Generating Station (Burrard) and spot-market power/Canadian Entitlement: • BC Hydro is prohibited from planning to rely on Burrard for energy (sections 3(5), 6(2)(d) and 12 of the B.C. Clean Energy Act) or for capacity after Mica Units 5 and 6, the Interior to Lower Mainland Transmission Reinforcement Project and the third transformer at Meridian are in-service (Authorization for Burrard Thermal Electricity Regulation). Therefore, Burrard is not a viable alternative to the Project; • BC Hydro is prohibited from planning to rely on spot-market power/Canadian Entitlement (section 6(2) of the Clean Energy Act). Therefore, spot-market power/Canadian Entitlement is not a viable alternative to the Project. More aggressive DSM, such as DSM Options 4 and 5, is neither legislatively barred nor constrained by Provincial Government policy. DSM Options 4 and 5 are not viable for the reasons set out in Section 5.4.2.3 of the EIS. Please see the Technical Memo on Demand-side Management. It is not clear what is meant by 'smaller-scale supply-side options. BC Hydro has analyzed all available and potentially available clean or renewable resources in B.C. in Sections 5.4 and 5.5 of the EIS, many

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		not appropriate to rely heavily on short-term guidance. While it is understandable that the EIS should take into consideration immediate direction from law and policy, this consideration should be tempered by recognition that at least some aspects of current law and policy are likely to be transitory and to reflect near term pressures more effectively than long-term factors. In the present case, the present focus on minimizing greenhouse gas emissions is admirably forward-looking, but other aspects of current guidance are clearly more debatable and may not survive even a near term change in government. Especially in such a case, it is not reasonable to rely on current policy that constrains identification and comprehensive analysis of potentially desirable alternatives, and conflicts with the reasonable expectations of an environmental assessment that covers a 20 year planning period. As noted above, the current policy acceptance of accommodating rising future energy demand is incompatible with a basic commitment to sustainability. Other problems with accepting current law and policy as permanent constraints include the following: • In a more open evaluation, the current policy commitment to self-sufficiency might not stand as sufficient justification for exclusion of spot market imports as a back-up option in case of short term extraordinary capacity needs (very low water or DSM program disappointments). • The commitment to minimize GHG emissions may not stand as sufficient reason to exclude the existing Burrard thermal facility from serving as back-up capacity, if that would contribute to avoidance or substantial delay of the Site C expenditure. The Burrard facility is in place and is to be maintained for the foreseeable future for other reasons, From a GHG emission perspective, significant actual use of the Burrard capacity would be undesirable, but that undesirability would have a positive effect. The Burrard facility's back-up capacity would clearly be for last resort situations only and would not relieve pressure to push and deliver effective DSM. Site C as back-up would in contrast, represent capacity with few constraints on maximum use and would not generate pressures to ensure the back-up capacity is not used. Accepting current law and policy as binding constraints on the scope of inquiry and analysis of DSM and supply-side options as alternatives to the Project is not required by the EIS Guidelines. BC Hydro may feel obliged to follow current law and policy prescriptions and proscriptions in its public policy documents. However, the environmental assessment process has broader obligations and the Guidelines state	of which are smaller scale. Please see the Technical Memo on Alternatives to the Project for references to all resources BC Hydro examined as potential alternatives in the EIS.

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		onlythat "the fundamental rationale for proceeding with the development at this time" should be considered "within the relevant legal and policy context." The Guidelines do not suggest that this context is limited to current law and policy and there is no good reason to accept a very limited interpretation of context. Realistically, one of the most evident characteristics of the law and policy context for electrical power system planning in BC is that the context has been and will almost certainly remain dynamic. There is negligible chance that the current laws and policies will remain unchanged over the planning period covered in the EIS. Proper respect for the relevant legal and policy context therefore requires adoption of the sort of farsighted and flexible approaches discussed above. *EIS deficiencies:* Despite the openness of the Guidelines' requirement to consider the relevant law and policy context, the EIS mostly restricts attention to options favoured under the current suite of laws and policies.19 The EIS chooses to address "the current legal and policy context" (e.g. p.5-2) instead of "the relevant legal and policy context." As discussed above, this slide from the Guidelines' language to a more narrowly constraining phrasing is not a necessary or justifiable interpretation of the Guidelines, is inappropriate in the actual context of a dynamic law and policy context, and is undesirable because it unduly restricts the consideration of alternatives and appears to exclude options that may well be more desirable on all grounds – considering the full suite of environmental, economic, social, health and heritage effects – than the proposed Site C Project. Among the most significant unfortunate effects of BC Hydro's restrictive approach to the law and policy context in the EIS are the following: • The EIS lists as available contingency options, in the event of more demand or less DSM, only "simple cycle gas turbines (SCGTs) and/or pumped storage" (p.5-21), excluding the apparently attractive option of a back-up role for the Burrard thermal facility and/or spot market or Canadian Entitlement sources, as noted above. The latter are screened out due to current provisions of the Clean Energy Act (p.5-25, 26 and 5-30,31). • The EIS also lists more ambitious DSM efforts, as represented by DSM options 4 and 5, as screened out, due to uncertainties about current acceptability and likely rates of success. While such efforts are not directly constrained by current law or policy, the EIS' explanation for screening out these options relies heavily on BC Hydro's	

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		interpretations of "present government and customer acceptance" and obligations to avoid delivery risk (pp.5-35ff), both of which are tied to matters of current law and policy. Ambitious DSM is certainly more demanding than current approaches. The EIS notes that it involves building and entrenching a culture of conservation and efficiency (p.5-35; see also IRP, p.9A-4). But as discussed above, accepting that challenge is inherent in adopting the sustainability principle that is featured at the beginning of the EIS. Moreover, the disadvantages of the more ambitious DSM options are not clearly greater than those of the proposed Site C Project, which would accommodate energy demand growth through the entire plan period and require acceptance of more ecological disruption, agricultural land loss and other adverse effects. • The EIS presumes, again on the basis of current law and policy, that most supply-side options would have to be delivered by independent power producers facing higher capital costs than BC Hydro, and consequently does not evaluate those options as they could be developed by BC Hydro. *Additional information requested:* Provide an analysis of reasonable alternatives to the Site C project selected and judged in light of the dynamic relevant law and policy context, rather than the current law and policy context. In the selection and evaluation of the options, apply the sustainability principle and use criteria covering the standard set of "environmental, economic, social, health and heritage effects" (including interactive and cumulative as well as individual effects) rather than focus on a more limited or restricting set of considerations tied to current BC law and policy. Include attention to (among other possibilities) • use of the Burrard thermal facility for contingency purposes; • use of the spot market and/or Canadian Entitlement sources for contingency purposes; • DSM options 4 and 5, or the equivalent with any promising additions resulting from action on the other additional information needs identified above; and • delivery of smaller-scale supply-side options by BC Hydro, itself or in partnership with Independent Power Producers.	
pub_0478-005	Peace Valley Landowners	**5. Benefits of the Project** *The issue:* In this environmental assessment, a discussion of the benefits of the proposed Project	The description of benefits provided in Section 7 meets the requirements of the EIS Guidelines. Comparison of the financial, technical, environmental and economic development attributes of

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	Associations	must serve two purposes. First, it must help provide a basis for comparative evaluation of the proposed Project and the potentially reasonable alternatives to it. Second, the benefits must contribute to assessment of the overall desirability of the proposed Project, which depends on whether the benefits exceed the adverse effects/risks involved and whether the trade-offs are justifiable in the circumstances. These two purposes are inevitably interconnected. For both purposes, there are three key implications for the EIS: • the benefits and adverse effects/risks must be presented in a way that facilitates application of a comprehensive and consistent set of criteria for evaluation (though more details will be available for the Project); • the presentation of benefits must focus on residual net benefits, just as the presentation of negative aspects focuses on residual net adverse effects/risks; and • the findings about benefits and adverse effects/risks must be well enough integrated to allow informed judgment about the relative overall merits of the alternatives, the desirability of the proposed Project, and the justifiability of the trade-offs involved. In addition, clearly it would be helpful for the EIS to clarify for each option, including the proposed Project, which of the identified net residual benefits would and would not also be delivered by other options. *EIS deficiencies:* In the EIS, the discussion of benefits from the proposed Site C Project (EIS, s.7, pp.7-1ff) is not well designed to serve any of the three requirements set out above or to clarify what benefits are particular to, or greater for, the Project. That is in part because the criteria set that underlies the benefits listing is not the same as the criteria set applied in the evaluation of alternatives (see point 1, above, concerning basic criteria). But the discussion also makes no attempt to integrate consideration of the benefits and adverse effects/risks to clarify net effects or identify trade-offs. And the section suffers from a determined focus on listing all benefits with the intent of demonstrating how much more important they are in comparison with the significant adverse effects anticipated from the proposed Project. The EIS notes that one of its purposes is to present information that "[d]emonstrates that if the Project will result in significant adverse effects, it can be justified by the benefits of the Project and the need for the Project" (EIS, p.1-2). Unfortunately, the enthusiastic presentation of benefits results in a distorted picture that serves neither of the basic purposes noted above. The following examples are illustrative:	portfolios of available resource options is provided in Section 5.5.4. Please also see the Technical Memo on Alternatives to the Project.

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		• The discussion of economic gains includes "benefits" that would be delivered in any case where equivalent expenditures were involved. Many of these benefits could and should be presented as costs. Otherwise the logic entails that BC Hydro should favour more expensive alternatives because they would bring more benefits. • Failure to focus on net benefits in some cases results in at best misleading emphases, such as with the employment benefits section (EIS, s.7.3.2), which puts full weight on the significant employment effects during the development/construction boom but offers no compensating recognition of the effects of the subsequent bust beyond reporting that local jobs will fall from 1600 during the construction period to 13 in the operation period (EIS, p.7-15,16). The result obscures the lower net long-term benefits (or possibly the net costs) of Site C employment effects. There is no recognition that the boom-bust job effects might be considered a failure to meet the Clean Energy Act objective of "economic development and the creation and retention of jobs," since so few jobs would be retained. On the contrary, the conclusion drawn ignores the non-retention problem and asserts that the construction period jobs qualify adequately as support for the objective (EIS, p.5-24). Finally, there is no comparison of the Site C jobs effects with those that would result from other options. • Similar neglect of net benefit considerations is evident in the discussion of recreation where benefits are claimed on the basis of increased fishing opportunities, without consideration of whether these gains would be achieved at the cost of fewer land-based recreational options (EIS, p.7-24). *Additional information requested:* Provide a discussion of Site C Project effects that (i) presents the benefits and adverse effects/risks in a way that applies a comprehensive and consistent set of criteria for evaluation of the Project and the alternatives (though more details will be available for the Project); (ii) ensures that the identified benefits are residual net benefits, just as the presentation of negative aspects focuses on residual net adverse effects/risks; (iii) integrates the findings about benefits and adverse effects/risks well enough to allow informed judgment about the relative overall merits of the alternatives, the desirability of the proposed Project and the justifiability of the trade-offs involved; and (iv) clarifies for each option, including the proposed Project, which of the identified net residual benefits would and would not also be delivered by other options.	

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pub_0478-006	Peace Valley Landowners Associations	**6. Cumulative effects as central to the assessment** If the assessment of the proposed project is to recommend the best option in the public interest (the most positive contributions to sustainability, avoiding significant adverse effects), clearly it must cover all of the effects that matter and it must do so recognizing that the various effects interact, the effects of individual undertakings interact and more importantly these effect interact with those of other past, current and future activities as cumulative effects. Practically, the effects that matter, ecologically, socially and economically, are the cumulative ones. They are the ones that people must live with. They are the actual effects that are suffered or enjoyed by communities, that alter ecosystems and biophysical structures, and that determine whether the legacy to future generations is positive or adverse. For these reasons, best practice in cumulative effects assessment recognizes cumulative effects as properly the central focus of all impact assessment work. They inform the discussion of purposes and needs and the comparative evaluation of potentially reasonable options, as well as the identification of suitable mitigation, compensation and enhancement steps and appropriate design of implementation, monitoring and other follow-up plans. **7. Definition of cumulative effects in the EIS** The definition of cumulative effects in the EIS refers to the effects that are likely to result from the Project in combination with other projects or activities that have been or will be carried out. This is consistent with the definition of cumulative effects in the EIS Guidelines and the federal Cumulative Effects Assessment Practitioners Guide is widely used. However, the EIS is seriously deficient in its treatment of cumulative effects and in so doing narrows the full meaning of the definition and undermines the integrity of the assessment. The approach in the EIS to the interaction of effects that result from past, present and future human endeavors in combination with the Project is a central concern in the commentary that follows.	Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried out. That approach was applied as described in Section 10 (Effects Assessment Methodology) of the EIS. The cumulative effects assessment was conducted in accordance with the EIS Guidelines and the information is described in Volume 3 Sections 12 to 15, Volume 13 Sections 16 to 27 and Volume 4 Sections 28 to 33 of the EIS. Please also see the Technical Memo on Cumulative Effects Assessment.
pub_0478-007		*This line left intentionally blank for administrative purposes. Comment initially considered as a separate IR was combined with pub_0478-006.*	

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pub_0478-008	Peace Valley Landowners Associations	**8. Spatial and temporal boundaries of the cumulative effects assessment** *The issue:* The focus of analysis in cumulative effects assessment and as identified in the Guidelines (p.34) and the EIS (vol. 2, s. 10.5) is on the condition of a Valued Component and understanding a VC's response to disturbance resulting from the Project in combination with other projects or activities that have been or will be carried out. Accordingly, the spatial and temporal boundaries are critical for an effective cumulative effects assessment. In understanding and assessing the condition of a VC and any changes to the condition, the temporal and spatial boundaries must be sufficient to capture the effects of other projects and disturbances in the past, present and future. For this reason, the Guidelines (p. 34) require a rationale for the boundary for each VC. The rationale should be sufficient to ensure that the total effects on the condition of the VC are summarized and evaluated. With regard to the scoping of the spatial and temporal boundaries, the Guidelines require that a cumulative effects assessment of the Project be conducted "if the potential residual adverse effects of the Project on that VC has a spatial and temporal overlap with a residual effect of another project or activity." (p. 34). At the same time, the Guidelines indicate that the "Proponent proposes" that spatial boundaries for the Regional Assessment Area for each VC will be based on "where possible interactions with other projects or activities overlap." (p. 34). For a number of VCs, this proposed approach dramatically narrows the spatial scope of the assessment from areas bounded by overlapping effects to areas bounded by overlapping project footprints and activities. For the purposes of our analysis and for consistency with best practices, we have applied the former guidance in the commentary that follows. *EIS deficiencies:* Central to the conservation of wildlife species is their management on a population basis. In short, the occurrence, distribution and movement of wildlife do not respect jurisdictional boundaries and borders or provincial wildlife management units. The spatial boundaries as defined in the Regional Assessment Area (RAA) for a number of wildlife species are not broad enough to consider population-level and home range-wide cumulative effects for a number of important wildlife species as well as the importance of local landscapes and migratory corridors for wildlife that migrate through the RAA even though they may occur only in small numbers in the RAA. For example, the EIS assumes that the scarcity or non-occurrence of resident grizzly bears	Please see the following Technical Memos: - Spatial Boundary Selection - Movement of Grizzly Bears and Large Carnivores - Cumulative Effects Assessment

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		in the RAA is sufficient grounds for predicting no potential impacts to this species. However, assessed at a broader regional scale more appropriate to grizzly bear home range, there would be a stronger basis for assessing the potential and significance of the local landscape to facilitate the movements of grizzly bears that could be significant to the stability, resilience and connectivity of the regional population. The relative importance of local and regional habitats and their potential disturbance and fragmentation are not adequately assessed when the spatial boundaries are narrowly defined and the significance of their conservation implications to larger regional populations - even those whose movements are periodic and rare - are not considered. *Additional information requested:* (i) Provide appropriate expanded spatial boundaries and the best available supporting information and evaluate the population-level and range-based cumulative effects on wildlife for wide-ranging species such as wolverine, lynx, woodland caribou, fisher, grizzly bears and wolves. (ii) Provide the best available information and assess the significance of the Peace River Valley as a wildlife corridor for migratory wildlife populations connected by the corridor and within the context of their home ranges.	

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pub_0478-009	Peace Valley Landowners Associations	*EIS deficiencies:* Agriculture is an important VC and the effect of the Project on the overall condition of that VC should be the focus of the assessment. By many measures, the Peace River Valley as an important agricultural region in British Columbia and Canada and is not limited to the RAA defined in the EIS (vol. 2, s. 10.5.1.1) as the Peace River Regional District and the Northern Rockies Regional District and the Peace River Agricultural Region. The permanent loss of productive capacity from the zone and the distribution of impacts within that zone and beyond to other parts of British Columbia and northwestern Alberta as a result of the Project's cumulative effects are not fully addressed in the EIS as a consequence of the RAA boundaries. *Additional information requested:* (i) Provide appropriate expanded spatial boundaries and the best available supporting information and evaluate of the importance of the agricultural productivity of the entire Peace River agricultural zone and the contributions of the BC section within that zone to determine the distribution of impacts and relative significance of the permanent loss of productivity and capacity resulting from the Project for British Columbia and northwest Alberta.	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. Comparisons have been provided, in accordance with the EIS Guidelines for agricultural land within the Project activity zone and land remaining within the Peace River valley, the region and the province, in Table 20.4 for baseline conditions, and Table 20.17 showing the permanent land loss caused by the Project. Please see the Technical Memo on Spatial Boundary Selection.
pub_0478-010	Peace Valley Landowners Associations	*EIS deficiencies:* The Guidelines require that the EIS provide a narrative description of existing hydro-electric generation projects on the Peace River (the Bennett and Peace Canyon dams), including a description of *"any existing studies of changes to the environment resulting from those projects that are similar to potential changes resulting from the project, including any mitigation measures that would were implemented, and long term monitoring or follow up program that were conducted. The effectiveness of those mitigation measures and key results of monitoring or follow up programs would be described. The narrative discussion should include the historical data, where available and applicable, to assist interested parties to understand the potential effects of the Project and how they may be addressed."* (p. 37). The EIS provides this description and includes a general commentary on the upstream and downstream effects, including a brief treatment of the Peace-Athabasca Delta	For the purposes set out in Section 9.1 of the EIS guidelines, the Previous Development Section 11.1 was specific in its direction that such information on the changes to the environment or effectiveness of mitigation should be supplied where it is "available and applicable". As stated in Section 11.1.2.2, BC Hydro is unaware of specific data that allows the description of environmental and biological conditions before the previous developments were initiated. Further, BC Hydro is unaware of specific applicable comparative information to allow meaningful assessment of the effectiveness of the mitigation measures that have been carried out. Identification of issues/concerns of the public, agencies and Aboriginal groups during consultation (described in Section 9 Information Distribution and Consultation of the EIS) were considered in the selection of valued components as described in Section 10 (Effects Assessment Methodology) of the EIS. Spatial boundaries for each valued component were determined based on the nature or characteristics of each valued component. For each valued component, the LAA was defined in consideration of the expected maximum range of the potential for the Project to cause an adverse

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		(PAD). The EIS indicates that *"the influence of flow regulation on the hydrology of the PAD has been examined for decades, yet there remains an ongoing debate amongst the scientific community about the overall contribution of hydro-electric development to observed hydrological changes in the PAD. Since flow regulation, the observed changes with the PAD lie with the range of natural variation in the system." (EIS, vol. 2, s. 11.1)* Beyond providing a summary narrative description of general changes to aquatic, vegetation and wildlife resources (EIS, vol. 2, s.11.1 – 11.1.2.2) resulting from these projects and general descriptions of follow up programs, no associated historical data is provided. The EIS also notes the many other factors that have "*confounded the assessment of hydrologic changes that have occurred on the PAD since the construction of the W.A.C Bennett Dam."* (EIS, vol. 2, s. 11.1.2.2) The EIS excludes the PAD from the assessment of the Project's cumulative effects. Notwithstanding, the challenges of understanding discrete causal factors affecting the changing conditions of the PAD and the ongoing debate within the scientific community and uncertainty regarding the contributions of hydro-electric development to these conditions, these are not grounds for excluding the assessment of cumulative effects from the Project on the conditions of the PAD. The EIS suggests there is a body of historic information pertaining to the assessment of conditions of the PAD since the construction of the Bennett Dam. This could and should inform the cumulative assessment of the Project's downstream effects on the PAD – a recognized wetland of international importance. *Additional information requested:* (i) Include the Peace River – Athabasca Delta in the cumulative effects assessment and provide the best available supporting information to evaluate the significance of the Project's effect on the current conditions of the Delta and in the context of the historic changes and trends. *EIS deficiencies:* There is no indication that scoping of spatial boundaries for VCs was informed by public interests potentially affected by the cumulative effects resulting from the Project. The EIS provides no explicit explanation in the rationale for VC spatial boundaries that responds directly to the public input BC Hydro received. Additional information requested:	effect on the valued component. Spatial boundaries of the RAA, as set out in Section 8.5.3.1 of EIS Guidelines, was based on: - where possible interactions with other projects or activities overlap; and - for ecological boundaries, they will be ecologically defensible (e.g., wildlife range boundaries) Please also see the following Technical Memos: - Peace Athabasca Delta - Spatial Boundary Selection - Cumulative Effects Assessment

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		(i) Explain in the rationale for VC spatial boundaries, the public input that was received and how it informed the scoping of the assessment.	
pub_0478-011	Peace Valley Landowners Associations	*EIS deficiencies:* As discussed above, determining the scope of the temporal boundaries for the cumulative effects assessment is one of the most critical considerations in addressing the interaction of project effects with the past, present and future effects of other undertakings and disturbances. Assessing the significance of cumulative effects on the sustainability of VC conditions requires a retrospective analysis of how these conditions have changed and will change over time. Assessing historical VC conditions and analyzing trends and changes in conditions over time is central to this exercise. The EIS does not address past conditions and effects of developments and initiatives prior to the current proposal on the grounds the current status of the VC "reflects the residual effects of projects and activities that have been and are being carried out." (EIS, vol. 2, s. 10.5.1.2.) This construction of the baseline is one of the most serious deficiencies of the EIS with disturbing consequences for our understanding of the cumulative effects of the Project on the sustainability of VCs. It affects judgments regarding the significance of these effects, how they are mitigated and how residual effects are managed. Others have criticized this approach arguing that developing a baseline as nothing more than a description of current conditions discounts the effects of past changes as the 'new normal.' 20 The approach ignores the importance of understanding the nature and extent of past changes as means of illuminating the sensitivity, vulnerability or perhaps resilience of what remains. In situations where social and ecological systems are to be affected, a crucial practical issue is whether any of those systems may be at or near a threshold to dramatic change that may compromise valued qualities or their delivery of valued goods and services. Identifying such thresholds is obviously important but difficult at best. While some present indicators may be revealing, often the most important information is historical – concerning the range of past fluctuations, the nature of and responses of past stresses and the extent of past losses (or gains) of adaptive capacities (as provided, for example, by indigenous biodiversity and niche filling redundancies in ecosystems, and by the various aspects of social capital in human systems). The EIS argues, reasonably, that reliable data on past conditions is limited, that	Section 11.1 Previous Developments of the EIS meets the requirements set out in Section 9.1 of the EIS Guidelines. Section 11.1 is not provided "to assess the historic effects of previous developments and activities", as noted in the comment. Assessing the historic effects of previous developments and activities lies outside the scope of the environmental assessment. Resilience of a particular valued component and the extent to which it has already been adversely affected by human activities is considered during the characterization of the residual effects using the criterion "context", as defined in Table 8.3 of the EIS Guidelines. In determining the threshold for significance, for each valued component, each of the nine criteria used to objectively characterize the residuals effects were considered. As required, thresholds were determined for each valued component and are described in the Volume 2 section 12-15, Volume 3 sections 16-27 and Volume 4 section 28-33)of the EIS. For the purposes of assessing potential effects of the Project on the VCs, the LAA for each VC was based on the nature or characteristics of each VC. For each VC, the LAA was defined in consideration of the expected maximum range of the potential for the Project to cause an adverse effect on the VC. The matters raised are described in the following sections of the EIS: - section 11.2 Land Status, Tenure and Project Requirements - section 19 (Current Use of Lands and Resources for Traditional Purposes) - section 34 (Asserted or Established Aboriginal Rights or Treaty Rights, Aboriginal Interests and Information) Please also see the following Technical Memos: - Spatial Boundary Selection - Movement of Grizzly Bears and Large Carnivores - Cumulative Effects Assessment - Private Property – Project Requirements and Tenure - Flood Reserve Please also see the response to pub_0478-010. The temporal boundary used in the cumulative effects assessment for the Project considers projects that "are at least as foreseeable as the Project", in accordance with Section 8.5.3.1 of the EIS Guidelines. Consideration of hypothetical projects is not required in the assessment.

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		considerable uncertainties would be involved and that these would undermine confidence in the findings. Unquestionably there will be data limitations and uncertainties. But that is one of the key things to understand. In impact assessments we need to be as precise as possible. But we also need to recognize what we do not know, where valued qualities and services may be vulnerable, where confident assurances are not supportable, where we need to be particularly cautious. Moreover, for some purpose we do not need a detailed understanding. If we can grasp in broad and reasonably accurate strokes what has changed, what has survived and what has been lost so far, we will be significantly better informed than we would have been starting from a present baseline. In the treatment of past developments and activities, the Guidelines also make provision in the cumulative effects assessment for the inclusion of information described in Section 9.1 as "previous developments." These developments refer to the two existing hydro-electric facilities on the Peace River – the WAC Bennett Dam and the Peace Canyon Dam. The Guidelines do not suggest that the consideration of these two previous projects is a substitute for the assessment of cumulative effects resulting from other previous developments. The EIS's treatment of specific previous developments is limited to a general and concise narrative of these two previous projects, their effects, and follow up programs. Elsewhere, BC Hydro argued21 that these projects' effects were most similar to those that may arise from the Site C project and that the survey might well be useful for clarifying some particular effects considerations. That said, this approach is not nearly sufficient to satisfy the broader needs of assessing the historic effects of previous developments and activities as discussed above. The historical contributions to cumulative effects that matter are those overall effects and responses that tell us something about how the social and ecological systems have functioned and changed, demonstrating resilience and vulnerability, persistence and loss. A selective history limited to conveniently available data cannot deliver what is needed. As a consequence the EIS does not consider the population-level and regional effects of the two previous hydro-electric developments. It gives limited attention to four follow up programs, but provides no discussion of the effectiveness of mitigation and operational constraints to address impacts and issues associated with the operation of the facilities.	The "Scenarios of Future Developments in Cumulative Effects Assessment: Approaches for the Mackenzie Gas Project" was prepared by Greig and Duinker at the request of the Joint Review Panel to help address issues raised by intervenors of potential cumulative effects of future developments. The study states the following: "Cumulative effects (positive and negative) of many types clearly depend heavily on government preparedness and choices. Strategic environmental assessments, land use plans and systems of protected areas are instruments with which governments prepare themselves to manage such effects. Unlike some other jurisdictions, however, the Mackenzie Valley contains regions where some or all of these management instruments are absent." Land use plans (OCPs, LRMPs) and protected areas exist in the Project area and provide guidance for the management of cumulative effects. The need to conduct future scenarios analyses for the Project is not required. CEAA 2012 provides for a separate process the study of the effects of existing future physical activities carried out in a region. See sections 73-77. Please also see the Technical Memo on Cumulative Effects Assessment. The Project has not been rejected twice before. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, *Site C Report & Recommendations to the Lieutenant Governor-in-Council*, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, *2006 Integrated Electricity Plan/Long-Term Acquisition Plan* Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's long-term planning process" (BCUC, *2008 Long-Term Acquisition Plan*, Decision, 27 July 2009, page 139). Chapter 5 of the EIS addresses the need for and alternatives to the Project. Section 5.2.1.1 describes the methodological approach and results of BC Hydro's 2012 Load Forecast, the most recent load forecast. Section 5.4.2 of the EIS canvasses the potential alternatives to the Project that BC Hydro

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		Another consequence of treating the cumulative effects of past developments as the "new normal" reflected in current baseline conditions is that it glosses the numbing human social, economic and cultural impacts of gradual encroachments, alienations and erosion of the regional land base and watershed that First Nations and non-First Nations people have depended upon. This is akin to fostering a culture of displaced persons – a suite of impacts that the EIS completely fails to recognize and address. The EIS (vol. 5) gives partial expression to the cumulative effects of incremental loss from previous developments and the two previously constructed hydro-electric dams as experienced by First Nations. However, the EIS has little to say about how First Nations peoples have coped and adapted to these externally induced changes. In glossing the cumulative effects of past developments, the EIS provides virtually no recognition and gives no voice to the long-term residents of the Peace Valley region. What the EIS fails to capture in its treatment of current baseline conditions is best expressed in a letter from a local resident commenting on the EIS22. It is cited here at length to emphasize the nature of the content that is absent from the EIS in its treatment of baseline conditions: *At the same time the EIS fails to recognize and acknowledge all of the losses to the inhabitants, particularly multi-generational farmers and ranchers that have lived all or most of their lives in the valley. Many of these people have a very deep rooted attachment to this special place. It is their place, their home and their community.* *The EIS partly addresses the physical displacement of residents but it also doesn't recognize the "spiritual" displacement of people, and how this loss will affect people emotionally…* *The possibility of expropriation or the forced loss of a home place is a stressful and disorienting experience. Since 1957, our family, 3rd generation (to myself) inhabitants of the Peace Valley, has been threatened with possible expropriation. As early as 1975, our family joined with others to protect our homes by creating the Peace Valley Environment Association, and more recently, the Peace Valley Landowners Association. In other words, since 1957, our family members have had their day to day life disrupted with the stress of an uncertain future and the demanding work of struggling to prevent expropriation. We do not want to be displaced. And should we be forced to accept expropriation, we will be thrown into looking for a new place and into reaching a financial settlement; both of these tasks we would expect to be very*	considers are not viable, with reasons provided for each alternative reviewed, while section 5.5 provides details of the available alternative resources to the Project and examines these available alternative resources using financial, technical, environmental and economic development attributes.

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		stressful. *Wherever we go will mean starting over. We will never be able to rebuild a third generation home in our lifetime. In addition to being stressful, involuntary displacement or expropriation brings with it a deep sense of loss for our home and for our failure to prevent its loss, to protect what belongs to us.* *The threat of this proposed project has been hanging over the valley residents heads for 56 years to date. An estimated 106 private land holdings comprising 178 separate parcels of land would be affected by permanent statutory rights-of-way. Of these totals, 52 private land holdings and 79 separate parcels would also be affected by required fee simple tenure. According to the BC Hydro EIS documents, if they received their certificate according to their schedule, we will be displaced in the fall of 2014. As one of the many inhabitants, we will lose all of our farmland, home, our place, mother's home, historic buildings and our businesses.* In the same vein, and in failing to establish temporal boundaries that provide sufficient reference conditions that can measure changes in socio-economic conditions in the Peace River Valley over time, socio-economic phenomena like the out-migration of people - especially younger generations - the decline in property values and the loss of agricultural productivity, are lost and not accounted for: *"Temporal boundaries [in the EIS] do not capture the impacts of BC Hydro's Passive Land Acquisition program which has been ongoing since the late 1970's. Several things occurred as a result of Hydro acquiring these properties. Certainly no further development occurred on these properties. In some cases buildings were removed, in other cases properties were rented on various short terms. This has had profound impact on agricultural and residential development in the valley. Many of the farms were depopulated as the previous owners moved away and absentee tenants took over use of the land. Development of these farms was hindered by the short time horizons provided by the lease terms. Absentee owners made short term decisions on use of the land and little or no capital investment occurred. More buildings fell into disrepair, and as maintenance costs rose, so Hydro often removed the buildings rather than maintain them. Because this program of acquisition has been ongoing for several decades, the base line for the economic impact must start at the time the program was launched, not the start of the construction phase of the project."* 23 *Additional information requested:*	

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		(i) Explain in the rationale for VC temporal boundaries, the public input that was received and how it informed the scoping of the assessment. (ii) In consideration of the cumulative effects on the relevant valued components, provide the best available qualitative and quantitative information that documents the long-term trends of changing VC conditions throughout the Upper and Lower Peace River Valley from the BC Hydro-held 1957 Flood Reserve and the 1975 Passive Land Acquisition Policy to 2012. (iii) Compile the best available information to document and assess the socio-economic effects on the residents and communities of the Peace Valley resulting from the establishment of the 1957 Flood Reserve and the 1975 Passive Land Acquisition Policy to inform the cumulative socio-economic effects that would result from the project in the Peace River Valley. EIS deficiencies: The Guidelines provide little specific guidance with respect to the inclusion of future developments in assessing the cumulative effects resulting from future projects and activities. They simply advise that the relevant federal and provincial guidance be consulted. Rather the Guidelines describe BC Hydro's proposal to address only other future projects "at least as foreseeable" as the Site C project (Guidelines, p. 35). The rationale offered by BC Hydro24 is that decision makers on these enabled projects should be responsible for considering their additions to future effects. But BC Hydro provides no grounds for assuming that enabled projects will be subject to assessment and approval processes that ensure such considerations. And it is far from clear that persuasive grounds could be provided. At least some enabled projects are likely to be individually too small to be captured by rigorous assessment processes. And there is no assurance that any effective process will be in place to consider the overall effects of these undertakings. Moreover, inducing and enabling significant projects is a central purpose of the Site C project and the likelihood and nature of the effects (positive and adverse) on and of these further projects is unavoidably a central determinant of the desirability of the Site C project. In that context, failure to examine the cumulative effects of Site C along with those of the induced and enabled projects makes no sense. The scoping of future projects is a challenging matter. The Canadian Environmental Assessment Agency, in its Operational Policy Statement on Addressing Cumulative Environmental Effects (2007 update) attempts to address some of the ambiguity	

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		associated with earlier guidance: *Accordingly, in identifying future projects to include in the cumulative environmental effects assessment, responsible authorities should consider projects that are "certain" and "reasonably foreseeable", as recommended by the Practitioners Guide. The Act does not require consideration of hypothetical projects, but responsible authorities may choose to do so at their discretion. Information concerning the cumulative environmental effects of the project under assessment combined with hypothetical projects may contribute to future environmental planning; however, it should not be the determining factor in the environmental assessment decision under the Act.* The policy also suggests that this position is consistent with the "best practices approach" of CEAA's Cumulative Effects Assessment Practitioners Guide (1999). In the EIS, BC Hydro's proposed approach to the scoping of future projects for cumulative effects assessment is limited to those projects "that are at least as foreseeable as the Project" (vol.2, s. 10.5.1.2) – in other words, those for which an application has been submitted or that are in transit through a process to seek some form of regulatory approval, permitting or licensing. The Proponent's proposed inclusion list (EIS, vol 2, s. 10.5.2.8)) also includes Official Community Plans, and parks and recreation plans and large water discharges into a watershed. This proposed approach effectively precludes consideration of many reasonably foreseeable future activities with effects that would interact with those of the Project. Without attention to these possibilities, it will not be possible to identify the likely range of possible cumulative effects related problems and opportunities that might affect the relative desirability of the Project in comparison with alternatives, and that would constitute the key factors to be anticipated in the design of the project's for adequate adaptive capacity. Because an overriding consideration of the assessment is to determine whether the project as proposed or modified, including the evaluation of alternatives, is in the public interest, the assessment of a broader range of future development scenarios is needed. For cumulative effects assessment BC Hydro proposes in the Guidelines (p. 35) and in the EIS (vol. 2, s.10.5.1.2) only to consider three scenarios: a baseline case, a future case without the project predicated on "projects and activities that are at least as foreseeable as the Project" and a project case. This approach is undesirable for two	

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		reasons. First, the foreseeability of the proposed project provides a highly ambiguous guide for what to include in In the EIS, BC Hydro's proposed approach to the scoping of future projects for cumulative effects assessment is limited to those projects "that are at least as foreseeable as the Project" (vol.2, s. 10.5.1.2) – in other words, those for which an application has been submitted or that are in transit through a process to seek some form of regulatory approval, permitting or licensing. The Proponent's proposed inclusion list (EIS, vol 2, s. 10.5.2.8)) also includes Official Community Plans, and parks and recreation plans and large water discharges into a watershed. This proposed approach effectively precludes consideration of many reasonably foreseeable future activities with effects that would interact with those of the Project. Without attention to these possibilities, it will not be possible to identify the likely range of possible cumulative effects related problems and opportunities that might affect the relative desirability of the Project in comparison with alternatives, and that would constitute the key factors to be anticipated in the design of the project's for adequate adaptive capacity. Because an overriding consideration of the assessment is to determine whether the project as proposed or modified, including the evaluation of alternatives, is in the public interest, the assessment of a broader range of future development scenarios is needed. For cumulative effects assessment BC Hydro proposes in the Guidelines (p. 35) and in the EIS (vol. 2, s.10.5.1.2) only to consider three scenarios: a baseline case, a future case without the project predicated on "projects and activities that are at least as foreseeable as the Project" and a project case. This approach is undesirable for two reasons. First, the foreseeability of the proposed project provides a highly ambiguous guide for what to include in the cumulative effects assessment. On the one hand the Project has been proposed and rejected twice before and may on those grounds be judged to be still quite unlikely unsuitable once again. On the other hand, the proposed project is now well advanced in a formal approval process that in most cases leads to implementation. Limiting future activities in cumulative effects assessment to ones that are in a formal approval process has long been recognized as unrealistic and inappropriate. As noted above, the now more widely accepted test is "reasonably foreseeable" future undertakings. Second, the proposed reliance on a single future scenario fails to recognize that	

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		futures are to a considerable extent matters of choice. As noted above, a better approach would broaden the scope of plausible future scenarios to be explored and assessed, the EIS could better address regional and provincial public interests whose range of future options will inevitably be altered with or without the proposed project or other alternatives to it. A scenario-based assessment of future cumulative effects would make for a more informed judgment about the consequences of future choices and decisions associated with these scenarios. A more appropriate approach to cumulative effects assessment for this case would include all reasonably foreseeable future undertakings, consider the range of plausible future scenarios in which the project would contribute positive and negative effects, and use this information for project selection and design. Scenario-based cumulative impact assessment is among things a means to gain insight into the implications for cumulative impacts from proposed, possible or hypothetical future development on the sustainability of valued components. In a special report commissioned by the Joint Review Panel for the Mackenzie Gas Project, Greig and Duinker25 explained the merits of cumulative effects scenario analysis: *By working with scenarios of quite different futures, the analytical focus is shifted away from trying to estimate what is most likely to occur toward questions of what are the consequences and most appropriate responses under different circumstances… Scenario-based CEA cannot guarantee VEC sustainability. It is meant specifically to help to cope with uncertainties about the future - the development future, the future of ecosystems, and the future of human communities. It is meant to assist in managing risks - perhaps reducing risks - associated with human actions that inadvertently may compromise VEC sustainability. It is meant to replace blindness caused by unwillingness to peer forward with glimpses of possible outcomes so that we might choose the best among them.* The EIS indicates in its description of the Peace Water Use Plan (vol. 2, s. 11.1.3) a scenario assessment exercise initiated by the Province with the cooperation of BC Hydro for the purposes of evaluating operating regimes and constraints on the hydro-electric facilities. The exercise involved licencees, government agencies, First Nations, key stakeholders, industry representatives, and key environmental and recreation interest groups. The lessons learned from this exercise could be applied to a scenario-based cumulative effects assessment for Site C.	

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		Additional information requested: (i) The scope of the assessment in the EIS should clearly include attention to the potential effects of all reasonably foreseeable future projects and activities and consideration of plausible future scenarios in which the Project may contribute positive and/or negative effects. In particular the project inclusion list in the EIS (vol. 2, pp. 10-15 – 10-21) should be presented as an illustration of the kinds of reasonably foreseeable activities to be included, expanded to include a more fully illustrative set of examples, and complemented by an additional requirement to consider cumulative effects in the context of alternative plausible future scenarios. (ii) Informed by the lessons learned from the scenario development and assessment exercise associated with the Peace Water Use Plan, for purposes of cumulative effects assessment BC Hydro should facilitate the development of plausible future scenarios through a public process with an independent facilitator	
pub_0478-012	Peace Valley Landowners Associations	**9. Interactive cumulative effects** *EIS deficiencies:* The EIS is narrowly focused on identifying and assessing project component interactions with VCs. It fails to identify project component effects that may interact with the systems on which valued components depend. These would include ecosystems, social-cultural systems, socio-economic systems and the interaction between them. In short, the valued components associated with one or more of these systems should be approached from a systems perspective. For example, the interactions of the Project's residual cumulative effects on wildlife, habitat traditional use, First Nations rights and recreational uses (like hunting) are not addressed. The interaction of the residual cumulative effects of the Project across various VCs and systems are not considered to contribute to the determination of whether the Project is introducing mutually reinforcing gains or losses. Nor is there any systematic and transparent treatment of whether the cumulative effects of the Project result in net gains or losses for the people of the Peace Region and greater British Columbia. As a consequence the concluding statements in the EIS (Executive Summary, p. 36) are heavily compromised, raising more questions than they answer.	VCs, and the potential interactions between the Project components and those VCs, have been identified using the method required by Section 8 of the EIS Guidelines. There is no deficiency. The reference to "systems" in the comment is unclear. However, EIS demonstrates that, using the example in the comment, the assessment of potential effects on wildlife resources was conducted employing an "ecosystem" approach. This is demonstrated in the conclusion that the Project is likely to result in a particular residual adverse effect on wildlife resources, alteration and fragmentation of habitat (Section 14.5.1.1): "The Project would cause alteration and fragmentation of habitat used by key indicator species by the following mechanisms: i) changes to the structural stage of habitats, ii) loss or reduction in the area of individual habitats, iii) changes to connectivity between habitats, iv) changes in hydrology and flow patterns, v) release of deleterious substance, and vi) loss or reduction in specific habitat features such as nests, winter range areas, and hibernacula. Habitat alteration and fragmentation is considered the primary effect of the Project on wildlife resources because the presence and use of the LAA by wildlife resources is driven by the presence and distribution of habitats." The assessment of the potential cumulative effects of the Project on wildlife resources was conducted on the same basis (See EIS, Section 4.6.5): "The Project is likely to result in a significant adverse effect in the alteration and fragmentation of habitat for some key indicators (see Section 14.5). Consequently, the cumulative effect of the Project on habitat for those species is also significant. The anticipated residual effects of habitat alteration and fragmentation to wildlife resources from all other future projects and activities combined are also

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			considered significant, even if the Project is not constructed. This occurs because effects associated with other projects and activities that involve road construction, forestry, land clearing, etc. are not fully mitigable, and the future loss of suitable habitats for species at risk is expected to further elevate provincial or federal listings." The ecosystem-based assessment of the potential effects on wildlife resources was in fact taken into account in the assessment of the potential effects of the Project on Current Use of Land Resources for Traditional Purposes (Section 19.4.4): "The assessment of changes in availability of targeted species draws on the relevant effects assessment in Section 2 Volume 14 Wildlife Resources and it follows Section 2 Volume 14 in treating construction and operation phases together."
pub_0478-013	Peace Valley Landowners Associations	**10. Cumulative effects - Significance** *EIS deficiencies:* Concluding statements in the EIS on the Project's cumulative effects on wildlife and habitat suggest that residual cumulative impacts are significant, regardless of whether or not Site C is constructed. In the absence of past reference conditions (as discussed above), trend information and management thresholds or triggers, there is no quantitative basis for making these judgments. This same concern applies to a number of socio-economic VCs as well. The suggestions above to adjust the temporal boundaries of the cumulative effects assessment to provide an extended series of data points over time using the best available information would partially address this serious deficiency.	Please see the response to pub_0478-011.
pub_0478-014	Peace Valley Landowners Associations	**11. Cumulative effects management** *EIS deficiencies:* The EIS suggests (vol. 2, s.14.6.3) that regional wildlife populations are already unacceptably impacted due to the intensity of human activity and development. At the same time, it states: *"It should be noted that BC Hydro is not the lone organization contributing to the decline in wildlife resources, as many of the other projects or industries mentioned above also contribute to the overall decline. Recovery efforts could be undertaken at the regional level collaboratively with other projects. BC Hydro has limited authority to guide regional initiatives to support the diversity and persistence of wildlife resources.*	Resilience of a particular valued component and the extent to which it has already been adversely affected by human activities is considered during the characterization of the residual effects using the criterion "context", as defined in Table 8.3 of the EIS Guidelines. In determining the threshold for significance, for each valued component, each of the nine criteria used to objectively characterize the residuals effects were considered. As required, thresholds were determined for each valued component and are described in the Volume 2 Section 12-15, Volume 3 Sections 16-27 and Volume 4 Section 28-33) of the EIS. BC Hydro cannot comment on the role or responsibility of the provincial government regarding the management of potential cumulative effects. In Section 35 of the EIS, BC Hydro sets out its proposed environmental management framework. That

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		This would be better guided by the provincial government." (vol. 2, s. 14.6.3) The same can be and is stated about other landscape level and regional cumulative effects on other VCs. As we have discussed above, the narrow scoping of current baseline conditions suppresses full consideration of the cumulative effects of the pace and scale of development in the Peace River Valley. The role, preparedness and capacity of the provincial government to effectively manage cumulative effects associated with the Project is not addressed in the EIS and yet it is the provincial government that the EIS relies on heavily for the management of such effects. The recent report from the British Columbia Auditor General assessing the key tools of the provincial to manage cumulative effects on biodiversity indicate that the government is seriously challenged and under-performing according to the audit of biodiversity26. There is no discussion in the EIS of what management tools the provincial government could apply, including attention to the establishment of thresholds and triggers for management actions when cumulative effects approach or exceed a threshold or a condition for the sustainability of a VC. The EIS identifies various compensation arrangements and programs in a suite of mitigation measures, but they are poorly defined and explained. No attention is given to the types of legacy funds like the Columbia Basin Trust created in 1995 to support efforts by the people of the Basin to create social, economic and environmental well-being in the Canadian portion of the Columbia River Basin - the region most affected by the Columbia River Treaty. For over fifty years the people and communities of the Peace River Valley have lived with the cumulative effects of two major hydro-electric projects that significantly altered and continues affect their way of life. Compensation and legacy programs as they relate to the management of cumulative effects should be fully addressed in the EIS.	framework encompasses an environmental oversight program and a framework of environmental and safety management plans, which would be developed by BC Hydro prior to beginning construction activities. BC Hydro's roles and responsibilities under the environmental oversight program are specified in Section 35.1 of the EIS. Under that program, the environmental obligations of contractors would be included in contract documents. The objectives of the environmental management framework are to ensure that: • necessary mitigation measures are implemented • the conditions in an environmental assessment certificate and in a decision statement are met • any conditions of permits and authorizations are met • any other legal requirements are adhered to • BC Hydro policies are complied with; and • monitoring and reporting requirements are fulfilled In Section 40.16 of the EIS, BC Hydro has proposed that certain conditions be imposed in a decision statement issued under CEAA 2012 and in an environmental assessment certificate issued under BCEAA. Section 6 of CEAA 2012 and Section 8 of BCEAA each prohibit BC Hydro from taking particular steps with respect to the Project except in accordance with the conditions in a decision statement and in an environmental assessment certificate, respectively. Under sections 89 - 102 of CEAA 2012 and under sections 33 - 47 of BCEAA, compliance with conditions in a decision statement and an environmental assessment certificate, respectively, can be enforced. Please also see the following Technical Memos: - Cumulative Effects Assessment - Environmental Management Plans
pub_0479-001	Boon, Arlene and Peace Valley Landowner Association	Name of Party Providing Comment(s): Peace Valley Landowners Association. Comment 1: Re: Volume 2, Section 11.3.2, Page 55, Lines 23-36 and Volume 2, Section 11.3.2.1, Page 56, Lines 3-16: Please provide a template of the Staturory Right of Way document to be registered on title of private land.	BC Hydro is not currently acquiring statutory rights-of-way for the Site C Project. The form of the statutory right-of-way for the land within the reservoir impact lines for the Project is under development.

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pub_0479-002	Boon, Arlene and Peace Valley Landowner Association	Name of Party Providing Comment(s): Peace Valley Comment 2: Volume 2, Section 11.3.2, Page 55, Lines 30-31. Please fully explain the basis upon which BC Hydro arrives at the "compensation" to landowners to acquire a permanent statutory right of way. Please address how BC Hydro will address the issue of foregone opportunities.	Please see the following Technical Memos: - Private Property – Project Requirements and Tenure - Agriculture (section entitled Estimated Future Agricultural Operations and Economic Activity, Without the Project)
pub_0479-003	Boon, Arlene and Peace Valley Landowners Association	Name of Party Providing the Comment: Arlene Boon Comments 1 and 2: Volume 1, Section 4.3.3.2.1, Page 21, Lines 3-17; Volume 1, Section 4, fig 04-27, Page 36; Volume 2, Section 11.3.2., Page 55, Lines 30-31. According to Transport Canada's submission Comment #146, in November 9, 2011 T8FN's were in discussions with Transport Canada and BC Hydro with regards to using this corridor instead of the line through the Peace Moberly Tract. This alternative 1 - North Transmission Corridor was not discussed with any of the landowners and was never presented in any of the consultation documents. 1. Why is this alternative corridor part of the EIS if it is not being considered? 2. What will the determining factor be in considering this corridor as feasible?	The reasons for BC Hydro's conclusion that this option is not feasible are described in EIS Section 4.3.3.2.1.
pub_0479-004	Boon, Arlene	Name of Party Providing the Comment: Arlene Boon Comments 3 and 4: Executive Summary, Page 8; Business Case Summary, Page 26, Table 4.3 1. Please explain why the Adjusted Unit Energy Cost For Cite C Portfolio in the Executive Summary is not the same value as the UEC in the Bussiness Case Summary? 2. Please explain why the Unit Energy Cost in the Executive Summary is in F2013 dollars and the Bussiness Case Summaryis in F2011 dollars?	All UEC figures provided in the EIS are consistent and based on the same Project cost estimate. There are two broad categories of UECs in the EIS. The first category is UECs at the point of interconnection (POI). For the Project this UEC is $95/MWh as provided in Volume 1 Appendix F Part 1 (Project Cost Estimate) on page 5. The UEC for the Project of $95/MWh is not “up from the earlier $87/mWh)”. As noted on page 4 of Volume 1 Appendix F Part 1, the $87/MWh figure is based on the same costs as the $95/MWh figure with a discount rate of 5.5% rather than 6.0%. The second category is UECs adjusted for cost of delivery to the lower mainland. For Site C this UEC is $110/MWh as provided in Section 5.4.4.3 (Financial Attributes) Table 5.42 on page 5-68. As noted in footnote (2) to Table 3 in Volume 1 Appendix F Part 1, the difference between the $110/MWh UEC and the $95/MWh UEC is the inclusion of system transmission costs, line losses, escalation to F$2013 and the exclusion of sunk costs. For additional information please see the Technical Memo on Project Costs.

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pub_0479-005	Boon, Arlene	Name of Party Providing the Comment: Arlene Boon Comment 5: Business Case Summary, Page 26, Line 4.3 1. Please explain why the calculation is performed for the 70-year planning life of the project when BC Hydro expects the project to operate for over 100 years and decommissioning must be included in the calculations.	As described in Volume 1 Appendix F Part 1 (Project Cost Estimate), the term of the analysis used to prepare the Unit Energy Cost for the Project is 70-years, equivalent to the financial planning life of the Project. This is the time period over which the majority of the depreciable equipment in the Project would be replaced through investments in sustaining capital. BC Hydro has no plans to decommission the dam. Please see the response to Pub_0254-001 with respect to decommissioning.
pub_0482-001	Thomas, Hugh	I wish to express my opposition to the Site C proposal. This project would be an enormous cost to publicly-owned BC Hydro. It would involve the loss of agricultural land. The power is mainly needed for questionable projects such as Liquid Natural Gas plants. Site C means huge costs for the Province of BC, and no real benefits.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. The matters raised are described in the following sections of the EIS: - Section 5 (Need for , Purpose of and Alternative to the Project) - Section 20 (Agriculture) - Section 7 (Project Benefits) The Project capital cost estimate is $7.9 billion, as described in Volume 1 Appendix F Part 1 (Project Cost Estimate). Please also see the following Technical Memos: - Agriculture - Project Need - Project Costs
pub_0484-001	Polden, Rodney	It seems very evident from wide-ranging sources of information that the Site C dam will not be of benefit to British Columbians and other citizens of Canada. To the contrary, the likelihood is that this mega-project would prove itself to be an unnecessary, wasteful and damaging mistake, causing far greater harm to area residents, farmers, First Nations, wildlife and the environment than any supposed	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The needs of the Project are described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address

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		profit that will be derived by industry. It is time that the true costs of projects such as this are realistically assessed and taken into account, instead of the present process of unrealistic and skewed evaluations based upon a system of environmental assessment whose only apparent purpose is to rubber-stamp approval by limiting the scope of what is studied so drastically that the proponents always achieve a positive response. We know that this process is a sham, when environmental assessments are so constrained and do not cover the real consequences of such projects. It is absurd that the future of BC's people, economy and environment should be permitted to be hijacked in this way, for the financial benefit of a very small number of players. The Canadian Environmental Assessment Agency needs to show itself capable of actually doing the job that is implicit in its name, and under circumstances such as those presently pertaining to the Site C dam, there needs to be a clear and unequivocal refusal to approve the project. From the conversations I have had with many friends and other ordinary British Columbians, I know that there is wide-spread rejection of the rationale put forward to justify this project. We demand a better, more thoughtful and conscientious decision-making process when such enormous future consequences for the region, the province and the nation are at stake. This is one decision that the CEAA needs to make with clarity and conviction. Please stand up for the real values that matter, not short-term financial enrichment for the few. Canadians, BC'ers, First Nations people and the wildlife and environment of the whole region will benefit from a far-sighted and principled decision to not approve this harmful project.	future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. Please also see the Technical Memo on Project Need.

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pub_0486-001	Pittman, Andrea	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. I'm sure you're aware of the opposition to the dam and the reasons why. I would assume that's your job. I want to send this message to you because I want these proposed energy projects to stop. The Enbridge Northern Gateway Pipeline project, and this one for example. Exporting dirty energy IS NOT THE WAY OF THE FUTURE, despite what Harper thinks. BC is full of amazing sites and culture, and everyday it's being threatened by these initiatives. When will our land and our voices be enough. If BC could live sustainably and green, it would set a tone for the rest of the country, and North America. We need to start developing smarter, and fund finding alternative ways of energy production. Please be apart of this green movement, and keep the respect for our lands strong.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. Section 5 of the EIS also describes Alternatives to the Project. Please also see the following Technical Memos: - Project Need - Alternatives to the Project
pub_0487-001	Vogelzang, Bart	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. The Peace River valley is a significant historical, cultural and natural feature in northern B.C. This significance is recognized by the B.C. government's designation of the Peace as a Heritage River. The river is heavily used by local residents for boating, swimming, rafting and fishing. The Peace River has significant cultural and historic values associated with First Nations settlement. One need only look at the disastrous effects of mega dams placed on other rivers to know that we really need to stop. Worse, the reason for the dam isn't even dire need by people, but a greedy pitch by the oil and gas industry to use public money to power their own profits, all the while creating even more greenhouse gasses with their processing and with the resulting use by the final consumer. Environmental assessment needs to be much further than the immediate location, and include the world we all must share.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The needs of the Project are described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. Please also see the Technical Memo on Project Need. The matters raised are described in the following sections of the EIS: - Section 15 (Greenhouse Gases) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 25 (Outdoor Recreation and Tourism) - Section 32 (Heritage Resources) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements)

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pub_0488-001	Knight, Hilary	You will be inundated with carefully reasoned arguments against this lunatic proposal, so I will simply quote Jonathan Swift: "Man is not the rational animal, merely the animal capable of rationality." Can you please use our big brains and realize once and for all that the economy is a wholly owned subsidiary of the environment? This dam is in nobody's long-term interests.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0493-001	Manley, Joanne	Once again, I must tell you I am opposed to the Site C Dam. The Peace River should be left as it is, because we don't need more energy for export or for domestic use. Profit is not everything. I want the B.C. Government to say NO, once and for all, to the idea that Site C is a good thing. I am not a scientist, but I am a good citizen and I care about the Peace River Valley and everything in it. The idea that no harm would be done should the dam be built is nonsense. The truth is that irreparable damage to all living things in the valley and surrounding area would result. Please do what is right. Do not accept Site C.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0494-001	Huntley, David	It was about 3 or 4 decades ago I attended a public hearing in Vancouver into the proposed site C dam on the Peace River. I made two presentations, one on behalf of my canoe club and one of my own. Both expressed opposition and reasons for it. With the resurrection of the proposal I have been waiting for announcement of another public hearing. To the best of my knowledge none is planned. This is a disgrace. The previous public hearings led to the proposal being rejected. Surely new public hearings should be required if the subject is to be revisited. If they are not I protest. The result will be that if a positive recommendation is made it will appear to be illegitimate.	Thank you for providing your input during the Public Comment Period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for Site C is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada “Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project” (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0498-001	Pettit, Donald	Thank you for this opportunity to comment on the EIS submitted by B.C. Hydro regarding the proposed Site C dam on the Peace River. As a long-time resident of northeast BC, I know first hand the value of this magnificent river valley am sure you have heard many of these values before: the Peace River valley is a significant historical, cultural and natural feature in northern B.C. and is recognized by the B.C. government's designation of the Peace as a Heritage River. The Peace River also has significant cultural and historic values associated with First Nations settlement. This dam will have an immense physical footprint for the amount of power it will produce. More flooded vegetation will create yet more mercury poisoning downstream for decades to come. Far downstream, in the extremely ecologically valuable Peace Athatbasca Delta, impacts from Site C will compound those already being felt there from the two previous dams. These impacts are clearly there, but poorly studied and not well understood. They should be, before considering the addition of yet more damage to one of North America's most important wetlands. For the long-term sustainability of the northeast region, we must also consider the food production value of this unique river valley ecosystem. For these reasons and many more, this power cannot rationally be called "clean energy." Using this term seems like an insult to anyone who lives here and understands the immense and irreparable damage that this dam will create, for power we do not actually need, for jobs we do not need, and at mmense cost to taxpayers. It seems, once again, that profits from this project will be uploaded to the corporate elite, and the costs, problems and impacts will be downloaded onto the land, its wildlife and the tens of thousands of common people who live here and love this beautiful Peace Rive country. For the sake of all this is truly valuable and sacred in this life, Site C should never be built.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The matters raised are described in the following sections of the EIS: - Section 32 (Heritage Resources) - Section 11.9 (Methylmercury) - Section 13 (Vegetation and Ecological Resources) - Section 20 (Agriculture) Please also see the following Technical Memos: - Methylmercury - Peace Athabasca Delta - Agriculture While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. Please also see response to form_0004-013

IR #	Name/ Organization	Information Request/Comment	Response
pub_0499-001	Broomfield, Peter	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. I think the dam should go ahead as per BC Hydro planning.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0506-001	North Peace Airport Society	The North Peace Airport Society is concerned that BC Hydro believes that increased use of the Regional Airport in Fort St. John will generate additional fees that will offset the costs of any improvements or services increases required. Attached to this letter is a document outlining “Comments, Concerns and Questions” for the Comment Period on Environmental Impact Statement. The North Peace Airport Society looks forward to continuing this dialogue about its concerns.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the responses to pub_0506-002 to pub_0506-016.
pub_0506-002	North Peace Airport Society	**Comments** 1. The North Peace Regional Airport should be treated like other Regional and Municipal authorities when mitigating infrastructure issues and that the long view of impacts in the future should be reflected in the mitigation plan. 2. The North Peace Airport Society will not expenditure Airport Improvement Fees (AIF) generated during the Site C Project to offset the costs of any improvements or services required during the projected time period. AIE is intended to cover long-term planned capital costs not to augment any stressors to the infrastructure as a result of the Site C project. 3. The Fort St John Airport wants to ensure that it is able to meet the increased passenger, freight, demands of industry and community stakeholders. > To meet these demands the society will need to > Procure additional airside surfaces and non-airside lands > Ensure equipment capital investments to maintain airport infrastructure Runway resurface and rehabilitation > Build airside services building to accommodate equipment and office space > Improve existing terminal building facilities > Improve groundside access and terminal parking Upgrade water and sewer systems	BC Hydro and its workforce would use the air services available at the North Peace Regional Airport in the same manner as other industry and community stakeholders, and would pay fees similar to other users as prescribed. Project demand is anticipated to be made up of primarily passenger air services. As described In Section 31.1.3 of the EIS, airport management has indicated that the airport would be able to support the expected incremental user demand from the Project, that added demand would be met by commercial or charter airlines adding flight capacity (e.g., increasing size or frequency of flights), and that airport management wants increased passenger use of the airport (North Peace Regional airport, Managing Director 2012, pers. comm.). Airport improvement fees are a user-pay system, so any Project-related use of the airport would include payment of these fees to support the airport’s operations and capital investment plans (Fisher 2012). Commercial carriers and charter carriers would continue to co-ordinate the timing of arrivals and departures to minimize congestion within the airport facility and on the tarmac, including any additional flights over current schedules. Through these mechanisms, the existing airline, market, and infrastructure could respond to the increased demand" (EIS Section 31.1.3).

IR #	Name/ Organization	Information Request/Comment	Response
pub_0506-003	North Peace Airport Society	**Concerns** 1. That BC Hydro will not utilize flight systems to move employees in and out of the region therefore not generating the Airport Improvement Fees (AIE) that is source funding for capital projects at the North Peace Airport (YXJ)	Please see the response to pub_0506-002. Assumptions regarding the use of the airport by Project workers are described in Volume 4 Appendix B Section 2.1.3, page 14.
pub_0506-004	North Peace Airport Society	2. That there will be increased poor visibility due to increased fog as a result of the Site "C" Dam at the North Peace Airport.	Section 26.4.10, Navigation, describes potential effects of fog on aviation operations at the airport. The Project is not expected to have an adverse effect on aviation visibility due to changes in fog at the North Peace Regional Airport. Visibility was examined to determine the potential for change at the North Peace Regional Airport as a result of the Site C reservoir. These results are shown in Volume 2 Appendix K, Table 11.10.9. The number of poor visibility hours (less than 1 kilometre) was predicted to increase by seven hours per year over the current conditions of 1,567 hours per year. However, the occurrence of fog and atmospheric visibility are both determined by the base quantities of temperature and moisture, for which statistically significant changes were limited to within 1 km of the reservoir. The airport is approximately 12 km from the Site C dam site and reservoir.
pub_0506-005	North Peace Airport Society	3. Competition issues for services and products will increase demand that may also lead to an escalation of costs for services in the region. A specific competition concern is that of multiple paving projects scheduled at the same time as there is only one paving company in the region.	In reviewing the airport's plan for works, BC Hydro does not anticipate that the road construction work will affect the local markets for paving suppliers or aggregate supply. Further information on the proposed road and highway construction activities and schedules can be found in Section 4.4.2 of the EIS. Section 4.3.7.1 of the EIS describes the proposed local road works required to support access to the dam site, proposed to be upgraded during construction Year 1, which is forecast to be May to October 2015 (EIS, Volume 1, Figure 4.43). No further major road works within the Fort St John area are anticipated during the construction period for Site C. With respect to Highway 29 realignments, BC Hydro anticipates that the supply of paving materials will be required seasonally between 2017 and 2021, that a number of aggregate sources within the inundation area of the reservoir will be used, and that asphalt surface would be produced by a temporary asphalt plant set up at one of the aggregate source locations (EIS Section 4.4.6 and Figure 4.42). The Project tendering process would likely attract paving suppliers from both inside and outside of the region. The successful suppliers would be restricted to use aggregate sources for Highway 29 as specified by BC Hydro.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0506-006	North Peace Airport Society	4. The establishment of a contingency fund is required by the effected communities to be accessed when stressors to their infrastructure; roads, runways, water and sewer systems are identified as a result of the Site C project.	Please see the response to pub_0506-002. Project related users of the airport will pay airport improvement fees consistent with other industry and community users of the airport.
pub_0506-007	North Peace Airport Society	5. The pre and post monitoring time line is not long enough to effectively monitor effects; monitoring from the pre-construction stage until at least 10 years after operations would track the actual long term effects of microclimate issues; fog and frost.	Please see the response to pub_0506-004. Due to uncertainty, BC Hydro has proposed to monitor fog conditions at the Taylor Bridge and approaches prior to and during the operations phase for a period that would enable a determination to be made on whether the Project has resulted in an increase to fog conditions (EIS Section 31.4.4.3, page 31-33 and 31-34, lines 35-45 and lines 1-9). Because of the high level of confidence of the model results for fog at the Airport, monitoring is not required. The model is described in Section 11.10 Microclimate, and in Volume 2, Appendix K, Microclimate Technical Data Report.
pub_0506-008	North Peace Airport Society	6. The Air Quality Management Plan should be inclusive of a Dust Control Management Plan and Blasting Management Plan, to minimize fugitive dust from vehicle activity and heavy equipment movement, and reduce total particulate matter emissions.	The Air Quality Management plan will include a "Reduction and control of emissions and dust from operating vehicles and equipment" (EIS Section 35.2.2.2). The Blasting Management Plan includes an objective of reducing dust, as described in EIS Section 35.2.2.3.
pub_0506-009	North Peace Airport Society	7. There has not been any preplanning negotiation with the North Peace Airport to upgrade or replace any infrastructure.	Please see the response to pub_0506-002
pub_0506-010	North Peace Airport Society	8. Promises or commitments made in the EIS should also be documented in separate legal agreements with the North Peace Airport Society.	A complete list of proposed mitigation and follow-up programs for the VCs is provided in Section 39 (Complete List of Mitigation and Follow-up Measures) of the EIS, and are also described in each VC section for the construction and operations phases of the Project, where proposed. Under sections 89 - 102 of CEAA 2012 and under sections 33 - 47 of BCEAA, compliance with conditions in a decision statement and an environmental assessment certificate, respectively, can be enforced.
pub_0506-011	North Peace Airport Society	**Questions:** 1. Will the North Peace Airport be included in mitigation fund to be established?	BC Hydro has not proposed a general mitigation fund. Mitigation in the EIS has been proposed where adverse effects have been identified. Please see the response to pub_0506-002

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pub_0506-012	North Peace Airport Society	2. Will flights chartered by BC Hydro coming in to YXJ for this project go through the North Peace Airport Terminal?	Please see the response to pub_0506-002 The use of chartered flights for the Project would be determined by individual contractor decisions, any use of chartered flights would be undertaken consistent with allowable use of the airport.
pub_0506-013	North Peace Airport Society	3. Would predicted changes due to global climate change be the same or greater with the existence of the reservoir as opposed to the river?	The assessment of greenhouse gases (Section 15 of the EIS) includes a comparison of the Project to alternative energy options, and demonstrates that the Project would produce among the lowest emissions per unit of energy produced, taking into account the net emissions associated with the change from a river to a reservoir. Therefore, construction of the Project would result in less long term impact to global warming than would competing forms of firm electricity generation.
pub_0506-014	North Peace Airport Society	4. Will reports from weather stations generated from weather and climate stations be forwarded to the North Peace Airport society and North Peace Airport Services for analysis?	The weather station at the North Peace Regional Airport is run by Environment Canada and the information is publicly available.
pub_0506-015	North Peace Airport Society	5. Will there be any compensation for the increase in costs due to competition for labour and supplies for capital projects at the North Peace Airport Society?	Please see the response to pub_0506-005
pub_0506-016	North Peace Airport Society	6. How will ongoing impacts during and post construction be monitored, for how long and how will ensure that any issues are compensated appropriately	Please see the response to pub_0506-002
pub_0508-001	Name withheld, Name withheld	There are many reasons that the Site C Dam should never be built. The most important to me is the loss of thousands of acres of class 1 and 2 soil in the river valley. Of course, flooding valuable land means that it will never be useable for agriculture in the future, when our great grand children will need it to produce their food. The lake (reservoir) will encourage sloughing of the unstable clay banks all along the shoreline, and will make more agricultural land unusable. This means that the micro climate in the Peace River Valley will not be utilized to grow the soft fruits and vegetables that could be produced in the valley if farmers were allowed to develop the land to its full capabilities. This could be the Valley of Eden for Northern B.C. if allowed to produce to its full potential. We have other choices for producing power. Since large dams are now believed to be archaic, why not use the many other sources of power available today instead of	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 20 (Agriculture) - Section 11.2 (Geology, Terrain and Soils) - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 12 (Fish and Fish Habitat) - Section 13 (Vegetation and Ecological Communities - Section 14 (Wildlife Resources) - Section 21 (Forestry) - Section 31 (Transportation) As required by Section 9.2.2 of the EIS Guidelines, “Land Status, Tenure and Project Requirements,” in Section 11.3 of the EIS, BC Hydro describes the construction and operation phase Project

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		flooding valuable farm land? Why not use the wind, the sun, and underground heat to bring power to homes and industry? These sources are proving to be very environmentally friendly. Why don't we use our vast resources of natural gas for our own power instead of selling it to other countries? This would make common sense to me. Maybe we could even leave some of that gas in the ground for future use! The way BC Hydro is going ahead, purchasing land to use for fill among other things, makes it look as though they are going ahead before the environmental reports have been approved. It makes the people who are trying to point out other means of producing power and are trying to save the Peace River Valley for producing food for future generations, feel that we are not being listened to and that our concerns are of no consequence. It looks like big money will win again and our future farmers will have to move away to find land to produce our food. What a waste of wonderful agricultural land. I wonder if people realize that there will be no more farm land made in the world that is suitable to produce the food that will be needed for the increasing population in the future. Many more people could be starving all over the world if the precious farm land is not preserved. I don't want that on my conscience- do you? Of course there are many more reasons to preserve the beautiful Peace River Valley. Loss of valuable timber producing land will also impact the future generations. Flooding vegetation produces toxic materials in the reservoir which will impact the fish population. These thousands of acres of river valley are home to many species of wild life and it is part of the important Yellowstone to Yukon wildlife corridor as well as the birthing place for moose, deer and other animals. Many bald eagles make their nests in the valley. What will happen to them? Another great concern is the enormous cost of such a mega project. Highways will have to be re-routed, new roads will be needed to transport the tons of fill that is required. Can our present road system stand up to this amount of heavy traffic? This project will make many changes to the landscape as well as the environment, and most will be detrimental to this pristine area. I feel that the taxpayers of B.C. will be paying for many years to reduce this huge debt. In summary, I would like you to consider other sources of producing power and save this and other productive river valleys for agriculture and recreation. There will be no	requirements for land or rights over private and Crown land, and describes the approach that BC Hydro proposes to follow for acquiring private property and rights on private property as well as on Crown land. Please also see the following Technical Memos: - Agriculture - Alternatives to the Project - Movement of Grizzly Bears and Large Carnivores - Private Property - Project Requirements and Tenure

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		turning back once the river is flooded- it is lost forever. Let's not destroy our grandchildren's heritage, let's move on to new solutions that will work for everyone, now and in the future. Let's protect our invaluable ecosystems and the natural beauty of our rivers that it so much a part of what makes B.C. "The Best Place on Earth"!	
pub_0509-001	Stephen, Ian	Please accept my comments regarding the adequacy of BC Hydro's Environmental Impact Statement for the Site C Clean Energy Project (the EIS). Site C would result in loss of some of the best farm land in Northern BC. Figures I have seen with regard to the project indicate loss of 6,469 hectares (15,985.25 acres) of agricultural land, 2,601 ha (6427.21) of which are Class 1 and 2 lands, as well as risks to additional agricultural land surrounding the project. Knowing as we do that growing regions are moving northward with climate change, we would be foolish to surrender Class 1 and 2 lands. The EIS fails to account for future value of this land as agricultural land under future conditions given the likely loss of traditional growing regions further south to drought and other extremes under future climate conditions. It is ironic that the Site C dam would also contribute to climate change through emissions of methane and CO2 due to decomposition of organic matter at the bottom of the reservoir. Brazil's National Institute for Space Research has found that dam methane emissions are responsible for some 4% of the total warming impact of human activities. (see http://www.internationalrivers.org/resources/greenhouse-gas-emissions-from-dams-faq-4064) There would be social and economic costs associated with the boom-and-bust nature of this kind of mega-project development. The EIS takes into account impacts of these kinds that are likely to result from the project, but it does not ask the question of whether this kind of development should be pursued at all. Research on similar projects in the past, such as those looked at by the UBC Centre for Human Settlements study "What We Know About The Socio-economic Impacts of Canadian Megaprojects: An Annotated Bibliography of Post-project Studies" (1993) has found that impacts on local communities significantly out-weigh benefits. It was found that hydroelectric projects "appear to be the most disruptive". In contrast, alternative energy in the form of solar, wind, geothermal and others has been found to have wide-ranging benefits in terms of economics, energy security and employment. See for example http://www.ucsusa.org/clean_energy/our-energy-choices/renewable-energy/public-benefits-of-renewable.html Rather than concentrating jobs on a mega-project, BC should look to stimulate local activity and employment throughout the province by building a diverse energy system. This would eliminate the mega-project	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 20 (Agriculture) - Section 17 (Labour Market) Potential effects of the Project on economic and social resources are described in Volume 3 and 4 of the EIS, respectively. Please also see the following Technical Memos: - Project Need - Alternatives to the Project - Agriculture - Workforce and Population Estimates during Construction

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		boom-and-bust impacts while maximizing the benefits associated with meeting the energy needs of British Columbians. The EIS fails to consider alternative development directions. Dams such as Site C made sense in the early to mid Twentieth Century. They do not make sense today.	
pub_0510-001	Ardill, Renee	I do not believe that the environmental assessment process for the Site C dam is a fair or honest one. The B.C. Liberal government has stacked the deck in favour of this project by passing the clean energy act, which does not allow B.C. Hydro to do anything but build Site C,and by removing the B.C. Utilities Commission from the assessment process. If this were a good or sensible project it would pass without help from the government. The area affected is understated by B.C. Hydro. The reservoir would be 9330ha, but the statutory right of way for the reservior will take another 9964ha. This is not mentioned in any of B.C. Hydro's information releases. The relocation of Hiway 29 would also take additional land. B.C. has a shortage of good agricultural land and I think it is important to conserve good land rather than destroying it. A plan to remove topsoil from affected class 1 and 2 land and put it on higher ground has been mentioned by B.C. Hydro. This is a ridiculous idea which would have a huge carbon footprint. The Peace River Valley as it is can grow just about anything. The financial cost of this project is very high and will very likely be a lot higher than predicted. The announced budget for Site C does not include the road relocation. Other ways of producing power could be built for less money and could be built closer to the major population centres. B.C. Has an abundance of natural gas. Why not use it to produce power? The liberal government calls natural gas dirty fuel and won't allow it to be used to produce power, but if that is true why is it alright to sell it to whomever they can? This seems to be a hypocritical view that does nothing to help global warming. The Peace River Valley hass been under flood reserve for years. The EIS does not consider the economic effect of lost opportunity the flood reserve has caused or the potential the valley would have if the flood reserve were removed. B.C.Hydro tells us that the reservoir would be a boost to recreation and tourism, but I do not believe this. I think the reverse will be true. We have a fair number of lakes in the area but the Peace River offers unique recreational experiences. In closing, I think that the EIS is a biased process that does not give an accurate description of the i mpacts of Site C on the environment or the socio-economic impacts on the area.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for the Project is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). The environmental assessment meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. The role of the BCUC is described in Section 7.2.3 of the EIS. The Project capital cost estimate is $7.9 billion, as described in Volume 1 Appendix F Part 1 (Project Cost Estimate), and includes the cost of highway relocation. The matters raised are described in the following sections of the EIS: - Section 4.3 (Project Description, including the realignment of highways) - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 20 (Agriculture) Please also see the following Technical Memos: - Agriculture - Project Costs - Flood Reserve - Alternatives to the Project While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project.

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pub_0514-001	Name withheld, Name withheld, Kamloops	This farmland will be flooded - 13,000 acres in total, about half of which is scarce Class 1 and 2 farmland. In a time when the effects of global warming are wreaking havoc on traditional food producing land, it doesn't make sense to simply wash this highly productive land down the river. Peace Valley farmland could provide much produce to the populations of northern BC during the growing season, reducing the need to ship it up from the Lower Mainland. Its where we grew up healthy and alive.. stop ruining what God has given us Please.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential for the Project to affect agriculture is described in Section 20 (Agriculture) of the EIS. Please also see the Technical Memo on Agriculture.
pub_0515-001	Name withheld, Name withheld, Nanaimo	Site C is premature in terms of need once the irrational commitment of the government to climate destroying fossil energy production is reversed in June 2013. There is plenty of time to review real energy needs for the people of BC and the alternatives available.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Please also see the following Technical Memos: - Alternatives to the Project - Project Need
pub_0516-001	Name withheld, Name withheld, Oak Bay	I'd rather higher electricity bills than more environmental destruction. We need to use those smart meters to help us consume less, and avoid using energy during peak hours. Spend the money on education and programs to allow British Columbians to do energy efficient upgrades to their homes. Please don't build the Site C project.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matter raised is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0519-001	Peterson, Larry	Having lived in the Peace Valley for most of my life and having been coerced in to selling 1810 acres for the Site C Project in 1977 through the so called "passive land acquisition program" I have endured and spent 37 years opposing this project. The latest studies and environmental assessments I find hurried shallow and inadequate in many areas. We raised up to 2000 tons of commercial potatoes had large market gardens and raised cereals, oil seeds, and forage crops, and operated a 250 head cow calf herd. In previous studies it was noted that the Class 1 Climate rating in the valley was only found in the lower mainland and that if the Site C dam were to be built the climate would be downgraded to a class 2. That valley has the ability to produce vegetable and root crops to support all of northern BC for the next 100 years. Agriculture and climate have not been studied adequately. The other issue is instability of the banks which was dismissed as we will wait and see what happens after the fact. There are many other issues too numerous to mention. Overall my opinion is that a poorly done rush job has been carried out to satisfy minimal requirements to "rubberstamp" a political agenda. N/G power generation could be developed at 1/6 the cost of this unnecessary destruction of one of the most productive river valleys in Canada.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 20 (Agriculture) - Section 11.2 (Geology, Terrain and Soil) - Volume 2 Appendix B, Part 2 (Preliminary Reservoir Impact Lines) Please also see the following Technical Memos: - Agriculture - Reservoir Impact Lines - Alternatives to the Project - Private Property – Project Requirements and Tenure
pub_0525-001	Barrington-Leigh, Chris	I'm an economist at McGill University. I'm writing to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. This EIS cumulative effects assessment does not adequately consider other prominent options for generating the same capacity with smaller impact. British Columbia has massive wind and solar resources. These generation sources can be sited with much more choice and discretion in terms of environmental and other collatoral impacts, and without the concentrated impact of a mega-dam. The technology and market for concentrated solar and of land and offshore wind is such that mega dams ought not to be built any more. Large wind turbines and wind farms are built for 1M$ per MW now. Investing BC Hydro money, or any available resources, in a major investment in wind and solar production can generate similar amounts of power, at lower cost, with few social and environmental side effects, and, importantly, with less concentration in time and space. This concentration in time and space is likely to bend the public's best interests	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matter raised is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Please also see the following Technical Memos: - Alternatives to the Project - Cumulative Effects Assessment - Hydro-Electric Storage and Dispatchable Capacity

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		in favour of narrow interests. In contrast, (1) costs for wind and solar continue to drop beyond their already-favourable levels, unlike those of mega-dams. (2) wind and solar do not destroy the potential for the same in the future, whereas mega dams silt up and change the landscape for good, (3) deployment is distributed, so that global interests and local interests (both environmental and in terms of the need/market for power) can be balanced, and, above all, (4) these local interests in the case of Site-C may include fossil fuel industries. Not only must the EIS analysis of total environmental impact be completely redone to include the new gas development likely aided by the local power supply of Site C, but this is a perfect example of the perversion generated by local, concentrated power, both energetic and political that comes with this sort of project. The EIS must place the impacts of this project in the context of the lifetime of the dam, using reasonable projections about the alternatives. That includes the permanence of new jobs, and the longterm impacts on fossil fuel extraction and GHG emissions. If that is done, the obvious massive untapped resources for clean energy in BC can be tapped, instead of sending massive resources into a temporary and destructive mega-dam and the build-up of new gas extraction.	
pub_0529-001	Langolf, Gudrun	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. A large number of people and many groups have written to tell you about the uniqueness of the Peace Canyon. Its significance goes far beyond the historical values far into the future. Once the valley is flooded, it cannot be undone! I want to echo most of the concerns expressed, particularly the restricted boundaries for the assessment - the area is too limited! The failure to consider actual and cumulative impact is a fatal flaw of the entire assessment. This project is too costly, not only in monetary terms but also in the future of the habitat. Please do not let the project go ahead.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the following Technical Memos: - Cumulative Effects Assessment - Project Costs

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pub_0530-001	Naylor, Matthew	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. The Peace River valley is a significant historical, cultural and natural feature in northern B.C. Indeed, development on the river has allowed British Columbia to benefit from some of the cheapest and greenest electricity in North America. The upper reaches of river have already been developed for hydro power. The WAC Bennett and Peace Canyon hydro-electric dams produce 31 per cent of British Columbia's hydro-electric power. A third dam, called Site C, is now proposed for the Peace River downstream from the confluence with the Moberly River, near the city of Fort St. John. B.C. Hydro is seeking federal and provincial approval to construct Site C and create a third reservoir on the river. In keeping with previous development projects, I strongly urge the approval of the Site C project as a source of renewable, low carbon carbon emission energy for the province. The purpose of the EIS is to assess the significance of the impacts of the Site C dam and determine whether or not they can be mitigated or offset. I am writing to let you know my opinion that the EIS for the Site C dam adequately assesses the significance of potential and cumulative impacts of Site C. While it is clear that there will be some displacement of nominally arable land, much of this land is not under cultivation. Very little of this land is in private hands. Similar projects have been completed in past, and alarmist rumblings about hilltop to hilltop flooding are unfounded. The preparation undertaken by BC Hydro exceeds that completed for any previous project. I am incredibly troubled at the prospect of being forced to import power generated by coal fired or gas fired plants. I would prefer to see a more environmentally responsible tack taken when assessing our future power needs. Indeed, the displacement of other, more carbon intensive power from elsewhere on the export market should not be underestimated. It is for these reasons that I strongly support the approval of the Site C dam.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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pub_0534-001	Boyd, Doug	Tables 30.14 (Student Enrolment) and Tables 30.15 (enrolment projects) do not appear to be utilizing the same data. This may be as a result of utilizing sources that reflect either Headcount or Full Time Equivalent (FTE), which are different due to secondary students not always carrying a full load of courses. Additionally, the projections for SD #60 (Peace River North) are not consistent with the Ministry's data which projects a consistent growth of 2+ percent each year from 2013 to 2017. This is also supported with the births in the district being reported as over 600 per year from 2006 to 2010. As a result, the comment contained in 30.3.8.3 (Outlook for Education) indicating a declining enrolment until 2017 does not reflect the same outcome. As reflected in the report, most in-town and surrounding neighbouring schools are at near, or above, capacity. Projecting a decline rather than steady growth would inaccurately suggest available space to accommodate potential enrolment increases that may occur with a Site C project. In order to recruit, retain and accommodate the potential workforce and their children, we must be able to facilitate their educational needs with the necessary school sites (seats). Due to the time necessary to have a school construction project approved, it is imperative that BC Hydro, Ministry, and the District collaboratively determine, as accurately as possible, enrolment projection and determine facility requirements. The impact statement does not appear to identify potential enrolment increase due to the project nor the impact that such growth may have. At this point the information on education only reports on the findings of what currently is or, at best, what may be happening without the project. We really need to know what is projected relative to the project in order to discuss potential impact!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro has proposed in the EIS to "work with School Districts 59 and 60 to plan for and adjust to anticipated changes in resident population and potential new enrolments by communicating in-community population forecasts" (EIS Section 30.4.2, page 30-47, lines 16-18). In addition, School District 60 has received draft population estimates as well as the final population results provided in the EIS including Volume 4 Appendix A Part 3 Table 6 which specifically identifies total children by age category as part of the Project population forecast. All estimates of enrolment increases due to the Project can also be found in EIS Section 30.4.1.3, page 30-42. Table 30.14 was taken from the Ministry of Education website (2011) and was expressed as headcount. School District 60 data in Table 30.15 data were taken from Appendix A, Figure 16: District Enrolment Projections in the District's Eligible School Sites Proposal, June 2011. The SD 60 report does not provide detail regarding if the projected enrolment provides headcount or Full Time Equivalent. The statement "with declining enrolment until 2017, followed by increased enrolment till 2020" in EIS Section 30.3.8.3, page 30-26, line 26 will be updated to: "with declining enrolment in 2012, followed by increased enrolment until 2020". This updated information has been added to the List of Errata and Updated Information. This update does not change the results of the effects assessment.

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pub_0535-001	Burke Mountain Naturalists (submitted by Elaine Golds)	1. The Site C project should be reviewed and regulated by BCUC: We are opposed to the Site C dam proceeding at this time. First, we believe the project should be under the purview of the BC Utilities Commission. To have exempted this project from review by BCUC means that there is no overall analysis to compare the relative merits of this proposal to others that could also generate electricity in BC for BC residents. Thus, the justification of the need for this project is lacking. This, we feel, makes the Environmental Assessment pre-mature at this point.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The role of the BCUC is described in Sections 1.2 and 7.2.3 of the EIS. The need for and alternatives to the Project are described in Section 5 (Need for, Purpose of and Alternatives to the Project). Please also see the following Technical Memos: - Project Need - Alternatives to the Project
pub_0535-002	Burke Mountain Naturalists (submitted by Elaine Golds)	2. BC Hydro should complete its Integrated Resource Planning process before a decision is made to proceed with Site C: A decision to proceed with Site C should only take place once an overall strategy is developed to assess the future needs for electricity generation in BC and an examination is undertaken of the full range of options to supply this electricity. Given the devastating impacts that global warming is having and will have in the future, this decision also needs to take into account whether or not the development of facilities to support or export fossil fuels such as diluted bitumen and shale gas is sensible and justifiable. In our view, the government of BC should be very cautious about supporting and enabling activities that will lead to the release of greenhouse gases anywhere in the world especially if the origin of these greenhouse gases is from fossil fuels extracted in BC and shipped elsewhere. In 2007, BC Hydro released a report from consultants who showed that, through the introduction of conservation initiatives alone, electricity consumption in 2027 could be no higher than it was in 2007 while still maintaining growth and economic prosperity. Last spring, BC Hydro was apparently spilling water over its dams because there was a surplus supply of electricity while, at the same time, BC Hydro was forced to purchase expensive electricity from private producers and sell it below cost to its customers. If we have insufficient sources to provide BC residents with electricity in the winter months, then the Burrard Thermal plant in Port Moody should be allowed to operate for a few weeks each winter to meet peak demand periods. This could be accomplished by allowing slightly more of BC's electricity to come from non-renewable sources or by curtailing somewhat the amount of electricity produced by private industry year-round from non-renewable sources.	The analysis of the need for and alternatives to the Project are consistent with the EIS Guidelines. There is no requirement to complete the Integrated Resource Plan for the Environmental Assessment. Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area". The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers, including but not limited to oil and gas-driven demand. The alternatives analysis is contained in Sections 5.4 and 5.5 of the EIS, and the resource options and portfolio analysis is consistent with another BC Hydro long-term planning analysis, such as would be included in the IRP. For example, the 2010 Resource Options Report is a fundamental input into both an IRP and the EIS alternatives analysis; refer to Section 5.4.1 of the EIS. Please see the following Technical Memos: – Project Need – Alternatives to the Project Regarding conservation, please see the Technical Memo on Demand-side Management. Regarding Burrard Thermal Generating Station (Burrard), the Canadian Environmental Assessment Agency, other government agencies and indeed any Joint Review Panel must recognize existing legislative parameters. Thus consistent with Section 4.2.1 of the EIS Guidelines, BC Hydro identified those potential resources that are legislatively barred in Section 5.4.2.1 of the EIS, including Burrard. BC Hydro is prohibited from planning to rely on Burrard for energy (sections 3(5), 6(2)(d) and 12 of the B.C. Clean Energy Act) or for capacity after Mica Units 5 and 6, the Interior to Lower Mainland Transmission Reinforcement Project and the third transformer at Meridian are in-service (Authorization for Burrard Thermal Electricity Regulation). Therefore, Burrard is not a viable

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			alternative to the Project.
pub_0535-003	Burke Mountain Naturalists (submitted by Elaine Golds)	3. Full impacts from construction of Site C must be taken into account: It is also important to have a good understanding of the full impacts, including greenhouse gas emissions, that would be associated with the development of the Site C. This should include, for example, the greenhouse gas emissions associated with the manufacturing processes of the materials needed to construct these facilities. If all these emissions are taken into account, how many years would Site C have to be in operation before its electricity production would truly become greenhouse gas-free?	The scope of the greenhouse gas effects assessment is in accordance with the EIS Guidelines and includes emissions associated with construction activities and materials.
pub_0535-004	Burke Mountain Naturalists (submitted by Elaine Golds)	4. Assess cumulative impacts: There is little doubt that industrial development associated with mining and fossil fuel extraction along with more traditional activities such as forestry is changing the face of northeastern BC and is having devastating impacts on fish and wildlife habitat as well as on other environmental values. Any decision to move ahead with Site C must take into account the impacts from all the other development that is occurring in this region or has already been approved. Our members feel that the people of the Peace River have already been asked to sacrifice a good deal of their valley to the construction of the Williston Reservoir and that additional losses of similar habitat should not be allowed downstream.	Please see the Technical Memo on Cumulative Effects Assessment.
pub_0535-005	Burke Mountain Naturalists (submitted by Elaine Golds)	5. Respect the wishes of First Nations and protect their resources: It is our understanding that a number of areas including burial and cultural sites of great significance to First Nations would be flooded by the creation of a new reservoir. Furthermore, the project would restrict access to or destroy traditional hunting grounds and threaten important fish populations such as bull trout. In September, 2010, over 33 First Nations signed a joint declaration stating their opposition to Site C. Their wishes as well as their rights to their traditional territory must be respected.	The effects of Project on burial grounds, culturally important places, hunting and fishing have been considered as part of the assessment described in Volume 3, Section 19 Current Use of Lands and Resources for Traditional Purposes. The result of the assessment was a determination of significance for the potential adverse effects of the Project on Current Use of Lands and Resources for Traditional Purposes. Section 19.7 pertains to BC Hydro's proposals for monitoring and follow-up and Table 19.12 outlines Project Effects and Mitigation Measures. Please see Technical Memo on Aboriginal Consultation.
pub_0535-006	Burke Mountain Naturalists (submitted by Elaine Golds)	6. Loss of agricultural land from the Agricultural Land Reserve is unacceptable: We are opposed to the loss of any more agricultural land in the remarkable Peace River Valley. This valley has a unique microclimate which supports a wide variety of agriculture despite its northern location. It would be foolish and short-sighted to allow the loss of an additional estimated 2800 acres of high-class farm land through flooding of land to create a reservoir. The EA process should determine if land with similar agricultural soils and growing conditions could be obtained and added to the	Please see the response to pub_0457-003.

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		ALR if a new reservoir is constructed.	
pub_0535-007	Burke Mountain Naturalists (submitted by Elaine Golds)	7. Loss of mature and old-growth valley bottom and riparian forests is unacceptable: The forests in the Peace River valley and as well as associated edge habitat areas provide immeasurably valuable habitat for several red- or blue-listed species at risk (Bay-Breasted Warbler, Blackthroated Green Warbler, Canada Warbler, Cape May Warbler, Connecticut Warbler, Olive-sided Flycatcher and Rusty Blackbird). Some of these birds are also listed under SARA. Most of these species undertake extremely long annual migrations and are not found anywhere else in BC except this region of the province. In our view, the potential loss of valuable nesting and rearing habitat for these birds is quite unacceptable. The proponents should be asked to identify areas of similar forested habitat (with old-growth or mature forest characteristics) that could be protected to replace the estimated 37,000 hectares of mature forest that will be lost by flooding of the valley. It is important to avoid impacts on the estimated 30,000 migratory songbirds that will be displaced from this species-rich portion of the Peace Valley.	BC Hydro will work with appropriate regulatory authorities in the development of appropriate mitigation for vegetation and ecological communities and wildlife resources. For clarification: 1) The estimated loss of mature forest was not reported as 37,000 ha (the total reservoir footprint is approximately 10,000 ha and only a portion is mature forest). 2) The EIS did not include an estimate of 30,000 displaced songbirds.
pub_0535-008	Burke Mountain Naturalists (submitted by Elaine Golds)	8. Loss of significant river-associated habitat is also unacceptable: Islands in the Peace River now provide important calving grounds especially for moose but also for other ungulates. The assessment should identify where these calving grounds could be replaced if these areas are lost. Other important facets of the riverine habitat that will be lost through flooding include backchannel areas very important for several species of waterfowl and great blue herons.	The scope of the wildlife resources effects assessment is in accordance with the EIS Guidelines and appropriate information related to ungulates and waterfowl is provided in the EIS.
pub_0535-009	Burke Mountain Naturalists (submitted by Elaine Golds)	9. The reservoir will impede the movement of some animals: Flooding of the river will also significantly alter conditions and prevent the migration of some animals which need to cross the river to access habitat on either side. One of these species is the fisher which was not thought to cross the Peace River until recently. The EA should have a mitigation plan which will provide corridors for these wildlife movements to continue.	The scope of the wildlife resources Effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. Please refer to Sections 14 and 39 for a list of mitigation and follow-up measures for wildlife. Please also see the Technical Memo on Movement of Grizzly Bears and Large Carnivores.

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pub_0535-010	Burke Mountain Naturalists (submitted by Elaine Golds)	10. Loss of wetlands especially Watson Slough: Creation of a new reservoir is estimated to result on the loss of over 675 hectares of wetlands including the remarkable Watson Slough area which presently supports a number of rare plants and provides exceedingly rare habitat for red-listed Yellow Rails and the very rare Nelson's Sparrow. The EA should develop a mitigation plan that will create this habitat elsewhere.	Please see the response to pub_0465-003. BC Hydro has engaged Ducks Unlimited Canada to assist in the development of detailed site-specific mitigation plans.
pub_0535-011	Burke Mountain Naturalists (submitted by Elaine Golds)	11. Unstable river banks: Experience has shown the Williston reservoir has very unstable slopes which continually erode and slide with resulting ongoing loss of private land. The slopes in the proposed new reservoir will be similarly unstable. Studies should be undertaken to determine how these hillsides could be made more stable to prevent the additional loss of valuable farmland and wildlife habitat once the valley bottom is flooded. In summary, our view is that the habitat and other biological losses due to the construction of the Site C dam would be far too high to justify this project moving forward and, furthermore, that the need for the project has not been proven. Given the ongoing opposition of First Nations and local residents, in our view, it only makes sense to abandon this project. Mitigation of its many impacts, in our minds, would be impossible.	Please see the Technical Memo on Reservoir Impact Lines.

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pub_0536-001	Hudson's Hope Historical Society	On behalf of the Hudson's Hope Historical Society, which own and run the Hudson's Hope Museum, we would like to provide the following comments on the Environmental Impact Statement for Site C. These comments were prepared and were compiled on a volunteer basis from members of our Board of Directors as we do not have the capacity to hire professional advice on this subject. Our concerns/comments are as follows: Hudson's Hope Shoreline Protection: Volume 2, Section 11 The Hudson's Hope Museum will be impacted by the shoreline instability, limiting our ability to expand our facilities and perhaps even putting at risk some of the existing structures on our property. The Hudson's Hope Museum would respectfully request to be included in any discussions with respect to the slope instability, and request assistance to be able to move the structures that may be placed at risk due to the reservoir operations. Furthermore, the Hudson's Hope Museum would request to participate in the design of the proposed shoreline protection, as there may be opportunities to link the historical information to the trails in and around the shoreline protection, as well as stairs to access the museum property.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the Technical Memo on Reservoir Impact Lines. BC Hydro will continue its consultations with the municipality of Hudson's Hope and will continue and address issues associated with the slope stability and shoreline protection, including its design. BC Hydro will seek the input of Hudson's Hope Museum.

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pub_0536-002	Hudson's Hope Historical Society	Outdoor Recreation and Tourism: Volume 3, Section 25 We did not see any linkages between the upgrade of Jackfish Road and what impacts it may have on decreasing traffic on Highway 29 to Hudson's Hope. We are concerned that after the Project is complete, there may be decreased incentive to travel through Hudson's Hope, as another route to the Alaska Highway will have been created by the upgrades on Jackfish Road. We also disagree with the statement that tourism would increase due to increased recreational opportunities. These recreational opportunities for outdoor recreation will exist on the reservoir created by Site C, which does not necessarily draw additional tourists from the Fort St. John area to Hudson's Hope (it may only draw them as far as the boat launches). Visitors to the area may choose not to travel through Hudson's Hope, reducing our average visitors to the museum. Additionally, we feel that if there are traffic interruptions on Highway 29, tourists choosing between driving Highway 29 through Hudson's Hope versus driving Highway 97 through to Dawson Creek may opt to choose the route with less traffic interruptions. We request that this statement be re-considered, and additional thought be put towards what could encourage travelers to continue to travel through Hudson's Hope during construction.	Upgrades to Jackfish Lake Road described in Section 4.3.7.2 of the EIS are not expected to decrease use of Highway 29 and associated travel through Hudson's Hope as there is no existing or planned travel option north over the Peace River via the Jackfish Lake Road access. Outdoor Recreation mitigation measures described in Section 25.4.3.1 and Volume 3 Appendix E of the EIS will address potential effects and in some cases will provide benefits to outdoor recreation and tourism use in the vicinity of Hudson's Hope. Specifically, the new boat launches, which will include docks and day use facilities, at Hudson's Hope (in association with the shoreline protection) and at Lynx Creek, would be very close to the town site of Hudson's Hope, and would be the nearest reservoir access point for people from Hudson's Hope, Moberly Lake, and the Chetwynd area. As described in Volume 3 Appendix E, the proposed Lynx Creek boat launch and day use site would be a shorter drive from Chetwynd than the proposed Cache Creek boat launch, and to any potential south bank recreation sites that could be accessed via Jackfish Lake Road. Further, the recreation site proposed in association with the Hudson's Hope would include a dock, which would enable boaters to travel to Hudson's Hope as a boating destination, which at this time would be the only destination with town facilities, restaurants and other attractions. Volume 4 Appendix B Section 3.2.1 of the EIS describes expected traffic interruption on Highway 29 during realignment. Traffic interruptions are expected to be minimal based on Highway 29 Realignment projects being constructed parallel to, and out of the highway right-of-way, generally north of the existing highway location. Through support of the Traffic Management Plan described in 35.2.1.4 traffic interruptions will be limited to occasional requirements to stop traffic to allow exiting heavy vehicles to turn onto the highway.
pub_0536-003	Hudson's Hope Historical Society	Transportation: Volume 4, Section 31 We would like to see a strong commitment to ensuring pedestrian safety around the Canyon Drive intersection with Highway 29. This might include installation of traffic lights, or pedestrian controlled lighted crosswalks. At the Museum property there is a crosswalk that tourists often use to travel between the Visitor Center and the Museum. We would encourage the project team to consider that if there is increased traffic in the Canyon Drive/Highway 29 intersection, there may be less people willing to walk across the road and visit the Museum. We want to ensure that Museum visitors feel safe walking around the Museum property and being able to visit the Visitor Center at the same time.	BC Hydro will develop Traffic Management Plans as described in EIS Section 35.2.1.4 which will address topics such as traffic control measures and public safety measures. Please see Section 3.2 for a more detailed description of the results of the traffic analysis for Highway 29 and the routes which will be used for materials transport through Hudson's Hope. Bulk materials delivery from the Portage Mountain quarry would only use Highway 29 between Canyon Drive and Clarke Avenue.

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pub_0536-004	Hudson's Hope Historical Society	Heritage Resources: Volume 4, Section 32 We were not clear on where the plan is located for housing any artefacts in the Hudson's Hope Museum. We feel strongly that there should be a plan and compensation to house any important cultural, historical, and paleontological artefacts found in the area surrounding Hudson's Hope during construction (including any discovered during the collection of gravel at Portage Mountain) at the Hudson's Hope Museum for our visitors and residents to view on a permanent basis. However, the Hudson's Hope Museum currently has limited storage and viewing areas, and as such additional compensation would be required to ensure that we can display and preserve the artefacts appropriately. Additionally, the Hudson's Hope Historical Society would like to note that Rocky Mountain Portage House (site HaRl-4) will be lost. While there are no physical structures left from this location, the significant historical feature is the original site. In the EIS, there are no specific mitigation measures proposed for site HaRl-4, only potential mitigation measures. The Hudson's Hope Historical society would like to be involved in any further discussions related to mitigation of this important historical site. As well capacity funding should be provided to ensure Hudson Hope Historical Society participation in the proposed Heritage Site Mitigation strategy.	Among potential mitigation measures listed in Section 32.3.3 is compensation-in-kind, which could include funding for public programming or museums, such as increasing or enhancing storage facilities for heritage resources. As described in Sections 32.3.3.1, 32.3.3.2, and 32.3.3.3, BC Hydro will develop detailed mitigation, in consideration of permit requirements including requirements from the Environmental Assessment of the Project. Input will be sought from relevant provincial agencies, Aboriginal groups, museums and local stakeholders, as appropriate for each class of heritage resources. Museums, including the Hudson's Hope museum, will be invited to participate in these discussions.
pub_0537-001	Little (c/o Mackeno Ventures)	*The commentator submitted a letter with comments contained in form_0004-001 to form_0004-022. Additional comments by the commentator are shown below.* In addition there has been no consideration made for the effects of the dam and resulting reservoir on agriculture lands that are above the reservoir. The creation of the two previous reservoirs has changed the potential for agriculture and use of land for agriculture since their creation to the Agricultural areas East of those reservoirs. I have brought this issue up with BC Hydro in their public meetings but they have not included anything on this issue within their documents submitted. This either means that they have taken their project for granted or do not care about the potential and resulting effect on other agriculture land in the area from the proposed Dam and Reservoir	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to form_0004-001 to form_0004-022. Consideration of effects on lands adjacent to or near the reservoir is taken into account in the EIS. Farm mitigation plans will be developed to address site-specific changes that may affect agricultural operations on individual farms, and where changes cannot be determined in advance, a follow-up program is proposed, as described in Section 20.7. It includes monitoring, within a defined area, of potential Project induced changes to wildlife habitat utilisation and effects on farm operations, changes to humidity and effects on crop drying, and changes to groundwater elevations and effects on crop productivity.

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pub_0537-002	Little (c/o Mackeno Ventures), James and Margaret	Lost opportunity. The financial cost for this project is extremely high and will likely go higher with cost over-runs. A very good example of this is a current project being worked on by BC Hydro. A Boat Launch being constructed at Taylor BC has an over run of cost greater than 30% and this project is only 1 million dollars. How can BC Hydro's estimate for the cost of the Dam and associated costs be considered accurate and with their resulting electrical rate for electricity based on those costs? Due to the many negative impacts caused by this project, there will also be a high cost for the proposed 'mitigation' measures. The EIS is inadequate and must address the lost opportunity of not using the money for other sustainable developments without such a large environmental footprint.	As stated in Volume 1 Appendix F Part 1, the Project cost estimate includes "... an appropriate level of contingency to reflect uncertainty in future conditions." As a result, BC Hydro expects Project costs "… to be within the bounds of the current capital cost estimate in ordinary market conditions." BC Hydro's estimate of the cost of mitigation measures is included in the capital cost estimate of $7.9 billion, as described in Volume 1 Appendix F Part 1. Please see the Technical Memo on Project Costs for a description of the Project cost estimate. Section 5 describes the analysis of alternatives to the Project. Section 5.5.4 provides the portfolio evaluation results, and includes a description of environmental and economic development attributes.
pub_0537-003	Little (c/o Mackeno Ventures)	The people in this area are familiar with rivers and reservoirs, and I do not agree with the proponent's assumption that recreation and tourism will benefit, but rather are convinced the opposite is true.	The scope of the outdoor recreation assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. The assessment takes into account changes in recreation opportunities as a result of the change from a river to a reservoir.
pub_0537-004	Little (c/o Mackeno Ventures), James and Margaret	In conclusion BC Hydro suggests in their reports proposed mitigative measures for compensating for lost values to the Peace River Area but these measures do not take ownership to those costs. Future costs for infrastructures, wildlife mitigation, agriculture mitigation etc. has to be included within BC Hydro's cost of the project with budgets going forward to allow for BC Hydro to directly pay for the known and expected costs in the future. A substantial bond or agreement with an estimated value of at least 400 million dollars would be required to pay for these costs going forward on completion of any approved project. These costs have to be borne by BC Hydro and not from the provincial government treasury.	BC Hydro's estimate of the cost of mitigation measures is included in the capital cost estimate of $7.9 billion, as described in Volume 1 Appendix F Part 1. In Section 40.16 of the EIS, BC Hydro has proposed that certain conditions be imposed in a decision statement issued under CEAA 2012 and in an environmental assessment certificate issued under BCEAA. Section 6 of CEAA 2012 and section 8 of BCEAA each prohibit BC Hydro from taking particular steps with respect to the Project except in accordance with the conditions in a decision statement and in an environmental assessment certificate, respectively. Under sections 89 - 102 of CEAA 2012 and under sections 33 - 47 of BCEAA, compliance with conditions in a decision statement and an environmental assessment certificate, respectively, can be enforced.

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pub_0538-001	Name withheld (Cecil Lake #1)	Site C will have significant and irreversible environmental, health, social, economic and heritage effects that will unjustifiably add to the industrial burden hat northeastern BC already bears. How valuable is farmland? The Peace is a region of exceedingly good productivity, capable of growing a broad diversity of crops and home to a rich farming community. Site C, a proposal by BC Hydro to build a third dam on the Peace River will result in the permanent loss of 6,469 hectares (15,985.25 acres) of agricultural land, 2,601 ha (6427.21) of which are Class 1 and 2 lands. In addition to the loss above, an additional 6,290 ha, of which 343 ha are Class 1 and 2 lands would be seriously at risk from flooding, slope instability and high waves. This area of the Peace is prime farm land with capabilities found nowhere else in British Columbia. This unique valley has a micro climate that could provide food security for this region and beyond. BC Hydro has not addressed this in its EIS review. According to Statistics Canada: Canada is losing farm acres every year: "Total farm area in British Columbia decreased 7.9% between 2006 and 2011 to 6.5 million acres. British Columbia had 4.0% of the total farm area in Canada in 2011". Can BC afford to lose this large parcel of prime farm land? This will be the largest parcel of land ever removed from BC Agricultural Land Reserve. The EIS does not adequately acknowledge the potential value of these agriculture acres for future use. The guidelines are based on how the land is being used at the present time. It does not address the cumulative effect of the previous projects and the present activities that remove land from agriculture production. This needs to be addressed because food security and buying local is a high priority. Also British Columbia is seeing a decrease in field vegetable area (stated by Stats Canada); how then can it be justified by destroying these valuable acres in the Peace Valley that has this capability. This area may not be producing to capacity at this time but does that give the right to destroy this priceless land for future generations. The Peace River Valley contains its own micro-climate that provides ideal growing conditions for a diverse array of crops. The EIS does not specifically identify the areas where this unique micro-climate occurs, and so underestimates both the growing and economic potential of those areas as agricultural lands. The EIS must map the climate characteristics of the Peace River Valley to accurately account for the potential productivity of the valley and contribute to a more accurate assessment of the economic and social effects caused	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Both temporary and permanent effects have been taken into account in the assessment of Project effects on agriculture. Volume 3, Appendix D, Section 7.1.2.3, page 65, provides information regarding anticipated changes in provincial food self-reliance in relation to climate change. Please see the Technical Memo on Agriculture.

IR #	Name/ Organization	Information Request/Comment	Response
		by flooding the Valley. Another concern BC Hydro does not address adequately is the problem it has with Invasive Alien Plants (based on Weed Control Records of the Peace River regional District). The Prohibited Noxious Weed problem BC Hydro has with Spotted Knapweed at Peace Canyon Dam has never been taken care of adequately over the last twenty years and this site is getting out of control. The location of Site C is the only known infestation of Diffuse Knapweed in the Peace River Region and must be within Hydro's plant to control and monitor for years after the construction of the dam. The proposal is to move the contaminated soil. The EIS needs to address long term plans to control this Prohibited Noxious Weed. It is hoped that this soil continues to be the responsibility of BC Hydro and not someone else's problem like the properties acquired by BC Hydro for the flood reserve. The EIS has not addressed the effects of Climate Change when another large body of water is created, thus increasing the heat units in the areas of Invasive Alien Plants. There appears to be a lack of weed identification in the EIS Report. Many of the gravel pits in the Peace have invasive weeds such as oxeye daisy, common burdock and scentless chamomile. These plants move via water and some of the areas of concern are within the flood area. The economic impact of these invasive weeds to farmland has not been addressed.	
pub_0540-001	Name withheld (Cecil Lake)	This letter is being submitted as residents to the region and we wish to make the following points. 1. The need for a critical arms-length audit to determine the accuracy of the projected power needs. 2. Cost of all mitigation measures need to be reported and part of the cost of the project	As described in Section 5.2.1.1 of the EIS the 2012 Load Forecast has been prepared in accordance with the BCUC's Resource Planning Guidelines (copy in Volume 1 Appendix D Need for and Alternatives to the Project Supporting Documentation, Part 2), using the same methodological approach for the mid-forecast accepted by the BCUC in long-term resource plan proceedings, including a sector-by-sector analysis of load. The 2012 Load Forecast incorporates the most current third party economic indicators available to be incorporated, including gross domestic product forecasts from the B.C. Ministry of Finance, external economic consultants and customer-by-customer information included in the industrial customer forecast. Please also see the Technical Memo on Project Need. BC Hydro's estimate of the cost of mitigation measures is included in the capital cost estimate of $7.9 billion, as described in Volume 1 Appendix F Part 1.

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pub_0540-002	Name withheld (Cecil Lake)	3. Accurate detail on all loss of land including the statutory Rights of Way and sloughing. These need to be combined as to the total loss of land. 4. Please provide the report on the passive land acquisition and the impacts on the Peace Valley since the policy was put into effect	Please refer to Tables 11.3.1, 11.3.2 and 11.3.3 in Section 11.3 of the EIS for details of the estimated fee simple, permanent statutory rights-of-way and temporary tenure required. BC Hydro owns approximately 2400 hectares of land in the region. Please see the Technical Memo on Private Property– Project Requirements and Tenure.
pub_0540-003	Name withheld (Cecil Lake #2)	5. A study to show the analysis that measures the value of the Valley with no flood reserve and no threat of site c.	Please see the response to pub_0457-003. Please see the Technical Memo on Flood Reserve.
pub_0540-004	Name withheld (Cecil Lake)	6. Impact on the people of the “involuntary displacement” of the residents who will be forced to leave their homes and lose their lands.	BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro’s proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. Please also see the Technical Memo on Private Property – Project Requirements and Tenure.
pub_0540-005	Name withheld (Cecil Lake)	7. Cost to decommission the dam when its useful life is done.	Please see the response to pub_0601-015.
pub_0540-006	Name withheld (Cecil Lake #2)	8. Further independent study on what is considered to be a “beneficially created recreational lake”. The loss of the river far outweighs any proposed, not proven benefits	The scope of the outdoor recreation assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. The assessment takes into account changes in recreation opportunities as a result of the change from a river to a reservoir.
pub_0540-007	Name withheld (Cecil Lake)	9. Lack of study on the accumulated impacts form WAC Bennett and Peace Canyon Dams combined now with the proposed site c.	Please see the Technical Memo on Cumulative Effects Assessment.

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pub_0542-001	Name withheld, Name withheld, FSJ	I feel that not enough research has been conducted in regards to the social impact of the immense change in the environment surrounding the North Peace Community. It is also my opinion that not enough of an effort has been made to reach and inform the younger residents of the North Peace. Fort St. John has the second youngest demographic in BC. This age group is not going to respond as well to postings in the local paper. I'm concerned that the peace hills are not stable enough to support the dam and will cause damage and expensive remediation costs. I wonder if experts in their field have studied the effect of the reservoir on insects. Bees in particular will be affected by such a large loss of land.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Volume 4 Social Resources - Sections 28, 29, 30 and 31) - Section 9.1 (Public Information Distribution and Consultation - Section 11.2 (Geology, Terrain and Soils) - Section 14 (Wildlife Resources)
pub_0543-001	Name withheld (Fort St. John 3)	I feel that the EIS draft is not adequate, failing to include important effects of proposed Site C, I feel it downplays potential negative effect and does not adequately paint the real picture. In particular, I feel BC Hydro underestimates the potential of the loss of 15,000 plus acres of Class I and II Agricultural Land to future food security in this area.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The scope of the effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. Potential effects of the Project on agriculture are described in Section 20 (Agriculture) of the EIS. Please also see the Technical Memo on Agriculture. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project.
pub_0544-001	Name withheld (Taylor)	Emergency Services The construction of this mega project will impact Emergency Services in the Region. I have concerns that BC Hydro does not understand how emergency services work in this province as their description of how fire services are guided is completely inaccurate on page 30-2. The Fire Services Act is not a regulation of the BC Fire Code and the BC Fire Code does not regulate fire departments. The BC Fire Code is about building fire safety throughout the province and the Fire Services Act is the act that deals with fire departments and municipalities requirements with regards to fire inspections. On Page 30-23 the EIS states that Municipalities must maintain emergency plans in compliance with the Provincial Emergency Program (PEP). Municipalities must maintain emergency plans in compliance with the Emergency Program Act, not PEP.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The statement referenced is correct, Under the Fire Services Act municipal governments are required to enforce the act within their boundaries. In addition, the British Columbia Fire Code provides a set of minimum requirements respecting fire safety in existing buildings and within the community at large. Its primary purpose is the promotion of public safety through the application of uniform fire safety standards throughout British Columbia. http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_96144_01#section8 Page 30-24 (not 30-23) refers to emergency plans. BC Hydro has updated the name to “Emergency Management BC” in the List of Errata and Updated Information.

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		The second issue is that PEP no longer exists. PEP was replaced by Emergency Management BC. These two items also create concern that BC Hydro is failing to fully understand emergency management in BC or that they don't care enough about it to get their facts straight. I was pleased to see on Page 30-42 that there was a recognition that the small per-diem paid by the Provincial Government for road rescue is not sufficient to cover the costs associated with the actual provision of these services and that on Page 30-47 BC Hydro committed to provide funding to increase capacity for Road rescue and the increase in service needed due to Site C. I do have concerns about the wording in Table 30.24 regarding providing funding for Fire and Rescue service as it does not specify that it would be for Road Rescue. The 3 Fire Departments in the Area have a mutual aid agreement between them and the EIS has stated that there will be no need for fire protection to be provided to the construction site. I have concerns that the ambiguous wording may allow BC Hydro to try to plan to call on the municipal departments for help in the event of an emergency, and if that is the case then they need to build the capacity in the region ahead of time. The 3 departments provide a high level of service to the residents and visitors to our communities; however having to assist at this project would be a strain on ensuring that we could continue to serve those who pay for our services through taxation.	Proposed mitigation is described in EIS Section 30.4.2 including the proposal to "work with local fire departments to identify incremental demands on emergency rescue services, and provide funding to local governments for accident coverage during Project construction" (page 30-47, lines 1-3). This includes road rescue. As described in EIS Section 30.4.2, BC Hydro will provide firefighting services for Project construction activities and work sites including first aid and medical transport for medical emergencies at the on-site accommodations and work sites" (page 30-46, lines 34-36).
pub_0544-002	Name withheld (Taylor)	There is no mention in the Mitigation about the increased risk to the area residents and visitors, including those at Peace Island Park, in the case of a failure at the Site C Dam. With a new Dam this close to the community, the time available to organize an effective evacuation, should a dam failure occur, is markedly reduced from the current state with Peace Canyon and the WAC Bennett Dam. There is no mention of mitigation or of any requirements for BC Hydro to develop plans and to fund those activities and any early warning system that would be required. Should a breach occur on a long weekend, there may be sever thousand people to evacuate in very short order from Peace Island Park as the water would begin rising within minutes. Although BC Hydro has traditionally claimed that they have no responsibility to plan for the citizens affected if their dams breach; I look at this project as a man-made hazard that benefits a corporation. Therefore I feel that the corporation should be responsible for emergency planning in a zone that may be affected. Many other industries are required to plan for dealing with the affected populations when their processes create hazards. These include the numerous Oil & Gas sector corporations	Please see the Technical Memo on Dam Safety.

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		that operate in the Northeast of BC and BC Hydro should be held to the same standard.	
pub_0544-003	Name withheld (Taylor)	I believe that this project has not considered the ramifications of its development on the emergency services of the region. As someone who has and continues to live in the inundation area for both the existing dams and the proposed dam, I am dismayed that the emergency response has been obfuscated by BC Hydro for many years and want to see the responsibility placed on BC Hydro before they build another Dam on the Peace River. I am also disappointed at their lack of understanding of emergency services and the disservice that does to those who have dedicated their lives to helping others. Many of the emergency responders in the affected areas are volunteers who give of themselves not for a paycheck, but for the betterment of their community. Is it truly fair for BC Hydro to minimize their contribution and value by not striving to be at the leading edge of emergency planning and helping to build capacity for those departments to be able to serve not only their constriction site and dam, but also the families who work for BC Hydro and live in the communities around the peace.	Changes to demand for emergency services due to the Project is presented in EIS Section 30.4.1.2, page 30-42, mitigation for these changes is presented in EIS Section 30.4.2, page 30-46 including: "Work with local fire departments to identify incremental demands on emergency rescue services, and provide funding to local governments for accident coverage during Project construction." Emergency response procedures during Operations will be developed as part of the Emergency Response Plan described in EIS Section 35.3.1.1. Please also see the following Technical Memos: - Dam Safety - Environmental Management Plans

IR #	Name/ Organization	Information Request/Comment	Response
pub_0545-001	Peacock, Adrienne	Thank you for this opportunity to comment. Further to my concerns about the EIS on Site C, I have several questions that have not been answered, including: 1. Where is the plan to replace the valuable habitat that will be lost when old growth forests (structural age 7) are lost to flooding? 2. Where is the plan to replace the calving grounds for moose that will be lost to flooding? These old growth forests provide very important calving 4. Where is the plan to replace the important migration corridor for fishers (Martes pennanti), a red-listed species in BC. The fishers are known to migrate across the river and the Site C reservoir would block this migration corridor, and there does not appear to be any plan to protect this vulnerable species. 5. Where is the plan to replace the habitat provided by the Watson's Slough? This area is located along hwy 29 by Bear Flats and will be lost to flooding, and is a particularly valuable habitat, with a number of rare plants and animals, including the yellow rail. The yellow rail (Coturnicops noveboracensis) is a red-listed species, a very rare species in BC and the focus of ornithologists from around the province and beyond. Where is the plan to save the rare plants found here and replace the habitat that the yellow rail occupies? 6. I find this EIS glosses over the many negative impacts, as if they are not important. The orientation of the Peace Valley is east-west - I believe the only one going through the Rockies. That orientation is very important and partly explains the unique micro-climate in the valley but there seems to be no consideration of the provincial extent of the loss of this unique geography. Also, I see no indication the EIS has considered that the Peace Valley, left extant, might be something of a haven for a lot of creatures as they seek to adapt to climate change. In fact, I could find no indication that the effects of climate change are addressed in the EIS other than the authors feel it will increase the amount of precipitation in the Peace watershed.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: -Section 13 (Vegetation and Ecological Communities) -Section 14 (Wildlife) Please also see responses to the following IRs: -pub_0535-007 -pub_0535-008 -pub_0535-009 -pub_0535-010 Further, please also see Volume 2, Appendix T - Climate Change Summary Report.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0545-002	Peacock, Adrienne	3. Given the enormous instability of the slopes in this part of the Peace River Valley, where is the plan to stabilize these slopes?	As described in EIS Section 31.1.8.3 the existing unstable material above the earthfill dam would be excavated to flatten the slope and prevent deep-seated movements. As described in EIS Volume 2 Appendix B Geology, Terrain Stability, and Soil, Part 2 Preliminary Reservoir Impact Lines, shoreline protection beneath Part of the community of Hudson's Hope would be constructed prior to filling the reservoir. As described in EIS Section 4.3.4.1 reservoir shoreline stability was taken into account in the realignment of segments of Highway 29. Please also see the Technical Memo on Reservoir Impact Lines.
pub_0546-001	Sawchuk, Wayne	I am very concerned about the adequacy of the EIS. In particular, the cumulative effects assessment does not consider the existing impacts of the two dams already on the Peace. Any cumulative effects assessment must fully consider all existing impacts, including the impacts of the existing dams on the amount, timing, and impacts to the flow regime of the Peace River. I am also very concerned about the stability of the ground around the proposed reservoir. Large landslides are common here, and it is inevitable that a major slide will occur. In my opinion, the modeling of potential waves that could be created is inadequate. If a slide like the Bear Flats slide were to occur, the tsunami-like wave that could be created could very well overwhelm the downstream dam. This should be more accurately modeled. The islands of the Peace have great significance as moose calving areas, and are also of historic significance, as sites where paddlewheelers cut wood can still be found. I believe that the costs cited for the building of the Dam are under-rated. This project will end up costing the taxpayer in the long run. We need an independent evaluation as to the NEED for this facility. To sum up, floodiong farmland and destroying an important river valley to produce energy which may or may not be needed is the equivalent of burning our furniture to keep warm- and we aren't even sure it's cold out. Let's not build this dam.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The scope of the effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. The matters raised are described in the following sections of the EIS: - Section 11.2 (Geology, Terrain and Soils) - Section 14 (Wildlife Resources) - Section 32 (Heritage Resources) - Section 5 (Need for, Purpose of and Alternatives to the Project - Section 20 (Agriculture) Please also see the following Technical Memos: - Cumulative Effects Assessment - Project Need - Project Cost - Agriculture

IR #	Name/ Organization	Information Request/Comment	Response
pub_0547-001	Startin, Don	I strongly object to the name of the project.If the dam is built: 1]There will be methane gas given off by the forest residue and silt in the resevoir. 2]There will be vaste amounts of CO2 emitted by the construction machinery and the trucks bringing supplies. 3]In the making of the cement for the concrete,and in the curing of the concrete vaste amounts of greenhouse gases will be emitted. This is a dirty energy project.The title is GREENWASH. I pointed this out in my submission on Hydro's project submission,but my objection was somehow overlooked. I respectfully request that the word ''clean''be omitted from the title.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matter raised is described in Section 15 (Greenhouse Gases) of the EIS.
pub_0548-001	Defehr, Steven	I live in <personal information removed> and I am against the construction of a Site C Dam .	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0550-001	Seegmiller, Ken	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* What has changed since the environmental reviews of the 80s? Once the environment has been impacted it is difficult if not impossible to remediate. To the best of my knowledge the practice of fracking is not proven to be environmentally sound and in fact may have severe impacts to the groundwater table as well as unknown effects on earth stability i.e. does it contribute to earthquakes? Isn't it better to figure that out before we commit to what could prove to be disasterous to the environment with a long term benefit to only international corporations and other countries. Who pays to clean up and remediate? Canadians!!! Why aren't the pipelines that have been around since the fifties being continually upgraded to prevent oil spills. Where is the accountability? I am not opposed to hydro development or even oil extraction, but I do not believe that economics takes precedence over the environment. We all have to live here. Let's ensure we do it right.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. Slope stability is described in Section 11.2 (Geology, Terrain and Soils) of the EIS. Please also see the following Technical Memos: • Reservoir Impact Lines • Seismic Considerations

IR #	Name/ Organization	Information Request/Comment	Response
pub_0557-001	Squires, Gary	I attended a recent public meeting (Dawson Creek, BC) regarding the Environmental assessment of the proposed 'Site C' energy project. Although I found everyone attending (both government officials and BC Hydro personnel) quite polite and accommodating, there were a few pressing issues that no one could give a reasonable response to - this was very surprising & frustrating for me. To think that the "experts" from neither side could answer some basic, fundamental questions regarding the environmental assessment was disturbing to say the least. Let me please express my points; 1. Where is the closest, DOWNSTREAM watershed from the proposed dam? No one could answer this question for me?! Some people had some educated guesses but everyone had to ask everyone else if they knew for sure where it was. No one knew. Not a good sign. If we look at the history of water Dam projects and their impact on the environment, one of the most detrimental effects is on the natural flow cycles (flooding, drought, etc) of the nearest watersheds (especially downstream from the dam). Ms. Linda Jones assured me several times that there are ~22 criteria being evaluated for the overall environmental impact on the water itself, or at least this is what I understood. But when asked about the direct impact on the watershed, no answer could be given. She didn't know. I understand that water temperature, pH levels, sedimentation rate, etc etc are very important factors that have to be measured. HOWEVER, it is absolutely ridiculous to look at such a complex system at such a superficial level. Being a healthcare practitioner myself, I used the analogy of a cardiology patient - If we want to determine the overall condition of that patient's circulatory system, do we test just the blood? NO. We look at the major organs and vessels as well, or in the this case, the major lakes/watersheds/rivers CONNECTED to the water immediately downstream of the dam. The current environmental proposal by BC Hydro is only testing water (downstream from the dam) as far as the Alberta border!?! Does that water flow not continue on to the next province? Is ANY testing being done on the natural flow cycles of the closest watersheds, INCLUDING Alberta (I believe Athabasca/Slave lake would be the closest)? This is pivotal in the assessment. Natural flooding and drought cycles (over a span of several years) is NECESSARY for flushing toxins, increasing biodiversity and normalizing/stabilizing an ever-changing system. Each and every watershed upstream AND downstream, in BOTH provinces is (in my opinion) the most crucial factor to look at....and for some reason it is being forgotten!?! Unfortunately BC Hydro does not have any river flow research PRIOR to	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please note that Section 11.4 Surface Water Regime describes the hydrology and watershed both upstream and downstream of the Project.

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		the construction of the current dams on this river to compare the impact they have already had. Now we want to add another dam, still avoiding this pivotal information. Shame.	
pub_0557-002	Squires, Gary	2. It has not been taken into consideration the impact of OTHER industries on these river/lake systems and how ALL of these new projects (including site C dam) will COLLECTIVELY affect the fresh water/watersheds. Every single industry says that their impact is not that significant on a grand scale BUT no one (should be gov't environmental agencies...) has tried "adding up" the impact of each individual project to see how it will affect the one common thread amongst them, the water systems!?! For example, several industries depend on the Peace River, use it continuously and subsequently pollute and exploit it - natural gas (fracking), oil sands, hydro electricity, refineries, etc etc etc. If each industry keeps increasing usage/dependance on this water system it MUST ULTIMATELY reach a point where it is no longer sustainable. THEN WHAT? I assume each individual industry will say "it wasn't just their fault" and everyone will be pointing fingers at each other. No one is single-handedly responsible, but everyone played a part in the eventual destruction of this IRREPLACEABLE resource. Why must you blind yourselves from this obvious truth, convincing each other that "it's impossible to measure something like this". When there's a will, there's a way....we should have learned that from the oil/gas/hydro companies a long time ago!?!?! Please take serious consideration of my points. They are not many but they also do not lack substance. These are some of the most pivotal arguments/concerns regarding a project such as Site C. To put them on the back burner or to say "it's too hard to measure" is a blatant sign of the irresponsibility of our governments.....and is one of the major reasons the people are not happy. If the results show that the environmental impact should not be significant - Great! It would be hard for the people to object. But to say that "everything is being accounted for" and that the current environmental assessment is "sound & just" is very transparent. Give the citizens the benefit of the doubt. Do a TRUE assessment and you will deserve our respect. Until then, you can continue repeating the history of Canada's environmental destruction.	The assessment of the potential for the Project to result in on environmental, social, economic, heritage and health effects is described in the EIS. The need for the Project is described in Section 5 of the EIS and the potential benefits of the Project are described in Section 7 of the EIS. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. Hydroelectric water use is clean, non-polluting and non-consumptive. No water is removed from the Peace River due to hydroelectric operations — all of the water entering the turbines flows downstream. Please see the Technical Memo on Cumulative Effects Assessment.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0559-001	MacKenzie, Mark	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. We have already dammed the peace River back in the era when massive technological interventions were routinely carried out without regard for the environment. Despite the vast damage that was done to the peace River by the WAC Bennet dam, the remaining river is not expendable. Building this dam will require a gargantuan public expendature and will result in vast damage to the already fragile ecosystem of the area. The benefits of this dam have not been adequately demonstrated. If the hydroelectric potential of the remainder of the Peace River is ever truly urgently needed by British Columbians, as opposed to particular petroleum industry interests, the dam can be built at some point in the future, say twenty or thirty years hence. In the shorter term the expenditure of monies from the public purse and the wastage of the equally tangible capital that is our environment can and should be deferred. It is essential to the interests of the people of this nation that permission to build the site C dam be denied.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The assessment of the potential for the Project to result in on environmental, social, economic, heritage and health effects is described in the EIS. The need for the Project is described in Section 5 of the EIS and the potential benefits of the Project are described in Section 7 of the EIS.
pub_0562-001	Porte, Jessica	I would like to add my voice of concern regarding the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. The EIS fails to holistically assess the potential cumulative impacts of Site C. The land included in the assessment is too small to properly take in to consideration the impact the damn may have on wide ranging species. Most puzzling is that the EIS failed to consider the impact that existing damns had on the river system and reservoirs of the Peace Region. On balance, British Columbians do not need this massive capital expenditure that comes at a huge cost of the destruction of Native land, habitat and agricultural land. Our energy needs can be met in more sustainable ways. British Columbians should not have to fit the financial bill for unsustainable, destructive energy products that citizens and the natural environment will be losers in.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the following Technical Memos: - Project Need - Cumulative Effects Assessment

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pub_0563-001	Jardine, Lindsay	I have many concerns about the Site C dam and its impact on Fort St John. I was born and raised here Fort St John (FSJ) has a strong economy based in oil and gas. We have always been overrun with young men with too much money. It is a transient town with high living expenses, high crime rate and lots of drug problems. We do not need more jobs here. We already have a low unemployment rate. Businesses are always running short handed because they cannot find any staff, let alone qualified staff to hire. We also have a low vacancy rate and high rents. Where would all these workers live while building the dam? With another influx of young labourers and high wages will come more drugs and more crime. Our addictions services are already overloaded with clients. Our shelter is running at capacity all year round. If the workers moved here with their families, they would find the schools and day cares also full. FSJ is not in need of work. Secondly, I am concerned about the loss of the river valley. Once flooded, that valley is gone forever. It is breathtakingly beautiful. It is full of trees and wildlife. It has great farm land. The river banks are also prone to sloughing. These losses would be permanent. The benefits must outweigh such a loss. I am told that new reservoirs are unusable for several years while they settle. I am also told they tend to emit mercury into the atmosphere as once dry land becomes wet. The rest of the world seems to have stopped building large hydro electric dams. So why are we contemplating building one? Why not put our limited resources (financial and natural) into conservation or upgrading the assets we already have? Why put all our resources into a large dam with a life span of only 100 years? Where will the electricity generated go? The provincial government and media claim the electricity will be sold to the USA or go to the Liquid Natural Gas Plant in Kitimat to ship LNG to Asia. Why are destroying our environment for another country's consumption? Who will pay for the building of this dam? BC is already broke. Will my hydro bills go up? Will my income taxes or property taxes go up? The money has to come from somewhere. The converyor belt from the FSJ dirt site to the dam site is 6 km long and will run 24 hours a day, 7 days a week. What an eye sore and noise pollution! How will they combat the dust problem? FSJ is a fairly windy city. How much dirt will be lost to our air? I hear this belt proposal has dropped property values of anyone living near it. No	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro has completed an analysis of the potential impact on population related to the Project, and community and infrastructure services. BC Hydro has proposed mitigation measures to address potential effects, and will continue to work with local governments and agencies to address these concerns. The matters raised are described in the following sections of the EIS: - Section 11.2 (Geology, Terrain and Soils) - Section 11.9 (Methylmercury) - Section 11.11 (Air Quality) - Section 11.12 (Noise and Vibration) - Section 14 (Wildlife Resources) - Section 17 (Labour Market) - Section 20 (Agriculture) - Section 29 (Housing) - Section 30 (Community Infrastructure and Services) Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. Please also see the following Technical Memos: - Agriculture - Project Costs - Workforce and Population Estimates during Construction - Reservoir Impact Lines

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		one wants to see that out their windows. Please keep the Peace River Valley.	
pub_0564-001	Ferguson, Greg	I wanted to inform you that I am not in favour of the construction of the Site C dam and the short and long-term negative impacts that it will have on the environment and social fabric of the Peace River Region and beyond.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0565-001	Blackwell, Lisa	I am writing tonight to say that I believe the Site C Dam is a big mistake and one that we cannot afford to make. There is too much to lose; namely the 3,800 hectares of agricultural land. Also, the unstable river banks of the Peace Valley will continuously slide into the reservoir, causing more and more damage each year. We have the choice to start making better decisions for the future of our planet and it starts by creating more smaller and more environmentally sensitive choices when looking for ways to produce power. Let's just create what we need. BC Hydro is predicted to lose $1 billion over the next four years, partly because the province has signed so many contracts with private power producers that BC Hydro has a surplus of expensive power that they can't use and can only sell at a loss.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11.2 (Geology, Terrain and Soils) - Section 20 (Agriculture) Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. Please also see the following Technical Memos: - Project Need - Alternatives to the Project - Agriculture - Reservoir Impact Lines

IR #	Name/ Organization	Information Request/Comment	Response
pub_0568-001	Peloquin, Danielle	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* The Peace River Valley has been my home for nearly 25 years. I love the beautiful crocus that pop out in the spring on the river banks each year. Often I take a special trip just ot amaze in the beauty of the unique ecosystem of the Peace River Valley. I have walked the grassy slopes and canoed down the river. I often take the long windy drive through to Hudson Hope just to take in the views and stop at a few special sites when travelling south. I've marvelled at the small islands in the centre of the river. So that is cultural significance to me but The EIS well that is a totally different thing all together. Are you serious that you did not include the impacts of the two already existing dams? Have you seen the crappy banks at Dinosaur lake? How can you cause this devastation yet again? I am not willing to see this river blocked up by three dams. In my opinion the short term gains for my region ARE NOT worth the long term environmental impact. Have you considered the consequences of putting in a dam in a region that is already heavily impacted by fracking and oil and gas activities that make it already susceptible to earthquakes. Anyone living in the Peace Region has experienced an earthquake at some point.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 11.2 (Geology, Terrain, and Soils) - Section 37 (Requirements for the Federal Environmental Assessment) Please also see the following Technical Memos: - Seismic Considerations - Cumulative Effects Assessment
pub_0570-001	London, Clara	The EIS fails to meet the requirements of the CEAA 2012, as it does not enable the public to meaningfully participate in the EA in the following ways: (1) There is no cross-reference Table included along with the Proponents "Table Response to Comments Dated June 26, 2012." Upon submission, a Document # is assigned to it. When the Proponents respond and puts it in their "Table Response", the submission is then given a Comment ID#. As these numbers are completely different and there is no cross-reference table included it is hard for a person to find the Proponents response to their submission. A person has to search through 635 pages to try to locate their submission. This is time consuming and unfair. As most people do not have the time required to do this, they do not locate the response to see if it is sufficient. Therefore, they cannot meaningfully participate in the EA.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Public participation in the environmental assessment has been conducted in accordance with the EIS Guidelines and appropriate information is described in Section 9 of the EIS. BC Hydro has been consulting in communities since 2007, and has led or participated in more than 500 public consultation meetings, presentations, local government meetings, community events and open houses. Input from these consultations informed the Project planning and design, as well as the proposed mitigation measures.

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pub_0570-002	London, Clara	(2) Within the Proponents "Table Response to Comments Dated June 26, 2012", located on the B.C. EA site, the Proponents Response to One of my submissions Comment ID# 0315 remains "Left Intentionally Blank". It is a requirement by the CEAA 2012 that the Proponent respond to all comments and that the public must have convenient access to the information. This is a non-compliance by the Agency. The response to my submission has been left off of the B.C. EA site for nine months. The Comment ID# 0315 showed up on the Federal Site 6 weeks later than all of the other responses then it disappeared off of the Federal site for 4 months. The public needs to have convenient access and be able to meaningfully participate or the Environmental Assessment in put in jeopardy.	Information submitted as part of the Site C Clean Energy Project's to the BCEAO and the CEA Agency websites is managed by the BCEAO and CEA Agency.
pub_0572-001	Quast, Dawn	We need the clean energy the Site C dam will provide. Please build the dam. Enough of the naysayers.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0573-001	Coste, Torrance	The Site C dam should not be approved, plain and simple. Hydroelectric power has and will be important to BC's low-carbon energy sector - but this project is the wrong one. Mega-dams are controversial worldwide, and for good reason. The loss of land associated with the creation of this reservoir is massive - at least 3,800 hectares. This land is of deep importance to several local First Nations, and is some of the best farmland in the province. Given the appalling treatment of First Nations over the course of our history and the failed efforts to right these injustices by recent governments, and given the fact that national food security will become a bigger problem in the near future, the flooding of this land would be incredibly irresponsible. The dam will cost billions (estimated between 8 and 10) of dollars to construct - at a time when BC Hydro is slated to post massive losses. BC Hydro has been crippled by the astonishing giveaway of public water resources in the early 2000's and the gold rush of environmentally disastrous private power projects have left BC Hydro in terrible shape. Fixing this problem is a far more efficient and equitable solution, and will do more for clean power than Site C - by far. Speaking of clean power - LIQUIFIED NATURAL GAS IS NOT CLEAN ENERGY. Period. End of discussion. That's what the energy generated at Site C will be used for (BC already has a surplus of power for the grid, and fracking - the extremely dangerous	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: -Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 20 (Agriculture) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) The Project capital cost estimate is $7.9 billion, as described in Volume 1 Appendix F Part 1 (Project Cost Estimate). Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. Please also see the following Technical Memos: - Project Cost - Project Need - Agriculture

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		process by which LNG is extracted - requires an unprecedented supply of electricity). To plan our future based solely on the extraction and export of LNG, to the extent that we're considering destroying a critical part of the Peace River Valley just to build a dam to power this future, then we are truly lost. There is no way to meet 2020 carbon targets and still ramp up LNG, and that's that (there is an extensive list of negative impacts and dangers of fracking - water contamination, earthquakes, water removal, etc. - but I'll leave those for another letter). To exploit our LNG is to forsake the global climate and all those who will be impacted by climate change (including us) to a very dire future - and this isn't what BC is about. Without these industry, we just don't need Site C, and given that this dam is vehemently opposed by local farmers, First Nations, and residents, the approval of Site C would be greedy and even undemocratic. This project was approved decades ago, and it still hasn't been approved. There is a reason for that: it wasn't right then, and it's not right now.	- The World Commission on Dams and the International Hydro Power Association's Sustainability Protocol
pub_0574-001	Cullington, Judith	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. Hydro power is 'clean' energy', with low GHG emissions. But it is not clean because of the massive impact this dam would have on the local ecology, culture and other values of this area. BC Hydro should be encouraging local renewable energy sources - such as solar and micro-wind – and continuing to help British Columbians to reduce energy use - and their energy bills - by doing energy retrofits to their homes, using more energy efficient appliances, and finding energy conservation measures. I hope you will deny this application.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The matters raised are described in Section 5 of the EIS, Need for, Purpose of and Alternatives to the Project. Please also see the Technical Memo on Demand-side Management.

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pub_0575-001	Independent Contractors and Businesses Association of BC	I am writing to voice support for the Site C Clean Energy Project on behalf of the Independent Contractors and Businesses Association of B.C. Our provincewide organization is made up of 1,200 construction companies of every size from across the province, and many who do the kind of work involved in this proposed project and in the spinoffs that would come from it. More importantly, we consistently advocate for the entire construction industry and the conditions that will help us build our provincial prosperity. Simply put, the Site C project is necessary for the future prosperity of the province – it would provide relatively affordable energy needed for residents, businesses and industry. The Site C project, the $3.2 billion in provincial GDP, and 10,000 direct jobs that would come from the project will help drive our industry in the region for a long time to come. We have confidence in the provincial and federal environmental assessment processes, and that the effects outlined in BC Hydro's Environmental Impact Statement for the Site C Clean Energy Project will be seriously considered against the benefits of the project. We have reviewed the EIS and it is very thorough; we are happy to see that BC Hydro has gone to great efforts to avoid or mitigate project effects. The Site C project is a building block for our province, and represents an environmentally responsible and sustainable source of electricity that can power our economy for generations. That is why our organization supports it moving ahead.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0577-001	Waldman, Danna	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* Simply put, The Peace River valley is of vital importance not only to the people who make it their homes, but also to the biological and environmental impact of the region. Healthy forests affect weather, temperature, soil retention, and humidity. Forests make oxygen. Forests mitigate violent and unpredictable weather changes. The damage to the river systems will be immediate and catastrophic. Important commercial fishing activities will be destroyed once deep water access for migratory species is eliminated.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative

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		projects will affect the quality of water and increase the presence of excess toxic minerals which can lead to neuro-muscular disease and cancers. There will also be massive releases of atmospheric carbon, adding to the dead zone already surrounding the the Tar Sands project. BC already has an excess of carbon output. financing of this project will use funds much better employed in the research and development of renewable energy sources such as wind and solar. More nations are moving science and investment towards expanding non-petroleum sourced energy. It's way past time to abandon climate-killing old- school, cheap and dirty, politically expedient, and inefficient technologies, in favour of those which will make more clean power, with less global harm. The EIS for the Site C dam must assess the significance of potential and cumulative impacts of Site C in terms of not only its effects on the people and animal life/diversity, but also the damage it will do to the climate, air quality, weather patterns, and geology,	effects of the Project in combination with other projects or activities that have been or will be carried out. The approach was applied and is described in more detail in Section 10 of the EIS. As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is described in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11. 1 (Previous Development) - Section 15 (GHG) Please also see the following Technical Memos: • Greenhouse Gas Emission Merits of the Project • Project Need
pub_0579-001	Drover, Jill	I am against government going ahead with this project. BC doesn’t need the electricity for domestic consumption. The costly Site C mega-dam will be used to feed the gas fracking which is sweeping north-east BC, power the proposed “LNG” plants that would liquefy the natural gas for export, and fuel tar sands extraction in Alberta. I strongly believe our country and the world needs to be investing in alternative energy. Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. Project alternatives are described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Please also see the following Technical Memos: - Project Need - Project Cost - Alternatives to the Project

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pub_0580-001	Gould, Doug	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. This project is of vital importance to the economic future of British Columbia and should have been built several years ago. If just settlements can be made with landowners in the area to satisfy the loss of their land I fully support the construction of the dam. Clean, cheaper hydro electricity is the future of this province and is worth the trade-offs required to complete the project. Unlike the nutcases at LeadNow... I suport Site C.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matter raised is described in Section 11.3 (Land Status, Tenure and Project Requirements) of the EIS. Please also see the Technical Memo on Private Property – Project Requirements and Tenure.
pub_0583-001	Lencoe, Bryce	It is time we start preserving the environment and stop destroying it. Government needs to stop allowing corporations from destroying our Canadian symbols. This is precious land land animals, first nations, tourism, naturalists, and the environment depend on. Don't sell out our countries precious resource of the environment for unnecessary and dirty energy. Linda Jones! You as the Panel Manager for the Canadian Environmental Assessment Agency need to start doing your job, and start protecting the environment! Shame on you for letting this proposition move forward!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0584-001	Paull, Chris	I would like to add my voice in the plea to not flood the beloved Peace Valley. Highway 29 between Fort St. John to Hudson's Hope is the most scenic drive in the whole Peace Country. I speak from experience as I've lived here since 1963. When I was younger we used to hang glide at Bear Flats which is just above Site C's proposed location. It was the best site in the whole area. I've spent many,many hours sitting on the Peace banks or floating high above the valley on air currents,smelling the unforgettable scents of sage and young poplar. Sometimes eagles and hawks would come and soar along side us. Sometimes we would "sink out" and land below by the river and have to hike 1,300 feet back up to launch to get our vehicle. These were the happiest times of my life and to put such a beautiful place underwater would be a sin against nature and future generations. I could go on..about the farmland in the valley..how the uniquely rich soil and the micro climate make it the best in the region...how the wildlife thrive in the valley. It sickens me to hear shortsighted people around here say it will it will promote the economy. Our economy is just fine without it. I don't really understand the politics of site C. One hears so much propaganda for and against it but in my heart I feel there has to be a better way to produce the electricity industry demands.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 20 (Agriculture) - Section 14 (Wildlife Resources) - Section 18 (Regional Economic Development) Please also see the Technical Memo on Agriculture.
pub_0587-001	Kadar, Joe	*To all the politicians in the legislature, It would be an absolute environmental disaster to go ahead with this project. I have been going up to the Peace country for the last forty years hunting and fishing and went on my first moose trip with my dad there when I was fifteen. I have seen the area slowly erode with all of the gas and oil exploration and the mess they are making with all of the open pit coal mining just before Chetwynd. Putting in the site C dam would just add to the and make us in BC once again look like the world leaders in how to destroy such a beautiful province. What really bothers me today is the fact that BC Hydro has quietly slipped under the radar and gone along and slowly aquired large pieces of land from Hudson Hope all the way down to Fort Saint John in the Peace River valley, in the hopes of coming to the table saying that there are no major stakeholders at the table with any opposition and therefore there seems to be no opposition to this project. But hold on, the people of this province as small as me , just one individual who doesn't own any land along the Peace River, are as well large	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.

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		stakeholder in the Peace River. the Peace River isn't BC Hydros to go and screw. The Peace River belongs to every individual in this province that cares about every river and watershed in this province and BC HYDRO should sit back and take a deep breathe and put on a good set of ears and really listen to the small individuals fromevery corner of this province about the negative impact this project would have on this magnificent ecosystem and as well socially for everyone that lives in the river valleys areas. I am not a greeny and or a tree hugger as per say, I am a general contractor and yes I do believe in a thriving province and one that has a balance between being sustainable and yet maintains a great sensitivity for the environment at the same time. This project would clearly put everything we go on and bragg to the rest of the world about , about how good we are at being green and clean, this would just fly in the face of hypocricy and once again make us look like the non thinking fools we can be when we don't sit back and take a hard look at the long term rammification of how negative this project will be to the rest of the world. And I ask , do we need this project, from all that I have heard, the electricity from this project would just be sold to the U.S. for cheap money anyhow, as we are currently doing today with the extra power we have left over from our grid lines today. So what a waste this would be to build this dam just for the sakes of selling off the power to the U.S. So as a simple individual who was born and raised in this province and who has spent many years enjoying the likes of the Peace River country, I say no to this project and lets not look like world wide fools again and lets show the world that we really are the leaders in presearving sensetive natural areas for us today and for others to enjoy in the future. I hope you listen to the people of this province loud and clear this time around!!	
pub_0588-001	Caldicott, Arthur	I haven’t had an opportunity to review the EIS for Site C, but I wish to be recorded as opposing the project.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0589-001	Harper, Daniel	The British Columbia government has previously recognized the significance of the area that would be affected by the proposed Site C Dam and decided against proceeding with the dam. In my view, this was a courageous and far-reaching decision that should be endorsed even more strongly today, when we have more awareness of the unintended consequences of cumulative impacts and when we should be even more concerned about future generations. I strongly urge the Panel to continue to say no to the proposed Site C Dam	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the Project until BC Hydro provided: (1) a load forecast demonstrating that construction of the Project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139). The EIS describes the potential cumulative effects assessed for each of the 22 valued components in Volume 2 Section 12-15, Volume 3 Sections 16-27 and Volume 4 Sections 28-33).
pub_0591-001	Molendyk, Sandra	Please do not allow for the dam know as "Site C" to be developed. The environmental importance of this area is far too important to develop into a dam. Please protect the Peace River Valley, and places like this. We do not know the ramifications of global warming yet on the wild and wildlife. We need to keep our wild places healthy to mitigate the dangers associated with global warming, excessive carbon, and other methods which harm the environment. Lets move on to other methods of energy that other countries are leading with, such as solar power, and other types of energies. There are so many new methods to create energy which are not dirty, do not destroy the planet and its inhabitants. Let us please become leaders in the field of alternative healthy energy for a healthy life and environment for humans and the wild.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matter raised is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Please also see the following Technical Memos: - Alternatives to the Project - Hydro-Electric Storage and Dispatchable Capacity
pub_0592-001	Scorey, R.D.	This letter is in response to BC Hydro's draft Environmental Impact Statement for the proposed Site C dam. Firstly, my position is that Site C should not be built. I grew up in Hudson's Hope and	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for the Project is being conducted in a thorough and

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		am very familiar with the beautiful stretch of river valley which BC Hydro plans to flood. In my view, much of the Environmental Impact Statement is a distorted representation of the real impacts this dam will have on the area. I do not feel the devastation of much of Hudson's Hope is fully dealt with. The town's main attraction is its riverbank, but instead of the beautiful river views and islands that exist now, the people of the town will look at an ugly berm (if it does ever get built) and the homes at the west end of the community will be bought out by BC Hydro and presumably left to slough into the reservoir. This has a huge social, emotional and health impact on the people who were unaware until recently that their homes would be affected. In addition, I do not feel the sloughing of the banks around the proposed reservoir have been property identified. I have worked on Williston Lake, the reservoir formed behind the WAC Bennett Dam, clearing debris and dredging. I am therefore very aware of the stability of the soil in this area. Once flooded, the banks will slough in continually and silt up the reservoir, leaving dusty bowls along the shore, just like the Williston Reservoir. I witnessed the huge landslide in 1973 which closed the river off, and was caused by excessive rainfall. Inundating these banks will cause more slides, and I don't believe this has been adequately taken into account. The valley is productive agricultural land, much of which will be lost if the dam is approved. Land which can produce quality food is valuable, and should be protected, not flooded. The potential for increased agricultural production has also not been adequately addressed in the Impact Statement. Dams are dinosaurs of the past; in 2013 there are infinitely better ways to produce electricity for way less cost than the anticipated $7.9 billion, which will no doubt increase to $10 billion dollars or more.	independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11 (Environmental Background) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Reservoir Impact Lines

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pub_0593-001	Little, James and Margaret	The following are my comments on the draft Environment Impact Statement for the Site Clean Energy Project and suggested additions. I noticed that we did not include our concerns to include required access for the Site C Project and or access that are required to be built to replace infrastructure that will be flooded or isolated due to the dam construction and reservoir pond age which will be created. 1. Highway 29 - the proposed route for Highway 29 is being built on Lacustrine Soils which are very erodible. Those portions of the Highway being replaced that are located close to the new reservoir will be very susceptible to inundation over time. The design of this road needs to be looked at to determine the potential of losing parts of this proposed route due to sloughing. If the road is built in the proposed RIW BC Hydro should be required to fund any future replacement to the highway due to sloughing or that can be attributed to the creation of the reservoir. Again a substantial bonding for this should be required by Hydro to meet this significant concern and future obligation to the public of BC. This potential costs needs to be included within BC Hydro's cost estimate for the project and their potential rate for electrical generation sale value for electricity to be produced.	The nature of the soils, as well as the potential for short term and long term erosion and sloughing have been taken into full account in the selection of the proposed route. Refer to documents such as Volume 2 Appendix B-2 which provides a detailed description of the development of the impact lines which are the predicted limits of future erosion; these impact lines are included on the roadway design drawings. BC Hydro has engaged the BC Ministry of Transportation & Infrastructure throughout the design process. BC Hydro would make the Ministry whole on any future potential defects or damage to Hwy 29 as they relate to the effects of the Site C reservoir. Please see the following Technical Memos: - Reservoir Impact Lines - Project Costs
pub_0593-002	Little, James and Margaret	2. Highway 97 Pine Pass to Chetwynd, Hwy 29 to Jackfish Lake Road- BC Hydro proposes using this route for the transfer of ballast rock from their proposed Pine River Quarry. BC Hydro should be required to transfer this material via rail as the use of public highways for that transport of the significant amount of material via trucks will create significant wear and tear on these existing highways and rail transport should be mandated as a part of this proposed project. My wife and I used the railroad for transporting material from this quarry source for our clients when ballast was used for road construction north of Fort St. John. This Ministry of Transport and Infrastructure has also used rail transport from this quarry for ballast material for their road construction. In summary road transport for ballast from the Pine River Quarry should be eliminated from their proposal.	The assessment has been based on the road option which has the larger footprint to be conservative, and preserves commercial options. The tender documents for the construction contracts will include both options and the requisite mitigation requirements.

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pub_0593-003	Little, James and Margaret	3. Road 271 Beatton Park Road- BC Hydro plans to use the Wuthrich Quarry for a source of ballast (sandstone) in their proposed Site C project. The 271 Road standard of construction does not currently meet the existing uses being made of this road. In fact one of the members of the North Peace Rod & Gun Club Executive was killed along the proposed stretch of this road in 2012. The report on this crash suggested that if the road had been a better standard there would have been a chance that the accident would not have occurred or at the very worst the person may have survived the crash. This issue was brought up in the public meetings with BC Hydro that were held on access. No mention that this road will be upgraded or that its use for a haul road by BC Hydro has been considered in their project document.	EIS Section 4.3.7.1 states "Upgrades to the existing roads would include: [….] 3. Improving public safety on 271 Road between the Wuthrich Quarry and Highway 97 by widening the shoulders or adding a paved path"
pub_0593-004	Little, James and Margaret	In summary that portion of the reports on access need to be reviewed to ascertain the incremental costs for these roads due to the proposed construction of the project. These costs will not be covered by the increase taxes gained from the workers in the area or the materials being brought to this are. The increased costs for these transportation routes needs to be reviewed and increased to cover these issues outlined. For Highway 29 there should be a requirement that BC Hydro is responsible for any costs of repair of Highway 29 that can be attributed to the creation of the reservoir.	Existing access roads used during construction have been evaluated and where required upgrades have been proposed. A description of the proposed upgrades is included in Section 4.3.7 - Road and Rail Access. The cost of these upgrades is included in the detailed Project cost estimate. BC Hydro has fully consulted, and will continue to consult with the Ministry of Transportation and Infrastructure with regards to proposed highway realignments, upgrades and maintenance of public roads during construction. The Ministry of Transportation and Infrastructure will continue to be responsible for maintenance of public roads. BC Hydro would be responsible for additional maintenance requirements resulting from Project construction activity. The six segments of Highway 29 proposed for realignments are described in Section 4.3.4 Highway 29 Realignment. Of the six, five would be realigned due to reservoir inundation, and one would be realigned due to the effects of long term erosion and potential instability. The remaining 75km for Highway 29 between Fort St John and Hudson's Hope is not anticipated to be affected by the proposed reservoir.
pub_0594-001	Esau, Joanna	I am writing in response to the draft Environmental Impact Statement for the proposed Site C project. I am <personal information removed> and have lived in the Peace River Area all my life. I believe destruction of the beautiful Peace River Valley by flooding is totally wrong. I have tried to review the numerous volumes of the Impact Statement and can find nothing that refers to the many homes on the Hudson's Hope Riverbank which are now being bought out by BC Hydro, disrupting families, seniors and homeowners who	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 11.3 Land Status, Tenure and Project Requirements - Volume 1 Appendix A Vegetation, Clearing and Debris Management Plan - Section 20 (Agriculture) - Section 25 (Outdoor Recreation and Tourism)

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		believed they would be able to stay in their homes for the rest of their lives, having been assured when Site C was under review previously that their homes would not be affected. This is just one of the social and health effects which have not been addressed, as well as the additional costs of purchasing these homes and relocating the owners. Also, the overall effect that Site C will have on the town of Hudson's Hope has not adequately been taken into account. I also do not feel the Impact Statement adequately deals with the loss of the rich agricultural land in the Peace River Valley. The micro-climate provides ideal growing conditions for a diverse range of crops, but it is not mapped, therefore the potential productivity of the valley is underestimated. In this day and age when climate change is negatively affecting food production throughout the world, it is unbelievable to even consider destroying almost 16,000 acres of agricultural land, some of the best land in British Columbia. The beauty of the Valley and its tourism potential has also not been addressed in detail. People from all over the world comment that it is one of the most beautiful valleys they have ever seen. Tourism could be developed on the basis of the River and the Valley, and not a "lake", such as Williston Lake behind the first dam on the Peace, with it's continual sloughing banks, and floating tree-stumps. My home on Charlie Lake, and my childrens' school, are down-wind of the Peace River Valley. The Impact Statement does not address the smoke and ash which will inundate our area as the underbrush and timber is cut and burned. This is a health and emotional hazard, together with the impact of the continual traffic of logging and gravel trucks which will pass close to our home, and their school. I find the Impact Study confusing, and do not feel it is adequate, as it downplays many of the potential effects of this proposed dam construction. The dam should not be built; the estimated cost of $7.9 billion alone is too high a price to pay, let alone the destruction of this beautiful and productive valley. Thank you for considering my comments.	- Section 33 Human Health While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. Please also see the following Technical Memos: - Agriculture - Private Property – Project Requirements and Tenure

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pub_0595-001	Hofmann, Verena	*The commentator submitted a letter in the standard forms suggested by the Yellowstone to Yukon Conservation Initiative and the Peace Valley Environmental Association, and provided additional comments as shown below:* *The oldest non-First nation settlement, Rocky Mountain Fort, is along the Peace River and is at risk of* *being destroyed by the project.*	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the responses to the letters in the standard form suggested by the Yellowstone to Yukon Conservation Initiative and the Peace Valley Environmental Association, located after this table. The matters raised are described in Section 32 (Heritage Resources) of the EIS. Please also see the Technical Memo on Permitting for Construction and Operations.
pub_0596-001	David Suzuki Foundation (Moola, Faisal)	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro for the proposed Site C dam on the Peace River. The Peace River Valley is a significant historical, cultural and natural feature within one of the most imperilled landscapes within the Yellowstone to Yukon (Y2Y) corridor – a globally significant trans boundary system that stretches across the mountainous spine of western North America. This area (called the Peace Break Region) forms the narrowest point of the Y2Y corridor and serves as a critical linkage zone between the Muskwa-Kechika Management Area in northern BC and the network of provincial and national parks in the Canadian Rockies of Alberta and central and southern BC. The lifeblood of the Peace Break Region is the Peace River1 itself, which begins in the alpine of the Rocky Mountains in the west and flows northeast across Alberta, eventually joining the Athabaska/Mackenzie Watershed on its way to the Arctic Ocean – a journey of almost 2000 km. The river and associated ecosystems support a diverse assemblage of boreal and sub-boreal wildlife, including threatened populations of bull trout, grizzly, and woodland caribou and countless other red and blue-listed plants and animals. In addition, because of its fertile soils, moderate climate and accessible terrain, the region supports a rich agricultural industry, including forage, cereal, and oilseed crops, as well as cattle and some vegetable production. Despite enormous agricultural potential, farming within the Peace Valley itself has been severely constrained due to the ongoing threat of the Site C dam and the loss of prime farmland with the establishment of the flood reserve in 1957. The region is poorly protected and has experienced a convergence of industrial activities over the last few decades, including clear-cuts, petroleum and natural gas well sites and facilities, mineral developments, roads, transmission lines, pipelines and seismic lines, as well as two earlier large scale hydroelectric dams and reservoirs on	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 7.4 (Sustainability) - Section 11.4 (Surface Water Quality) - Section 11.5 (Water Quality) - Section 19 (Current Use of Land and Resources for Traditional Purposes) - Section 20 (Agriculture) - Section 24 (Harvest of Fish and Wildlife) - Section 25 (Outdoor Recreation and Tourism) - Section 26 (Navigation) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) - Section 32 (Heritage) The potential effects of the Project on the environment is assessed under the following valued components: - Fish and Fish Habitat (EIS Section 12) - Vegetation and Ecological Communities (EIS Section 13) - Wildlife Resources (EIS Section 14) - Greenhouse Gases (EIS Section 15) The purpose of the EIS, as stated in Section 1.2 of the EIS, is to provide the information that the Minister of Environment of Canada and the Executive Director have identified in the EIS Guidelines. The EIS Guidelines was finalized by the Executive Director of the EAO and the Minister of Environment issued on September 7, 2012. The EIS Guidelines identify the information that must be provided in the

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		the Peace River itself (W.A.C. Bennett and Peace Canyon). Many of the ecosystems in the Peace Break have been severely impacted already. For example a recent study2 by the David Suzuki Foundation and Global Forest Watch Canada found that overall, 20 per cent (1,135,796 ha) of the region (which includes both the LAA and RAA zones identified in the EIS) has been impacted by industrial activities. When buffered by 500 m to establish an ecological footprint, 66.9 per cent of the Peace Break Region, has been disturbed by human land use already, including much of upper reaches of the Peace River itself due to earlier hydro development. Given the unparalleled amount of development that has already impacted the Peace Break Region, including the Peace Valley itself, the David Suzuki Foundation is concerned that further expansion and intensification of the industrial footprint in the region, with the proposed Site C Project, will cause undue ecological harm. The Outdoor Recreation Council of BC has also recognized the vulnerability of the Peace and deemed it BC's forth most endangered river. The purpose of the EIS is to assess the significance of the impacts of the Site C dam and determine whether or not they can be mitigated or offset. The David Suzuki Foundation believes that the EIS for the Site C dam fails to adequately assess the significance of potential and cumulative impacts of the Site C Project. The EIS is deficient in the following ways: The boundaries of the Local and Regional Assessment Areas (LAA and RAA) in the EIS are far too limited to assess the impacts of the Site C Project in the context of interacting and overlapping cumulative effects of other earlier and pending future projects. 2- As a result, the EIS omits assessment of regional impacts to many important species, especially those that range widely, occur at low densities and/or are unevenly distributed, such as grizzly bear. 3- Conversely, a number of other wide-ranging animals, such as wolverine, lynx and woodland caribou were wholly excluded from the EIS. 4- The EIS does not consider the impacts of the existing dams and reservoirs on the Peace River, and how earlier effects (e.g., loss of wildlife habitat) may be heighted by the proposed Site C project going ahead. 5- Furthermore, the cumulative effects assessment includes a temporal baseline that fails to reflect the long history of industrialization in the Peace Valley and its	EIS. The EIS Guidelines required the inclusion of a Table of Concordance in the EIS, which is found in Volume 1 of the EIS. This table identified through cross-referencing, where information identified in the EIS Guidelines is found in the EIS. The Table of Concordance shows that the EIS satisfies all the requirements of the EIS Guidelines. As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is described in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project. Please also see the following Technical Memos: • Spatial Boundary Selection • Movement of Grizzly Bears and Large Carnivores • Cumulative Effects Assessment • Caribou

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		surrounding region. The Peace Valley Environmental Association (PVEA), the BC Women's Institute, and the Yellowstone to Yukon Conservation Initiative3 have prepared more detailed comments on the EIS, notwithstanding the severely constrained time and resources available for public comment. Their assessments of the EIS have been submitted to the Canadian Environmental Assessment Agency and the B.C. Environmental Assessment Office. The David Suzuki Foundation has reviewed their submissions and we wholeheartedly support their conclusion that significant deficiencies in the EIS exist. Most notably, it fails to adequately address the potential and cumulative impacts of the proposed Site C project on critical agricultural and wildlife values by being too limited in scope and scale and for excluding critical values at risk, such as the impacts on wide-ranging species, whose populations have already been impacted by earlier industrial activities in the region.	
pub_0597-001	Alberta Wilderness Association	Alberta Wilderness Association (AWA) appreciates the opportunity to provide comments on the adequacy of BC Hydro's Environmental Impact Statement for the Site C Clean Energy Project (the EIS). AWA, founded in 1965, is an Alberta-based conservation group with 7,000 members and supporters in Alberta and around the world. We work towards the long-term protection of remaining representative large wilderness areas and other areas of special ecological significance in Alberta to sustain species diversity; conserving biodiversity is an important international obligation undertaken by Canada as a signatory to the Convention on Biological Diversity. We also work for better management of Alberta's watersheds to ensure future generations enjoy healthy aquatic ecosystems and the abundant, clean water they provide. The Peace River watershed is a nationally significant waterway that supplies water to the Peace-Athabasca Delta, one of the largest freshwater deltas in the world. The Delta ecosystem has already been adversely affected by the Bennett Dam's reduction of the Peace River's replenishing floods. In Alberta, the Peace River contains a high species diversity of fish. Its valley provides key habitat for migratory birds and sensitive species including the threatened grizzly bear and amphibians and reptiles. Because of these interests, AWA offers the following comments regarding the adequacy of BC Hydro's EIS for the Site C Dam proposal.	The EIS describes the downstream implications of the Project. Section 12.4.2.2 Downstream Habitat Changes address the potential effect of the Project on fish habitat downstream of the Project, and considers physical conditions of the habitat, including surface water regime (Section 11.4), water quality (Volume 2 Appendix P:Part 2 Hydrodynamic, Water Quality, and Productivity for the Site C Project), thermal and ice regime (Section 11.7), and fluvial geomorphology and sediment transport (Section 11.8). Extensive consideration to downstream aquatic productivity changes is provided in Appendix P Part 3 Aquatic Productivity Reports: Future Aquatic Conditions in the Peace River. This information has been used to assess the downstream effects of the Project on Fish and Fish Habitat (Section12), Vegetation and Ecological Communities (Section 13), and Wildlife Resources (Section 14). These sections and their accompanying Appendices include considerations for the examples provided (habitat for migratory birds, grizzly bears, and amphibians and reptiles). Please see the following Technical Memos: - Peace Athabasca Delta - Spatial Boundary Selection - Movement of Grizzly Bear and Large Carnivores -Caribou

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		Overall, BC Hydro has not adequately assessed the environmental effects of Site C. The following deficiencies in the EIS need to be addressed: **Insufficient analysis and area assessed for wildlife impacts** The boundaries of the area assessed are too limited. As a result, the EIS omits assessment of regional impacts to species that range widely, occur at low densities and/or are unevenly distributed. Impacts need to be accounted for at a population scale that is relevant and appropriate to conservation planning for wide-ranging terrestrial and aquatic species. Impacts on the wolverine, lynx and the SARA-listed woodland caribou are virtually excluded from the Regional Assessment Area (RAA) analysis, and RAA analysis for fishers, grizzly bears and wolves is also cursory; these species need to receive more careful consideration about the cumulative effects of regional industrial disturbance on the quality and connectivity of their regional habitat. A sound cumulative effects assessment of impacts to these species should include past industrial impacts, including of existing Peace River dams, and reasonably foreseeable future impacts.	
pub_0597-002	Alberta Wilderness Association	**Insufficient assessment of downstream effects** To be credible, the EIS must assess the downstream effects as far as the Peace-Athabasca Delta. Previous BC Hydro projects on the Peace River have already seriously interfered with natural flow regimes in the Peace-influenced part of the Delta. Currently, the EIS only describes downstream effects as far as Vermilion Chutes. To ensure all significant potential downstream effects are considered, the EIS must describe the current conditions and potential effects of the surface water regime, climate, fish and fish habitat, wildlife and vegetation to the Peace-Athabasca Delta.	Please see the response to pub_0597-001. Please also see the Technical Memo on Peace Athabasca Delta.
pub_0597-003	Alberta Wilderness Association	**Insufficient description of pre-industrial environment and cumulative industrial effects** The EIS cumulative effects assessment appears to have omitted a number of past and potential future projects, including the impacts of the existing dams and reservoirs on the Peace River. Both federal and provincial laws require that the EIS include an assessment of the cumulative environmental effects of Site C in combination with the effects of past projects and activities in the area. The EIS should be amended to strengthen the analysis of the pre-industrial local and regional area, as well as the	Please also see the Technical Memo on Cumulative Effects Assessment.

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		cumulative effects of previously-existing and reasonably foreseeable projects.	
pub_0597-004	Alberta Wilderness Association	**Insufficient threshold consideration for cumulative effects assessment** The grizzly bear road density analysis study states (Part 7, p.173) "The Project will have relatively little long-term or permanent effect on overall road densities in the LAA. The majority of the changes in road density due to the Project will involve increases in road density in areas that are already over the 1.2 km/km2 threshold and are thus unlikely to be used by grizzly bears." EIS section 14.6.3 states in part: “It should be noted that BC Hydro is not the lone organization contributing to the decline in wildlife resources, as many of the other projects or industries mentioned above also contribute to the overall decline.” These two statements suggest science-based thresholds for industrial impacts to wildlife populations have already been exceeded, beyond which new industrial disturbance should not proceed. The EIS should provide more information on science-based threshold values for wildlife, particularly for species at risk and for wide-ranging carnivores, and whether they are at or near exceedance levels at both a local and expanded (per comments above) regional scale.	Please see the following Technical Memos: - Cumulative Effect Assessment - Movement of Grizzly Bears and Large Carnivores
pub_0597-005	Alberta Wilderness Association	**Insufficient decommissioning and associated effects ignored** Decommissioning dams and generating facilities requires extensive planning and can have significant environmental effects. For example, sediment that has accumulated behind dams can degrade water quality when released, adversely affecting fish and fish habitat. Changing water levels can affect sensitive species. These impacts should be considered in the EIS.	BC Hydro has no plans to decommission the dam. EIS Section 4.6 provides the commitment required by the EIS Guidelines and also “An Environmental Protection and Monitoring Plan would be developed for decommissioning to implement applicable measures for environmental protection, and to restore the area to conditions deemed acceptable at the time of decommissioning. Further details on decommissioning would depend on regulations and practice at the time of a decision to decommission.”
pub_0598-001	Goodings, Verne and Karen	This letter is being submitted as residents to the region and we wish to make the following points. 1. The need for a critical arms-length audit to determine the accuracy of the projected power needs. 2. Cost of all mitigation measures need to be reported and part of the cost of the project. 3. Accurate detail on all loss of land including the statutory Rights of Way and sloughing. These need to be combined as to the total loss of land. 4. Please provide the report on the passive land acquisition and the impacts on the Peace Valley since the policy was put into effect.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for the Project is thorough and independent. BC Hydro’s EIS, including Section 5 that describes the methodology for determining future electricity demand, is reviewed under this process and is consistent with the EIS Guidelines. The cost of mitigation measures is included within the overall detailed Project cost estimate. Please also see the Technical Memo on Project Costs. Land requirements for the Project are described in Section 11.3, including the amount of land required

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		5. A study to show the analysis that measures the value of the valley with no flood reserve and no threat of site c. 6. Impact on the people of the "involuntary displacement" of the residents who will be forced to leave their homes and lose their lands. 7. Cost to decommission the dam when its useful life is done. 8. Further independent study on what is considered to be a "beneficially created recreational lake". The loss of the river far outweighs any proposed, not proven, benefits. 9. Lack of study on the accumulated impacts from WAC Bennett and Peace Canyon Dams combined now with the proposed site c.	for statutory-rights of way. Please see the following Technical Memos: • Private Property – Project Requirements and Tenure • Flood Reserve With respect to the Voluntary Passive Land Acquisition Policy, the Project's baseline described in the EIS includes current conditions, including any implications of this policy. With respect to land acquisition, BC Hydro's preferred method of acquiring land or rights is by way of mutually agreed upon settlements. As described in Section 4.6, BC Hydro has no plans to decommission the dam. With respect to the creation of the reservoir, potential Project effects and benefits are comprehensively described in the EIS. Please also see the Technical Memo on Cumulative Effects Assessment.
pub_0599-001	Sinats, Andy	Thank you for this opportunity to comment on the terms of reference to the Environmental Impact Statement for Site C on the Peace River. A dam at Site C has been proposed, since the late 1970's, based on increased demand for electrical power in British Columbia which didn't materialize then and is not needed now. Last year BC Hydro had to spill water from the Bennett Dam because the Northwest of the United States, and the Bonneville Power Administration was flooded with excess power which couldn't be sold, couldn't be stored, and was unwanted. http://www.el.bchydro.com/mediabulletins/bulletin/system_facilities/spill_scheduled_at_wac_bennett_and_peace_canyon_dams BC does not need more residential power, nor should the 8-10 billion dollar projected cost (In 2006, the estimated cost of the 60 metre high dam was less than $3 billion) be borne by residential users, when the beneficiary of this huge investment (the largest such project in the world) would be the LNG and Fracking industry. Why should residential rate increase flow to shareholders and foreign investors? Eight billion dollars is "serious" money and is a huge lost opportunity for investment in Renewable energy like Solar. Germany, as is widely known, leads the world in renewable energy and, while its insolation is the same as Alaska.obtained 25%of its energy from the renewables last year.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. The role of the BCUC is described in section 1.2, page 2 of the EIS Guidelines and section 7.2.3, page 7-4 of the EIS: • Section 1.2 of the EIS Guidelines, which sets out the purpose of the EIS, states: "The EIS is not intended to constitute a Certificate of Public Convenience and Necessity for the Site C Project. The Site C Project is exempt from the requirement for a Certificate of Public Convenience and Necessity as per section 7 of the B.C. Clean Energy Act"; • Section 7.2.3 of the EIS describes the role of the BCUC with respect to the Project, which is to review the costs associated with the Project should it proceed in the context of BC Hydro's revenue requirements: "Costs associated with generation projects are recovered from ratepayers based on the revenue requirements collected by BC Hydro, as regulated by the [BCUC] … The manner of cost

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		Where does Canada lead? In Consumption! The graph below shows where BC Hydro should put its efforts----CONSERVATION. Germany gets a quarter of its energy from renewables, AND uses perhousehold, one third of the energy. When is BC Hydro going to turn its attention from its "idee fixe," a new dam on the Peace, to where it should have been all along, using less? *Original submission includes a graph entitled, "Household Electricity Consumption (kWh/year)* It's as if our public utility, BC Hydro, has had its head stuck in the sand for the last 30 years. The world is undergoing climate change, there is a world-wide drought, there are agricultural shortfalls and crop-failures in the US, Mexico, New Zealand,Queensland, southern New South Wales, Victoria and South Australia, Africa, andChina; meanwhile, inexplicably and irrationally, British Columbia wants to flood prime farm land, 18% of all class 1 land in the province! Agriculture is the true green energy. Not oil, not coal, nor electric power, nor uranium but food is what we put into our bodies to fuel our every action. The Peace Valley if flooded will lose 3,500 acres of farmland, nearly a fifth of the best farm land in British Columbia. We don't have a shortfall of energy but a serious shortfall in objectivity. *Original submission includes a photograph with the text "3,500 acres of Class 1 farmland; 18 percent of all Class 1 farmland in the province".* Why has the BC Utilities Commission authority to review this proposed Site C travesty on the Peace River been removed by the Clean Energy Act? Ifthis project has any merit, why is it not subjected to such a review to see if it is in the public interest? The answer I believe is the Site C proposal could not survive an objective look at its cost/benefit and impact to bio-diversity. We all know China is investing, and has been encouraged to invest by the Harper Government, in energy projects in Canada. At the same time BC Hydro and the BC Government are determinedly ramping up energy production in British Columbia. Our utilities and governments are eager to discard jurisdiction over fish habitat, navigable waters, giving away 600 BC Rivers to IPP's, putting the mighty Peace River and all the biodiversity it protects at risk for the sake of share-holder value which will flow out of the Canada, at about the same rate the rivers stop their natural flows in BC. The EIS, whatever its terms of reference, needs to take into consideration these global	recovery is determined by the BCUC …". The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 9 (Information Distribution and Consultation) - Section 12 (Fish and Fish Habitat) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) - Section 34 (Asserted of Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: • Aboriginal Consultation • Agriculture • Consideration of Historical Context in Assessment of Potential Effects and Impacts on Aboriginal Groups • Methodology for the Assessment of the Potential Impacts of the Project on the Exercise of Asserted or Established Aboriginal and Treaty Rights • Project Need • Reservoir Impact Lines

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		changes. We don't have rivers to waste. Have a look at what is happening in the jurisdictions investing most heavily, (the United States and China) They are running out of water AND rivers. In China: ABOUT 28,000 rivers have disappeared from China's state maps...evidence of the irreversible natural cost of developmental excesses. More than half of the rivers previously thought to exist in China appear to be missing, according to the 800,000 surveyors who compiled the first national water census, leaving Beijing fumbling to explain the cause. http://www.theaustralian.com.au/news/world/rivers-wiped-off-the-map-of-china/story-e6frg6so-1226609139591 Only 22,909 rivers covering an area of 100sq km were located by surveyors, compared with the more than 50,000 in the 1990s, a three-year study by the Ministry of Water Resources and the National Bureau of Statistics found. Officials blame the apparent loss on climate change, arguing that it has caused waterways to vanish, and on mistakes by earlier cartographers. But environmental experts say the disappearance of the rivers is a real and direct manifestation of headlong, ill-conceived development, where projects are often imposed without public consultation. We don't need this outcome in British Columbia: *Original submission includes photograph.* I've mentioned cost/benefit, lost opportunity, conservation, and global changes and other jurisdictions. These are real human concerns but even greater is the impact to wildlife habitat, migratory species, and the role the Peace River plays in providing a flyway to birds at risk due to habitat loss and climate change which needs to be regarded in the EIS. These are the words of David Suzuki "The Lower Peace River and its associated ecosystems support a diverse range of wildlife, including threatened populations of bull trout, grizzly bears, wolverines, and countless other plants and animals. Because of its fertile soils, moderate climate, and accessible terrain, the bottomlands along its banks and gentle valley slopes have supported farming families for more than a century. These farmers grow forage, cereal, and oilseed crops, as well as raise cattle and growing market gardens. To First Nations and other local people whose traditional lands and farms were	

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		flooded and livelihoods destroyed by the W.A.C. Bennett Dam in the 1960s, the prospect of yet another dam that will flood long sections of the Peace River Valley, destroying farms and forest, is unacceptable." Protecting the Peace: David Suzuki on B.C.'s Site C project The present EIS has slighted in its terms of reference the downstream effects and impacts to wildlife and wetlands in Alberta and the cultural impact to First Nations, including the treaty rights of the Athabasca Chipewyan First Nation. At least six bands in the northern part of the province supported by the Alberta government have registered major concerns with B.C. Hydro's plans to build another dam on the Peace River, saying the utility still hasn't understood the effects of previous projects on the Athabasca Delta and refuses to study them. http://thecanadian.org/hot-links/item/1968-alberta-first-nations-oppose-site-c-dam-backed-by-alebrta-govt The Vancouver Sun reports, The Doig River, Halfway River, Prophet River, West Moberly and Salteau First Nationshave asked the United Nations to intervene to protect their interests from provincially sanctioned development, in particular the proposed Site C hydroelectric dam. (and) invoked the Declaration of the Rights of Indigenous Peoples recently signed by Canada. In summary, there are many reasons, some stated above, to cancel Site C proposed dam; and other than the narrow financial benefit, very little of it accruing to British Columbia, in return for an enormous sacrifice of agricultural potential, bio-diversity and loss of opportunity, there is no good reason to support it. This project is not warranted and the review thru the Environmental Assessment and EIS as it is presently construed needs to be abandoned and returned where it belongs to the BC Utilities Commission if it is to have any validity. Thank you for this opportunity to Comment and your attention to this, *The original submission includes 3 attachments: (1) a copy of a BC Hydro website page article dated June 25, 2012 and entitled "Spill scheduled at W.A. Bennett and Peace Canyon Dams"; (2) an article dated March 30, 2013 by Emily Ford, entitled "28,000 rirvers wiped off the map of China; and (3) an article dated March 3, 2013 entitled "Alberta First Nations Oppose Site C DAm, Backed by Alebrta [sic] Govt".*	

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pub_0600-001	Brown, Colleen	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* I buy all of the fresh vegetables that my family eats, including broccoli, corn and squash, from a local market garden that is located in Bear Flats (an area that will be flooded). It is a unique, special, fertile place that will cause irreparable harm to local and regional residents if it is flooded. The land that is proposed to be flooded is a future food trust for the region. As cycles of global warming and urbanization impact arable lands across the globe and our province, to remove high-value, productive agricultural land from the regional food security system seems unconscionable. This land cannot be "made-up" somewhere else. This is a tremendous harm that cannot be mitigated and has not been adequately addressed in the EIS.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. EIS Volume 3, 20.3.11 describes the effects assessment on food production and consumption, with additional information described in EIS Volume 3, Appendix D, Section 7.0. This assessment estimated that about 1,500 hectares of land would be required to support 100% of the regional demand for market garden crops that are climatically adapted for the area, for a growing regional population over 100 years. There would remain more than adequate lands outside the Project activity zone to meet self-reliance needs for vegetable crops, with over 6,000 hectares remaining in the valley of high utility, Class 1 and 2 land, and over 3,000 hectares of class 3 land. BC Hydro is aware of a small market garden that began operations at Bear Flat in 2012. The capability of that land was taken into account in the agriculture assessment.

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pub_0600-002	Brown, Colleen	In addition, the Peace River has significant cultural and historic values associated with First Nations settlement. These cultural and historic values will be irreparably lost once the valley is flooded. On that front, the proposed dam is causing social conflict in our local community and my home. My spouse is a member of Blueberry River First Nation and a member of a family that camped, fished and hunted in the area. She is so upset by the fact that the project has been reopened that she refuses to speak about it. My experience with many members of her family and community has been similar. They understand the project to be a 'done deal' and view the EIS as a mere formality prior to a rubber-stamp of approval. There is a pervasive sense of defeat and hurt and deja vu, surrounding this project - as their experiences with Site A (WAC Bennett Dam) and Site B (Peace Canyon Dam) are still very fresh. The opposition of most First Nations in the area to the project is a factor that must be weighted significantly.	The potential for the Project to result in changes to cultural and traditional uses of the land is one of three key aspects considered in the effects assessment in Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes. The EIS includes a determination of significance for the potential adverse effect of the Project on Current Use of Lands and Resources for Traditional Purposes. Section 19.7 pertains to BC Hydro's proposals for monitoring and follow-up and Table 19.12 outlines Project Effects and Mitigation Measures. Please see Volume 4: Social, Heritage, and Health Effects Assessment for BC Hydro's assessment of the potential social effects of the Project. Please see the Technical Memo on Aboriginal Consultation for additional discussion regarding the opportunities available to Aboriginal groups to meaningfully participate through the environmental assessment process. BC Hydro agrees – and acknowledges in the EIS – that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. The EIS also demonstrates that the potential adverse effects can largely be mitigated through implementation of the Environmental Management Plans and follow-up programs that BC Hydro has proposed. While the Project has the potential to result in some significant residual adverse effects, they are justified by (1) the public interest served by delivering long term, reliable electricity to meet growing demand (2) the employment, economic development, ratepayer, taxpayer, and community benefits that would result (3) the ability of the Project to meet this need for electricity with lower GHG impact than other resource options and (4) because the Project would also take advantage of water already stored in the upstream reservoirs to generate over 35% of the energy generated by BC Hydro's largest facility with only 5% of the reservoir area. Further, BC Hydro is continuing to consult with Aboriginal groups and to seek accommodations where appropriate.

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pub_0600-003	Brown, Colleen	A third area that I do not believe has been adequately addressed in the EIS is with respect to the socio- community impact of the project (particularly in its construction phases) on surrounding aboriginal and non-aboriginal communities. The significance of the impact that thousands of mostly single, male, transient workers will have on the region and its infrastructure has not been adequately addressed or provided for. I live and work in the City of Fort St. John. Our existing amenities are barely adequate to deal with the current (and growing) population. The hospital is full, the fire and police departments are running at capacity and there are not enough laundromats, grocery stores and entertainment amenities for the current population. The present influx of transient workers to the gas patch has resulted in issues of substance abuse and domestic violence that we are currently struggling to deal with. When gas-patch workers have time off, they leave the camps that they are residing in, and come to town. Traffic has increased tremendously and predictable social problems, dealing in large part with young men having a lot of money and no-where to go but 'town', have followed. The pressure on local amenities and services will be increased significantly if construction on the dam is to proceed. This has not been adequately dealt with in the EIS.	The scope of the community Infrastructure and services assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. The responsibility for provision of the services and infrastructure to community residents, including planning for future population growth, lies with several different agencies and jurisdictions, as described in Section 30 of the EIS. Where effects are reasonably attributable to the Project, and there is not already a public entity with the responsible for providing for services to residents, BC Hydro has proposed mitigation measures. In many instances, where feasible, BC Hydro has proposed to provide additional services directly for the workforce to reduce use of services for residents. The potential effects on surrounding First Nation communities have been taken into account to the extent information was made available to BC Hydro, within each valued component. The supporting information is available in Volume 3, Appendix B, as a series of First Nation Community Baseline appendices.

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pub_0600-004	Brown, Colleen	Finally, I am concerned that the cumulative effects assessment has omitted a number of past projects and potential new projects. Without the comprehensive inclusion of those projects that have been built, those that are currently in process and those that are reasonably likely to be built, the fragmentation of wildlife habitat, in particular, is not appropriately considered. The intensity of development in the Peace Region is tremendous and the river valley corridor and mid-river islands are extremely important for the protection of wildlife populations, including SARA listed species. I do not believe that there is a compelling public policy reason that overrides these omissions and concerns. Supplying cheap electricity to Powerex for trade with Alberta and the US or to assist with LNG development and fracking operations is simply not sufficient. Once the valley is flooded it is gone forever and any sort of post-development analysis and attempt at mitigation will be a band-aid solution at best. For reasons of: i) unmitigatable impacts on regional food security; ii) tremendous impact on First Nations' Treaty, Constitutional and Aboriginal Rights; iii) negative socio-community impacts with no current comprehensive management plan; and iv) inadequate treatment of the cumulative impact of regional industrial development on wildlife habitat I oppose Site C.	Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. The matters raised are described in the following sections of the EIS: - Section 20 Agriculture - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) - Volume 4 Sections 28 - 31, including proposed mitigation measures - Section 35 Summary of Environmental Management Plans Please also see the following Technical Memos: - Cumulative Effects Assessment - Agriculture

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pub_0601-001	Peace River Environmental Society (Walter Andreef)	Volume 1: Introduction, Project Planning, and Description Dam Safety Section 4.5.1.1 Operations, Maintenance and Surveillance Manuals are required to follow the CDA Dam Safety Guidelines (CDA 2007). In the CDA 2007 guide under data requirements for Operations (3.4.2) it is noted that the Dam operator should consider obtaining data for certain aspects of Dam surveillance such as headwater, tail water elevations, flow data, etc. and install the means to gauge flow volumes. It is noted in Section 37.10.1 (Volume 5) that the flows for 1986 were excluded from the Flood frequency analysis of the site C catchment area because of missing records. This suggests that the maintenance and/or surveillance documentation system may not have been fully functional at that time. As noted in Section 3.6.4 of the CDA 2007, "*the dam owner should establish a procedure to document findings…….that require follow-up action*." How does the project proponent ensure that Peace River Dam safety systems and required operating, maintenance and surveillance procedures for each dam are audited and inspected? What is the frequency of dam safety audits and are they undertaken by an external third party arms-length organization? What is the historical record of safety evaluations and audits undertaken at all the Dams upstream of the proposed Site C dam project and what does it imply for start-up and normal operations of the proposed dam? References: Canadian Dam Association (CDA), 2007a. Surveillance of Dam Facilities.	The missing data referred to in EIS Section 37.10.1 are data missing from the records of Water Survey of Canada (WSC) gauge WA07FA004 Peace River Above Pine River. Please see the Technical Memo on Dam Safety.
pub_0601-002	Peace River Environmental Society (Walter Andreef)	Regional Bedrock Geology Section 11.2.2.1 and Dam Site Geology Section 11.2.2.4 CDA 2007 states that the Geotechnical assessment review many types of available information including air photos and other maps along with site reconnaissance. In this instance the EIS need to consider additional work on the underlying geology of the project area. Both sections of the EIS omit a prominent geological feature known as the Peace River Arch that underlies the bedrock units in the technical study area and location of the Site C dam. Section 11.2.2 .1 states that tectonic activity has had little effect on the rocks of the proposed Reservoir area but in fact Peace River Arch (PRA) Geological features have been mapped and interpreted as influencing the path of river courses such as the Moberly River and the Peace River near the proposed Site	Please see the Technical Memo on Seismic Considerations.

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		C dam location. In a February 2009 article in the Canadian Society of Petroleum Geologists (CSPG) Reservoir, the writers suggest that several structural elements are easily identified in interpreting High Resolution Aeromagnetic (HRAM) surveys of the PRA area. They further interpret that many structural geological features such as normal, strike-slip faults, pull-apart basins and detached thrust faults can also be observed through HRAM survey. This suggests there is more complex geological story involving tectonic elements that requires further scientific investigation to determine potential tectonic feature impacts to the Site C Dam. I note that in EIS Figures 11.2.14 and 11.2.15 there is little definition of the number, length or orientation of the PRA faults. *original submission (CEAR document #986) contains embedded figures, with the following caption:* Figure 1: Figure 5 from the 2009 CSPG Reservoir. A geological and geophysical data interpretation of the Monias area. This data includes: a seismic line across the Monias field (5A). An HRAM image showing the magnetic expressions of near-surface faults and their relationships to known producing fields (5B). Surface structure map of the Wilder field, which was interpreted from stereo photography (5C) and Landsat imagery showing the surface expression of Wilder Field (5D). Unfortunately, geological structural data such as strike and dip readings nor other typical geological information is available in the EIS for technical review and analysis although it is evident that information has been collected at several site locations. The cross section of Figure 11.2.7 does not provide a map to provide the location of the cross section on any map nor the linear orientation of the cross section. Also, The "Little Ricky Shear" noted on the cross section figure should be described and dip, strike details of the shear be made available. There are also several cross sections denoted as A-A', B-B', D-D' and MR-1L that are not in Vol. 2, Appendix B, Geology and Terrain, Part 2 Preliminary Reservoir Impact Lines in the required section of Drawing 13. References: Berger, Zeev, M. Boast, and M. Mushayandebvu, February, 2009, Reservoir Issue 2. The monthly magazine of Canadian Society of Petroleum Geologists, Pp. 40-45. Canadian Dam Association (CDA), 2007b. Geotechnical Considerations for Dam Safety.	

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pub_0601-003	Peace River Environmental Society (Walter Andreef)	Landslide inventory Section 11.2.3.3 The landslide inventory should include an assessment of slides from the Alberta Region. The Eureka River Slide of June 1990 at 50 Million cubic meters of landslide material is one of the seven largest translational landslides to have occurred in the Peace River area within the last 65 years. According to the authors, "*the texture and Atterberg limits of the sample of preglacial lacustrine sediment collected at the Eureka River landslide are within the range of values found at the Attachie landslide*"….. This would suggest that these features, although a distance from the proposed Dam location site, should be included in the EIS to better understand the Peace River regional features of the surficial Geology and gain a greater understanding of landslide effects to the Site C project. References: B.G.N. Miller., D.M. Cruden. 2002, The Eureka River landslide and dam, Peace River Lowlands, Alberta, Pp 863-878. Accessed at the NRC Research Press Web site.	As described in Volume 2, Appendix B, Part 2, Section 4.1, landslide investigations in similar geological settings along tributaries of Peace River and east of the B.C.-Alberta border have been studied. For a list of supplemental references please see the Technical Memo on Reservoir Impact Lines. The list includes the paper on the Eureka River landslide.
pub_0601-004	Peace River Environmental Society (Walter Andreef)	Regional Seismicity Section 11.2.5.1 In this section (line's 39-40) it is noted that no faults in the Peace River Embayment are reported to extend into the Middle or upper Cenozoic. I point out that the Shaftesbury and Dunvegan formations were deposited during the Mesozoic era and faults have been mapped in the late cretaceous rocks of the Dawson Creek Graben. Therefore there may be evidence of faulting due to the tectonic activity within the area of the PRA on formations deposited during the Mesozoic and Paleozoic era that are underneath the base of the proposed Dam location.	Please see the Technical Memo on Seismic Considerations.
pub_0601-005	Peace River Environmental Society (Walter Andreef)	2012 Seismic Hazard Assessment 11.2.5.2.2 Lines 9-40 lists the experience and proficiency of professionals who were involved in undertaking the Hazard assessment. However, the proceedings of those meeting's and related documented interactions with the project proponent are not available for public review. Nor are there adequate resources and review time supplied by the project proponent to stakeholder professional's or other representatives to properly assess the work of the Hazard Assessment team(s). Without the openness of peer review and public disclosure of the data and information to the private, public sector or academia the public cannot be assured the work was completed in the public interest.	Please see the Technical Memo on Seismic Considerations.

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pub_0601-006	Peace River Environmental Society (Walter Andreef)	Petroleum Industry-Related Activities that may affect Seismicity Section 11.2.5.5 Information stated in this section on hydraulic fracking suggests that there is little risk to the public from activities yet it was made clear by a 2012 BC Oil and Gas commission report that 38 earthquakes were induced by movements on pre-existing faults due to fluid injection during fracking activities. It is important to note that the area where these earthquakes occurred were remote unpopulated areas of north east BC therefore the public was unlikely at risk. However, within 100 km's of the Site C Dam there are several Oil and Gas development area's that use hydraulic fracking. Given that the research, experience with horizontal well drilling and fracking is relatively young (2005) within the BC Oil and Gas industry and the effects or impacts are not fully understood it may be prudent to limit fracking activities near the dam location during and after the filling of the Site C Dam reservoir for a period of time. Real time Monitoring of potential ground movement's on or near the Moberly River and Tea Creek landslide area's during fracking activities would be prudent when water saturation values in the subsurface are higher than normal due to abnormal precipitation occurrence's. A report and several maps produced in October 2012 on the Montney formation in north east BC by the BC OGC noted several gas pools and new 2012 subsurface land sales near the area of the proposed dam and reservoir. Reservoir development of the Montney depends on fracking and horizontal drilling technology therefore it needs good oversight by the BC Oil and Gas Commission as the Montney play is developed in this area. *original submission (CEAR document #986) contains embedded figures, with the following caption:* Figure 2 Montney unconventional play trend 2012 (grey slant lines) Montney horizontal wells are darker grey Figure 3 Montney pools denoted as red circles Figure 3 2012 Montney land sales in red Note subsurface land sales near the Site C dam location References: BC Oil and Gas Commission, August 2012, Investigation of the Observed Seismicity in the Horn river Basin. BC Oil and Gas Commission, October 2012, Montney Formation Play Atlas NEBC.	Please see the Technical Memo on Seismic Considerations.

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pub_0601-007	Peace River Environmental Society (Walter Andreef)	Volume 2: Appendix B Geology, Terrain and Soil, Part 2 Preliminary Reservoir Impact Lines: Bedrock Geology Section 3.2.1 The report section references that past tectonic activity has had little effect on the rocks of the proposed reservoir area. (Pp. 10) However, I believe further field investigation, documentation research and Geological modeling is required. A 2008 report wrote on the reactivation of subsurface faults during the upper cretaceous time period located in the Dawson Creek Graben complex near the Site C location. The study focused mainly on North West Alberta in the subsurface area of the Peace River Arch (PRA). It is well known the PRA is present in North East BC and North West Alberta suggesting that faults in Alberta in the PRA may also be present in the Cretaceous rock of the bedrock underlying the Site C dam location. *original submission (CEAR document #986) contains embedded figures, with the following caption:* Figure 4 Note the lineament trending north south above the "7" and the photo 3 displayed below located near the Montagnuese River. Some brief field investigations in the areas of the Montagnuese River and the Peace River valley South West and North West of Fairview Alberta were undertaken in August 2012. The Peace River valley is about 200 meters deep at this location and access to the area is west of secondary road 729. Several photos were taken of the west side of the Peace River of a linear feature at the surface that can be observed on satellite images and on maps. The feature is over 2.5 kilometers long and appears from an observation distance of 4 km's as if a block of material separated from the west valley wall of the Peace River and moved downwards towards the river. The location of the feature is 56.2402 N and -118.9823 W. Also, the direction orientation of the feature appears to strike parallel to the direction of the Montagnuese River. Further site investigation should assist to classify the type of landslide. *original submission (CEAR document #986) contains embedded photos with the following caption:* Photo 1 Observing downstream to the South West Photo 2 Observing to the West Photo 3 Looking to the North West	Please see the Technical Memo on Seismic Considerations.

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		A report published by TUL Petroleum Ltd. stated that the Montagnuese river is underlain by an deep basement fault. A paper from the CSPG (O'Connell et al., Vol 38A, Pp. 76) noted the same fault on a structural contour map of the Precambrian surface. If the fault in the river valley is the same fault that may have enabled the landslide mentioned previously it suggests this may be evidence of the surface expression of a deep fault currently impacting the Peace River valley. Combined with studies mentioned earlier on small faulting in Cretaceous rocks it suggests that the Peace River Arch needs to be further defined and researched beneath the Site C Dam location. References: Stapleton, Murray J., 1997, Lamprophyres of the Peace River District, TUL Petroleums Ltd., Peace Diamond Project Assessment Work Report No. 97-08-15A. Mei, Shilong. 2007, Updates on Faults and Structural Framework of the Peace River Arch Region, Northwest Alberta, Obtained using a New Approach, 2007 CSPG CSEG Convention, Pp. 75-78. Eaton, D., Hope, J., and Ross, G. 1999. The rise and fall of a cratonic arch: A regional seismic perspective on the Peace River Arch, Alberta Bulletin of Canadian Petroleum Geology, VOL. 47, NO. 4 (DECEMBER, 1999), P. 346-361	
pub_0601-008	Peace River Environmental Society (Walter Andreef)	Background on Landslides in the Peace River Valley Section 4.1 As written, landslides investigations have taken place between Hudson's Hope and the BC/Alberta Border. There is mention of some landslide investigations in Alberta but the locations are not listed. Why are the landslide investigations in Alberta not part of the report and included in the EIS? What is required to disclose this information in the Site C Dam EIS.	Please see the Technical Memo on Reservoir Impact lines.

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pub_0601-009	Peace River Environmental Society (Walter Andreef)	Seismicity Section 9.2.4 Table 9-3 pseudo-static seismic analyses assumes firm ground conditions at each cross section location. PGA values are based on "firm" ground conditions when we know ground conditions can vary at each cross section location. Why are firm ground condition's assumed for the application of the 2010 NBCC seismic calculator and why is a conservative approached used when there might be uncertainties in the input of the scenario calculations? Table 9-2 lists shear strength parameters that have different values for a diverse set of surface materials and Table 9-1 lists a summary of 13 scenarios of stability analysis. It's not clear to me how Table 9-1 that are determined by different software packages such as Slide and Seep/W are used as input into Table 9-3. Are there any uncertainty ranges in this methodology and are the uncertainties taken into account in calculating the Table 9-3 results? Also, I note that Table 9-3 uses the Median hazard value when the 2007 Dam Safety Guidelines recommend the use of Mean value. What were the rationale in using the Median value? References: Canadian Dam Association (CDA), 2007c. Seismic Hazard Considerations for Dam Safety.	Please see the Technical Memo on Reservoir Impact Lines.
pub_0601-010	Peace River Environmental Society (Walter Andreef)	Volume 5: Requirements for the Federal Environmental Assessment: Seismic Data Section 37.1.2.3 This section refers the EIS reviewer to the Project Proponents (BC Hydro) science and engineering review reports in the EIS rather than conducting a separate science based research and review of the project as the responsible federal crown agency. Given the interprovincial aspect of the water flow from BC to Alberta, the continuation of subsurface geological features, the impacts to the local economies, and indirect and direct effects including cumulative impacts across interprovincial boundaries, the crown has not applied the due diligence required in managing the assessment of this project for the people of Canada nor the people of Alberta downstream from the Site C dam.	Please see the Technical Memo on Seismic Considerations.

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pub_0601-011	Peace River Environmental Society (Walter Andreef)	Seismic Activity Section 37.1.6 No comments are supplied in the EIS. Accordingly, the crown has not conducted a separate science based research and review of the project as the responsible federal crown agency. Given the interprovincial aspect of the water flow from BC to Alberta, the continuation of subsurface geological features, the impacts to the local economies, and indirect and direct effects including cumulative impacts across interprovincial boundaries, the crown has not applied the due diligence required in managing the assessment of this project for the people of Canada nor the people of Alberta downstream from the Site C dam.	Please see the Technical Memo on Seismic Considerations.
pub_0601-012	Peace River Environmental Society (Walter Andreef)	Earthfill Dams Section 37.1.8 This was a great job. Very impressive interesting reading.	Thank you for your comment.
pub_0601-013	Peace River Environmental Society (Walter Andreef)	Teunis H. op ten Noort, Ir (MSc.) Engineer Dam Breaching Scenarios I have updated my comments, mainly because I fail to understand some result of the dam breach analyses, notably Vol 5 Tables 37.18- 37.21 (pp37-56/57/58). How can a Sunny Day situation yield to higher peak flood flows at Site C than the inflowing Probable Maximum Flood (PMF), which is much higher by definition? Unless the breach parameters are completely different. But BC Hydro does not mention them in detail). I only considered Site C, but of course this also holds for the situation further downstream. When W.A.C Bennett Dam (WACBD) and probably Peace Canyon Dam (PCN) as well were designed, similar dam breach investigations may have been modelled. But I would recommend strongly that this exercise for WACBD be repeated since the downstream situation is going to change considerably with the construction of Site C. The effect of WACBD breaching and consequently the other dams in the cascade, PCN and Site C, could have dire consequences for the communities downstream, much more than what has been modelled in Vol 5 Sec 37.2.2.3.2. I would recommend they use the Sunny Day and PMF situations at WACBD. It is possible that the PMF for WACDB must be updated (Probable Maximum Precipitation, UBC Watershed, etc.), and of course severe inflow from the local catchment between WACDB and Site C	As indicated in the table titles, Tables 37.18 to 37.21 provide inundation modelling results for the following cases: • Table 37.18 - sunny day failure scenario • Table 37.19 - probable maximum flood without the Project (i.e. natural conditions, no dam breach) • Table 37.20 - probable maximum flood with the Project and no dam breach (i.e. reservoir inflows are safely passed through the Site C spillway) • Table 37.21 - probable maximum flood for the dam overtopping failure scenario (i.e. dam breach) Flood flows for the probable maximum flood with dam breach (Table 37.21) are higher than for the sunny day failure scenario (Table 37.18). Flood flows for the two probable maximum flood scenarios with no dam breach (Tables 37.19 and 37.20) are lower than the sunny day failure scenario for locations upstream of the Town of Peace River. At downstream locations, attenuation of dam breach outflows for the sunny day failure scenario results in lower peak flows compared to the two probable maximum flood scenarios with no dam breach.

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		must also be included in the analysis. The modelling of this series of events would not be difficult as they have already have the model and the data.	
pub_0601-014	Peace River Environmental Society (Walter Andreef)	EPP (Emergency Preparedness Plan) I had a look at the BC Dam Safety Regulations of 2000, including amendments up to 30 Nov 2011, which are, fortunately, directly available from the internet. There it is specified under EPP that: 3.1 (1) A dam owner of a dam that has a classification of significant, high, very high or extreme must, in the form and manner and within the time period specified by the comptroller or regional water manager, (a) prepare a plan that describes the actions to be taken by the dam owner in the event of an emergency at the dam, and (b) submit the plan to a dam safety officer for acceptance by the dam safety officer. (2) Subsection (1) applies whether or not there is a term or condition in an approval granted or licence issued that requires the preparation of such a plan for the dam. (3) A dam owner of a dam that has a classification of significant, high, very high or extreme must (a) review, and revise if necessary, the emergency preparedness plan for the dam no less frequently than is specified for the classification of the dam in items 5 and 6 in the Schedule 2 table, and (b) submit any revisions to a dam safety officer for acceptance by the dam safety officer. [en. B.C. Reg. 108/2011, App. 1, s. 4.] The specific Emergency Preparedness Process (EPP) for Site C has not yet been presented in the EIS but we expect it will be prescriptive and thorough as described in the 2007 Dam Safety Guidelines sections 1.3, 4.0, and 5.4.7.	Please see the Technical Memo on Dam Safety.

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pub_0601-015	Peace River Environmental Society (Walter Andreef)	General Throughout the report(s) is mentioned... Maintenance policies and procedures would be implemented to ensure that structures and equipment are maintained in a safe operating condition." (Vol 1 page4-66 line7) I stress the ... would be... This is just an example. The question is: who will implement it and when, and who is to check it? What happens if it is not done? Who is to monitor this? Drainage areas mentioned, notably at the key points Bennett Dam, PCN and Site C are not univocal. E.g. In Vol 1 Appendix E Sec 6.1 (page 25) The contributing drainage are at PCN is 71250 sq km, in the Water Use Plan (page 4) it is 70400 sq km and in Vol2 App I page 6 it is 73000 sq km. I did not locate any references made to the future decommissioning when the Site C Dam is at the end of service. As mankind is progressing to find new alternate forms of energy use, decommissioning is a serious option which should be estimated and included in the economic analyses.	As Described in EIS Section 4.5.1.1 the Operation, Maintenance and Surveillance Plans would be prepared as follows: - for the cofferdams prior to river diversion - for the dam prior to reservoir filling BC Hydro has no plans to decommission the dam. The EIS Guidelines require that the "EIS should state the Proponent's commitment, should a proposal be made in the future to decommission the Site C dam and generating station, to address a plan for decommissioning and restoration in accordance with applicable regulations at that time". Please also see the Technical Memo on Dam Safety.
pub_0601-016	Peace River Environmental Society (Walter Andreef)	GHG (Green House Gases) Vol1 Appendix D Pp. 3 upper right corner. Another point is that the EIS states that there are no Green House Gas (GHG) emission's for new projects! Apart from emissions during construction, including fabrication of equipment which would happen with any energy generating project there are numerous GHGs emissions. Only after 30 years or later, are the GHGs more or less equal to the emssion's of a natural lake. In the same context I don't understand why a Canada Boreal Hydroelectric plant would produce more GHGs than the Site C Dam would. Isn't Site C also considered a boreal area (the colder climate the less GHG), see Vol 1 p7-21 Table 7.14 first 2 lines? Also compare Vol 2 p15-16 Table 15.8 last line with the first line in Table 7.14. The figures in Table 15.8 are much higher than those in 7.14. What is the reason for this?	Estimated emissions for the Project, and for other types of electricity generation options, are cited in Table 7.14. As compared to reported emissions for several other energy sources in Table 7.14, the emissions from the Project, and from other Canadian boreal hydroelectric sources, would be considered very low. The Project would be a Canadian boreal hydroelectric plant, and the different emissions between individual plants are explained by different natural local conditions, for example by the extent of biomass and soils inundated. Table 7.14 should cite 8.5 g / kWh as in table 15.8, for the likely scenario. This update has been added to the List of Errata and Updated Information.
pub_0601-017	Peace River Environmental Society (Walter Andreef)	Volume 1, Section 4.5.1.1, page 4.65, line 3. Comment 1 Where are the Emergency Preparedness Plans?	As Described in EIS Section 4.5.1.1 the Emergency Preparedness Plans would be prepared as follows: - for the cofferdams prior to river diversion - for the dam prior to reservoir filling Please also see the Technical Memo on Dam Safety.

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pub_0601-018	Peace River Environmental Society (Walter Andreef)	Volume 1, Figures; Fig 4.20 Comment 2 The cross-sections do not show the following levels: top of radial gates, bottom of radial gates and crest level of auxiliary spillway	This level of detail regarding the design of the spillway is not germane to the environmental assessment of the Project.
pub_0601-019	Peace River Environmental Society (Walter Andreef)	Volume 2, Appendix I, page 54 Comment 3 2) Runoff from onshore construction activities around the dam site – These sediment inputs have not been explicitly estimated at this time. These inputs would need to be kept below the effluent criteria to be set out in the Environmental Management Plan. *This has to be checked and monitored*	As stated in EIS Section 35.2.2.9 Erosion Prevention and Sediment Control Plan, BC Hydro will implement a sampling program for monitoring sediment releases from construction activities and results will be reported to regulators. Please also see the Technical Memo on Environmental Management Plans.
pub_0601-020	Peace River Environmental Society (Walter Andreef)	Volume 2, Appendix I, page 55 Comment 4 The estimated total fine sediment input from in stream construction activities during the eight-year construction phase ranges from approximately 18,000 tonnes to 30,000 tonnes. For comparison, the mean annual suspended sediment load in the Peace River is 1.36 million tonnes/yr (at Site C).), *It will drop considerably during filling of the reservoir and the period thereafter. This gives rise to degradation the first km d/s of the dam.*	The description of predicted channel erosion and deposition patterns downstream of the Site C dam site is provided in Section 11.8.5.3 of the EIS. As described in this section, bed material in the Peace River is rarely mobilized under the normal range of regulated baseline flow conditions. As described in Section 11.4.5.2.3 of the EIS, flows immediately downstream of the Site C dam would be less extreme than flows at the same location under current conditions; hence no erosion/ degradation of the channel is expected downstream of Site C under normal operational flow conditions.
pub_0601-021	Peace River Environmental Society (Walter Andreef)	Volume 5, Section 35.1.1, page 35-2, line 34 Comment 5 Who will ensure that these plans are made and adhered to?	As described in EIS Section 4.4, all construction activities would be carried out in accordance with the Project Construction Environmental Management Program described in EIS Section 35 Summary of Environmental Management Plans, with legal requirements applicable to those activities, and with the terms of permits issued with respect to those activities. The work would be contracted on the basis that contractors must commit to compliance with the Project Construction Environmental Management Program, legal requirements and the terms of all permits. All construction contracts would contain terms mandating compliance with the commitments made in the contractor's proposal or tender, as applicable. Details of how the construction contractors would manage the construction site to comply with the contract terms will depend on the contractor's construction means and methods and will not be known until after the contractors have been engaged (see EIS Figure 3.1 Project Development Schedule). These details will be provided in the work plans prepared by the contractor as described in EIS Section 35.1. BC Hydro would also develop an oversight program prior to construction that would describe the requirements for monitoring of contractor performance,

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			which is described in EIS Section 36.
pub_0601-022	Peace River Environmental Society (Walter Andreef)	Volume 5, Section 35.2.2.5, page 35-10, line 14 Comment 6 Where is Chapter 9.1.4?	Chapter 9.1.4 refers to Section 9.1.4, which begins on page 9-18 in Volume 1 of the EIS. This update has been added to the List of Errata and Updated Information.
pub_0601-023	Peace River Environmental Society (Walter Andreef)	Volume 5, 37.1.3.1.1, page 37-6, line 30,31 32 Comment 7 Is there a case where the wave generated by 1000-yr wind is smaller than the one generated by a 100km/h wind?	The height of a wind wave is a function of the wind speed, direction and fetch in the wind direction. During the Stage 2 diversion, the normal maximum headpond level is approximately 40 m lower than the maximum normal reservoir level during operation; therefore, the fetch is shorter. For the same fetch the wind wave from a 1000 year wind will always be higher than the wind wave for a 100 year wind.
pub_0601-024	Peace River Environmental Society (Walter Andreef)	Volume 5, 37.1.11, page 37-25, line 37,38 Comment 8 Reference is made to the wrong Section	A cross referencing update has been added to the List of Errata and Updated Information.
pub_0601-025	Peace River Environmental Society (Walter Andreef)	Volume 5, 37.1.11.1.1, page 37-26, line 20 - 21 Comment 9 Reference is made to the wrong Section	A cross referencing update has been added to the List of Errata and Updated Information.
pub_0601-026	Peace River Environmental Society (Walter Andreef)	Volume 5, 37.1.13.2 and further, page 37-46, line 13, 26 Comment 10 All references made to Section 37.1.9.xxxxx are wrong and should be rectified. (as in comments 7 and 8)	A cross referencing update has been added to the List of Errata and Updated Information.
pub_0601-027	Peace River Environmental Society (Walter Andreef)	Volume 5, 37.1.13.2, page 37-46, line 26 Comment 11 The peak PMF inflow is given as 19,300 m3/s. However, in Vol1, Appendix E, Section 6.2, p 25 the PMF inflow (peak) is given as 20,810 m3/s (+7.8%). Which one is correct, and used in the calculations?	The value of 20,810 m3/s was for a preliminary study that has been superceded by the studies described in Section 37.1.11 of the EIS

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pub_0601-028	Peace River Environmental Society (Walter Andreef)	Volume 5, 37.2.2 and further, page 37-48, line 15 Comment 12 All references made to Section 37.1.8.xxxxx are wrong and should be rectified.	A cross referencing update has been added to the List of Errata and Updated Information.
pub_0601-029	Peace River Environmental Society (Walter Andreef)	Volume 5, 37.2.2.2.1, page 37-51, line 33 Comment 13 Reference is made to the wrong Section	A cross referencing update has been added to the List of Errata and Updated Information.
pub_0601-030	Peace River Environmental Society (Walter Andreef)	Volume 5, 37.2.2.3.2, page 37-56/47/58 Comment 14 Table 37.18: Needs an explanation why the Peak Flood Flow at Site C = 77090 m3/s compared to 18530 m3/s and 17100 m3/s in Table 37.19 and 37.20 respectively. Apart from the very high figure in Table 37.18 which could be the result of an instant breach (please explain), explain why there is little difference in the w/ and w/o project situation. Table 37.21: If all outlet systems including turbines fail and the earth dam gets overtopped, please explain why the peak flood flow is higher than the PMF (even if the retarding effect of Site C reservoir is neglected).	Please see the response to pub_0601-013. As described in EIS Section 37.2.2: - The flow at Site C in Table 37.18 is the outflow from a sunny dam breach. - The flow at Site C in Table 37.19 is the probable maximum flood for natural (existing conditions). - The flow at Site C in Table 37.20 is the probable maximum flood with the Project and is less than the flow in Table 37.19 due to the attenuating effect of the reservoir. - The flow at Site C in Table 37.20 is the outflow from a dam breach assuming the probable maximum flood overtops the earthfill dam and breaches the dam.
pub_0601-031	Peace River Environmental Society (Walter Andreef)	Volume 5, 37.2.2.4.1, page 37-61, line 1 Comment 15 Reference is made to the wrong Figure	A cross referencing update has been added to the List of Errata and Updated Information.
pub_0601-032	Peace River Environmental Society (Walter Andreef)	Volume 5, 37.2.2.4.4, page 37-63, line 33 Comment 16 Reference is made to the wrong Figure	A cross referencing update has been added to the List of Errata and Updated Information.

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pub_0601-033	Peace River Environmental Society (Walter Andreef)	Volume 5, 37 in general Comment 17 Consequences of PMF and Dam breaches are calculated but nowhere is indicated what mitigating measures are going to be taken, neither in BC nor in Alberta. Is this (going to be) part of the Emergency Preparedness Plans? In my opinion the population deserves to be informed of what they could expect in some future disastrous situation before the construction of Site C	Please see the Technical Memo on Dam Safety.
pub_0603-001	Smith, George	Introduction: I am a private citizen working as a conservation consultant . Previously I spent some time working for the in Ottawa. I currently live in Gibsons, BC and my work has taken me throughout Canada for many years and in particular to northeastern BC where the proposed Site C Dam is situated. The general scope of my work and beyond has made me aware of the importance of maintaining biodiversity within the ecosystem matrix of Canada, particularly in light of the encroaching impacts that Climate Change will have on the functioning of natural ecological processes that provide the basis for life as we know it. My experiences over many years in northern Canada have alerted me to the ecological, agricultural, cultural and treaty importance of the Peace River Valley in northeastern BC, not to mention its extraordinary physical beauty. My time working on energy issues has raised real concerns about the advisability and need to construct the Site C dam. Thus I feel it my duty to provide you with the following comments on the draft Site C EIS submitted by BC Hydro. I have several concerns about numerous deficiencies of the EIS as submitted but will confine my comments to the temporal and spatial parameters of the EIS as submitted by BC Hydro. Issues: The current project represents the third dam that BC Hydro wants to construct on the Peace River within the borders of British Columbia. The first, the WAC Bennett Dam created the Williston Reservoir, the largest man made anything in North America and had tremendous impacts on the fish and wildlife of the region and of course on the capacity of the local First Nations to survive. Moose and Bull Trout in particular, not to mention Caribou and other ungulate species were key components of the diet of the Treaty 8 and Sekanni and Kaska peoples for millennia. The second dam and reservoir	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - section 12 Fish and Fish Habitat - section 14 Wildlife Resources - section 20 Agriculture - section 19 (Current Use of Lands and Resources for Traditional Purposes) - section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: - Movement of Grizzly Bear and Large Carnivores - Caribou - Agriculture - Cumulative Effects Assessment - Spatial Boundary Selection

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		at the Peace Canyon Dam further exacerbated the environmental and cultural impacts on the First Nation and settler residents along the Peace River. Among other impacts, I have been informed by the former Chief of Wildlife of the BC Fish and Wildlife Branch that the Williston Reservoir alone eliminated habitat for probably 14,000 Moose. The impact of the first two dams on the caribou populations and their capacity to migrate and survive in traditional herds has been well documented. The accumulation of toxic levels of mercury in Bull Trout caused by the dams is also on record and also limited human food sources. These actions taken by BC Hydro have already had serious implications for the wildlife and residents of the area. Constructing this third dam across the only river in North America that carves a valley through the wall of the Rocky Mountains will have additional serious effects on the significant wildlife and thus human population resident in that fertile region of BC and the wildlife corridor connections that the impact area currently provides and will provide in future as climate change impacts grow. The valley bottom lands of the Peace River that would be eliminated by the Site C dam will eliminate critical warm wintering habitat for wide ranging ungulates and wolves. The dam will also damage the spawning grounds for Bull Trout in the Halfway River. The best Class 1 and Class 2 agricultural land in northern British Columbia capable of producing market garden crops for most or all on northern BC residents will also be lost, further diminishing the capacity of the area to provide food and habitat for people and wildlife. The cumulative effects of the three dams will be significant for the capacity of the areas ecological system to continue to provide sufficient habitat for the fish, wildlife and human population to thrive. I hold that the boundaries of the Regional Assessment Area employed by BC Hydro to assess the cumulative effects of Site C dam are far too restrictive to truly analyze the impacts on wildlife such as the wide ranging predator and prey species and on the aboriginal and non-aboriginal communities in the area. Secondly, the cumulative effects temporal perspective of the BC Hydro submission does not consider the impacts of the two previous dams just upstream and thus is temporally deficient in that it does not consider the pending impacts of Site C dam on the ecological and cultural damage already meted on the river and region of which the Site C impact area is certainly a constituent part. Recommendations:	

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		I respectfully submit that the EIS submission by BC Hydro would be far more convincing and real if they were to do two things. First, broaden the spatial boundaries of the Regional Assessment Area to assess the cumulative effects of Site C dam to include the impact area on the wide ranging predator and prey species in the area. Second, broaden the temporal boundaries to include the area impacts on fish, wildlife and both First Nations and non First Nations caused by BC Hydro beginning with the construction of the WAC Bennett Dam. I realize that other organizations and individuals have had the opportunity to provide you with far more detailed specific input on the impacts of the proposed dam, however I felt it necessary to point to what I feel are two key deficient components of that resound throughout the BC Hydro EIS submission. Thank you for the opportunity to provide input into this process.	
pub_0604-001	Goodwin, Stephanie	We are writing to give you a preliminary opinion on your proposition to build yet another dam on the Peace River, at Site C. This is the third time in 30 years that BC Hydro has tried to launch this project. As licenses have been refused twice, this new attempt at building the multi-billion dollar project comes is surprising as the environmental impacts of such a mega-project have not changed to any extent. Greenpeace continues to be concerned about the impact on ecosystems represented in this area as there is no “green” way to flood such an important river valley and no clear accounting of the cumulative impacts of this and other projects on the regions ecosystems. There are two existing hydro projects upriver from this proposed site, and the addition of a third dam would have to respond to some kind of verified need. BC Hydro invokes the energy gap, based on projection of needs in the range of 75,000 to 80,000 GW hours by 2025. The BC hydro projection used in 1989 to explain building Site C in the “recommended resource plan to meet range of forecast demands” projected that needs would be at that level, over 70,000 GW hours, by…2008/09. In fact, real needs had not reached more than 57 GW hours in 2007. Projections of future energy needs seem to be consistently overestimated. At this time, BC Hydro is considering many other energy projects, such as tidal, solar, local hydro and wind power. These projects, combined with strong regulatory	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 Need for, Purpose of and Alternatives to the Project - Section 15 Greenhouse Gases Please also see the following Technical Memos: - Cumulative Effects Assessment - Project Need - Alternatives to the Project - Hydro-Electric Storage and Dispatchable Capacity The Project has not been rejected twice before. May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the Project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro’s long-term resource plans: • In 2006 the BCUC noted that “Site C appears to be an attractive resource under a range of scenarios

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		frameworks, public participation and a strong energy efficiency measures could, from our point of view, reduce the perceived energy gap considerably. Finally, the short-term production of methane and other pollutants by the flood site pose a risk to the atmosphere as methane is a greenhouse gas 30 times stronger than carbon dioxide. Given the severity of the climate change crisis, such risks should be avoided and all possible alternatives prioritized. Additionally, large new power projects such as this proposal should not be considered as potential energy sources to facilitate the extraction of fossil fuels, such as hydraulic fracturing in the northeast, lest we create one environmental problem to facilitate an even greater climate change problem. We would be pleased to discuss our comments with you and answer any questions you may have at your earliest convenience.	for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139).
pub_0605-001	Hadland, Randal	An open letter to the BC and Canadian Ministers of Environment, comments to the BC Environmental Assessment Office, and the Canadian Environmental Assessment Agency, and the review panel, concerning the BC Hydro and Power Authorities Environmental Impact Statement in support of its application for permission to build the proposed Site C on the Peace River and Peace River Valley. Please find enclosed the results of my examination to date of BC Hydros EIS. There are a couple of problems so far that I have noted with the Federal Provincial joint environmental review of the dirty Site C proposal. The first is that, while the process calls for the encouragement of public participation, it appears to work in the opposite direction by allowing only a token amount of time for public review of the very large Environmental Impact Assessment as provided by BC Hydro. The Provincial Crown Corporation has had fifty years, in which to put together its case for this uneconomic development in the hopes of getting approval from somebody. The proponent has spent hundreds of millions preparing its various cases, and building upon its old evidence. The public was given fourty-five days to look at the terms of reference for the proposed studies. That was reasonable but now the public is expected to examine the 15,000 pages of evidence and reference material in the space of a month or two and show the Canadian Environmental Assessment Agency, and the Provincial Environmental Assessment Office, in what ways Hydro has failed to meet its	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for Site C is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. The process for public participation follows the public consultation requirements set out in the BC/Canada Cooperative Agreement. Direction for the distribution of copies of the EIS was provided by the BCEAO and the CEA Agency. BC Hydro's distribution of information and consultation with the public is described in Section 9.1 (Public Information Distribution and Consultation) of the EIS. The EIS is available electronically at the Fort St. John Community Consultation office, where it can be downloaded onto a memory stick from the public computer. The EIS meets the requirements of the EIS Guidelines. In accordance with Section 3.6 of the Terms of Reference of the Joint Review Panel, procedures for

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		obligations under the Environmental Impact Assessment Guidelines. While we take care of our families and work at our jobs. This is insufficient. I am also concerned that BC Hydro is being miserly in making the reports available to the public. During the preparation for and during the Site C Hearings before the BC Utilities Commission in the seventies and eighties, interveners and interested parties could get copies of Hydros evidence for their own analysis. This is not the case this time around. I think that the additional cost of a few more copies of the relevant material would be a minor addition to the costs Hydro has incurred doing their research and compilation. The local libraries have even been told by BC Hydro not to allow lending of their documents, and public libraries are not open enough hours in a sixty day stretch to allow full examination of this much material. If Hydro were to provide additional copies to the libraries in order to allow public viewing at the publics convenience it would have helped, but there is only one copy, it can?t be signed out, and it is stored in boxes under the table in the storage room. Hardly conducive to meaningful public participation. Personally I don?t consider myself part of the computer generation. My internet access is spotty at best, and downloading large amounts of data regarding this review is an expense that I don?t think is my responsibility anyway. Hydro has attempted to limit public participation in this process with its approach to dispensing its EIS. This does not meet the requirements as set out in the Canada - BC Co-operation Agreement on Environmental Assessment, of Meaningful public participation, or that of Reviewable Projects within BC and the Guiding Principles of Fairness, Transparency, Inclusiveness, Comprehensiveness, or Efficiency. Setting an arbitrary limit of 60 days for review does not allow for a public and holistic examination of the proposal. Since the joint review itself is taking several months to look at this proposal the same time should be allotted for the public. I don?t think it is enough to say that Ministry personnel are going to be looking at Hydros material and that therefore we can rest assured that justice will be done. I believe that Ministry staff will do what they think is right from their perspective but their perspective is not that of someone who lives along the valley, and sees the value in it every day. Lacking that focus I think anyone will miss important aspects of such a	the hearing will be set by the Joint Review Panel. All methods of meeting need considered in the EIS portfolio analysis will result in financial obligations to BC Hydro. The comparison of financial attributes between the Project and alternative generation options is provided in Section 5.5.4.3, while the effect of the Project on ratepayer costs is provided in Section 7.1.3. As stated in 7.1.3, "… the Project is expected to result in lower long-term costs to ratepayers than alternative resource options." As a result, the Project would result in a lower financial obligation to BC Hydro than the other available alternative resource portfolios considered. Please see the Technical Memo on Project Costs. BC Hydro has been consulting with communities since 2007, and has led or participated in more than 500 public consultation meetings, presentations, local government meetings, community events and open houses. Input from these consultations informed the Project planning and design, as well as the proposed mitigation measures. In accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012), and in addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. BC Hydro has made copies of the EIS available for the public in the Hudson's Hope and Fort St. John consultations offices. The EIS is also available in BC Hydro's Fort St. John office for anyone who wants to download the EIS onto their own memory stick from BC Hydro's public computer.

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		large and complicated resource as the valley, especially when confronted by huge amounts of paper with writing on it from BC Hydro. 1.1 Guiding Principles from page 1-1 of BC Hydros volume 1 The following principles are set out on page 1 of the EIS Guidelines: Public Participation The overall objective of public participation is best achieved when all parties have a clear understanding of the proposed project as early as possible in the review process. The public will be provided with opportunities to participate in the environmental assessment process. Opportunities to participate are not enough. The opportunities must be equitable. A 60 day timeline for public participation in a proposal as large and destructive as BC Hydros proposal to build a dirty Site C is unfair and prejudicial against meaningful public participation. The second problem that I see is that the kind of Hearing that will occur, should we go that far, is still undecided. There is a need for public participation at each step of this process. If not for public participation at the evidentiary level in the BC Utilities Commission Hearing into Site C, we might have been paying the costs of this very expensive and unnecessary proposal for the last thirty years. Interest at 10%, for example on a three Billion dollar investment, back when Hydro applied to the BCUC, would have seemed quite reasonable at the time. And yet we, the ratepayers and taxpayers of BC would have ended up paying nine Billion in interest alone for a project that was not needed. A total of 12 billion more added to the Provincial debt, uselessly. suggest that the opportunity for public review and consultation on the Site C proposal is being lost because of these problems. I am asking that continuous public opportunity for input be allowed in the name of fairness and transparency. I will continue trying to delve into Hydros paper work, and I would appreciate hearing from the Review that my further concerns will be considered on the same basis as information received as of the last day of the arbitrary 60 day ?Public Participation? period. As well, I am asking for a paper copy of Hydros EIS and supporting documents.	

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pub_0605-002		*This line left intentionally blank for administrative purposes. Comment initially considered as a separate IR was combined with pub_0605-001.*	
pub_0605-003		*This line left intentionally blank for administrative purposes. Comment initially considered as a separate IR was combined with pub_0605-001.*	
pub_0605-004	Hadland, Randal	Existing sources of information concerning public and available data on the Proposed Site C Has the CEAA or the BCEAO had the time or the interest to review the evidence that has already been gone over by the public and the BC Utilities commission, and which led to the refusal, of the Social Credit Government of the day, to allow Hydro to proceed? The 1976 Site C and E studies, which convinced the people of BC that we needed an open, public, and fair Hearing process, led to the BC Hydro Site C studies prepared for those Hearings. The BCUC commissioned its own studies of many aspects of the valley and Hydros proposal, and there is almost a full year of evidentiary presentation and cross examination in transcripts that are still available. Definite proof that Site C is not in our best interests. Public convenience and necessity really are of importance to British Columbians and Canadians. With a further reference to the cost of interest if a mistake were made now as was nearly done thirty years ago, Hydro has made much in its evidence about the variable costs of natural gas in trying to discount that option for electricity generation. The argument is that massive Hydro projects have this amazingly high capital cost, but the long term costs are low because of the use of free fuel. Which is a separate issue itself, given the price of our remaining Peace River Valley, but it also ignores the cost of interest associated with the borrowing of such a huge amount of money. As everyone who lived through the eighties can tell you, variable interest is just that. At a time when everyone is expecting those costs to go up, BC Hydro says it is a non-issue. BC Hydro has in the past been so fiscally minded that it took the costs of borrowing, and as soon as construction was complete, all due interest on the moneys paid were charged as system costs. This might be a very good way of embedding the costs of construction into the general ratepayers bills, but it is insufficient accountability when making a comparison of alternative energy options. Hydros full costs of borrowing	The role of the BCUC is described in Section 1.2, page 2 of the EIS Guidelines and Section 7.1.3, page 7-4 of the EIS: • Section 1.2 of the EIS Guidelines, which sets out the purpose of the EIS, states: "The EIS is not intended to constitute a Certificate of Public Convenience and Necessity for the Site C Project. The Site C Project is exempt from the requirement for a Certificate of Public Convenience and Necessity as per section 7 of the B.C. Clean Energy Act"; • Section 7.1.3 of the EIS describes the role of the BCUC with respect to the Project, which is to review the costs associated with the Project should it proceed in the context of BC Hydro's revenue requirements: "Costs associated with generation projects are recovered from ratepayers based on the revenue requirements collected by BC Hydro, as regulated by the [BCUC] … The manner of cost recovery is determined by the BCUC …". The cost of financing has been included in the Project capital costs described in Volume 1 Appendix F Part 1 (Project Capital Costs) and is reflected in the analysis of alternatives described in Section 5. Please see the following Technical Memos: – Project Costs – Alternatives to the Project

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		must be included in the equation of the cost to society of the proposal, in the same way that private power producers must charge what it costs them to generate power or suffer financial losses when delivering power to BC Hydro.	
pub_0605-005	Hadland, Randal	The Economic/ecological Costs of the proposal. As to the price of the valley, Hydro has done its best to find potential problems for agricultural development of the Class one climate capability soils, when what it was supposed to be doing, according to the Environmental Impact Assessment Guidelines, was studying the impact on the potential of that resource. With the information Hydro was supposed to report, government could compare the relative costs and benefits. It isn't there, and no amount of rationalizing or dismissing of that value is going to change that. BC Hydro should be treating agriculture the same way it looks at the potential Hydro power available from the proposed Site C. In order to do that we would have to tell Hydro to punch a hole through the bottom of its dam, and generate electricity from that. Hydro has not fulfilled its obligations in the EIS Hydro's use of a regional study recommending an ecological protection zone in the Peace River Valley as justification for constraining the future economic value of agricultural production in that area is the height of absurdity. The environmental concern that proposes such an area reflected in public opinion is more likely to allow future farming than it is to allow the total destruction of the area by a proposed Site c. Hydro should provide an analysis of agricultural production potential capability from all lands with high climate ratings now and in the future. When the concerns of the effect of global warming on Agriculture production was raised during Hydro's consultation process did it not cross their mind that people are worried about not just production and consumption within and from the valley? That Global warming is not confined to the Peace River Valley? With a growing population, with peak oil, with depleting aquifers, with reduced summer melt in mountain streams as glaciers disappear, all issues that have been raised many times with Hydro over the last forty years, would it be too much to ask of Hydro that they recognize the potential value to society of a river valley with climate advantages, water available, and tillable land? Hydro's research on the subject is here. ?7.2.1.3 Anticipated Changes in Peace Agricultural Region Food Self-Reliance in Relation to Global Climate Change The anticipated increase in the frost-free period and the number of growing degree days	The scope of the agriculture effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. The EIS reports the agricultural capability, including climate considerations and the improved and unimproved ratings, for all land within the Project activity zone. Further, the EIS provides an estimate of the likely foregone agricultural activity, appropriately taking into account the Province's land use plan for the area which considered the future land use within the Project activity zone, in absence of the Project and associated Order-In-Council reserve. EIS Volume 3, Section 20.2.4 describes the methodology used in assessing agricultural utility, a term used in this assessment to reflect the likelihood of future agricultural use. It takes into account the agricultural capability of the land, and treats equally land which is currently developed and land currently undeveloped for agricultural use. Please see the Technical Memo on Agriculture.

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		will improve agricultural capability and increase the potential for agricultural production. The direction of the potential net effect of climate change is toward increased regional food self-reliance and the potential for the Peace Agricultural Region to supply more food to the rest of the province, as well as increased exports to the rest of the world. ? --But Hydro doesn't inform on how this has economic or environmental consequences. This is a requirement under the EIS Guidelines.	
pub_0605-006	Hadland, Randal	BC Hydro is being cynically hypocritical as well in other ways dealing with the Agricultural Potential. For example Hydro contends that the islands currently in the river are not accessible and therefore can't be considered in assessing the agricultural potential. They then turn around and say 20.3.1.3 on page 20.28; Reservoir; All of the agricultural land within the full supply level of the reservoir would be permanently lost. Permanent loss of agricultural land due to inundation would occur during the reservoir filling stage of construction. Islands that would be created during reservoir filling have not been included in the estimates of land that would be permanently lost. This is the old axiom about wanting your cake and eating it too. Meanwhile the people of the Province, Canada, and the world won't be eating out of the area flooded. All agricultural soils, with the class one climate capability should be evaluated as producing highest value fruits and vegetables. Hydro has not fulfilled its obligations in the EIS. A response is required of Hydro as to why it is not much more likely that the islands created by a rising reservoir in the Peace River Valley would have a lower utility than the islands that are in the river we have. Hydro's evaluation of agricultural potential is also hypocritical in its determination and use of net returns to farming as an indicator of value of the land, and therefore to society. As seen in this comment, ?6.0 AGRICULTURAL ECONOMIC VALUATION METHODOLOGY The value of the future agricultural activity in the Project activity zone area that is forecast to be displaced by the proposed Project is calculated in this section of the report. The approach used largely follows a valuation methodology first used in the 1981 review of the BC Hydro Peace River Site C Hydroelectric Development Agriculture Assessment (CBRC 1979) by the BC Ministry of Agriculture Blue Paper (BCMAF 1982). Adjustments have been	Please see the response to pub_0605-005. The estimates of permanently lost land include islands inundated, remaining, or created, within the reservoir area.

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		made to address changes since that time. The valuation methodology process, described below, consisted of the following: Estimated values from agricultural production are based on expected per acre net economic returns from key crop types. ? At the original BC Utilities Commission Hearing the lawyer for the commission cross examined Hydro's witnesses on how they would determine the value of electricity from the proposed dam. Hydro was quick to agree that they would multiply the number of units of electricity by the price per unit and that would be the answer. Gross returns. In fairness the same methodology applies then for food produced in the future. Again Hydro has not done enough in consideration of the Agricultural value of the valley. BC Hydro needs to do an examination of the potential value to society, of each acre and portion of an acre that has high climate capability for agriculture.	

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pub_0605-007	Hadland, Randal	page 20-14 Table 20.5 Rating of Agriculturally Capable Lands Rating Description Well Suited ? Management inputs can be made by an individual producer ? Technological inputs are low to moderate ? Irrigation is provided if required Suited Moderate to high level of expertise and management ? Technological inputs are moderate to high (e.g., drainage, organic matter additions) ? Economic inputs may be high (e.g., land levelling) ? Risk of crop failure may be moderate to high ? Irrigation is provided if required Not Suited ? Risk of crop failure is high For areas within and near the reservoir, soil characteristics generally do not limit the suitability of most crops, and crop suitability is primarily dependent on climate. Crops that are considered well suited or suited for different improved land capability classes within or adjacent to the proposed reservoir area are listed in Table 20.6. This table provides examples of crops that would be well suited or suited, but is not an exhaustive list of all potential crops that would be well suited or suited. Table 20.6 also provides an indication of the range of crops that can be grown in areas of different land capability classes. A determination of the range of crops that could be grown successfully at a specific location would require a site-specific evaluation of soils and climate. I would say that a site specific evaluation would provide a clearer indication of the potential value of agriculture from the valley. Hydro should provide it. The effort put into determining if the specific land forms at Site C can support a dam, seem justified from Hydro's point of view. Hydro should provide a breakdown of all costs associated with preparing its proposal to build Site C, including in this instance the amount spent examining the geotechnical analysis of the proposed site, and the amount spent analyzing the agricultural capability of the valley, over the last fifty years.	Climatic capability for agriculture ratings are reflected in the land capability for agriculture ratings. EIS Volume 3, Figure 20.2 Maps 1 through 25 show improved land capability for agriculture ratings. Areas shown as having an improved land capability for agriculture rating of Class 1 and 2 are, for the most part, areas of improved climatic capability of Class 1 and 2 respectively. These high capability areas are suited for a wide variety of crops, as described in Section 20.2.3 Agricultural Suitability of Lands of the EIS. A determination of the range of crops that could be grown successfully at a specific location would require a site-specific evaluation of soils and climate, which is beyond the requirements of an agriculture assessment for the EIS.

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pub_0605-008	Hadland, Randal	Derived from table 3-2 on page 17 of the Ag Appendices, 3.1.3 Climatic Capability for Agriculture Based on 1971 through 2000 Climate Normals Climatic capability for agriculture, based on the data from the six BC Hydro climate stations and the Fort St. John Airport, normalized to 1971 through 2000, is presented in Table 3.3. But the conclusions arrived at from table 3-2 are wrong. Hydro says just above that table ? During the growing season in 2011, the Peace River region had higher than normal precipitation during the spring and early summer, and then experienced lower precipitation during the later summer months. In 2011, May to September precipitation at the Fort St. John Airport was 128 percent of normal, and was slightly cooler by -0.2 degrees Celsius.? The temperature difference from Hydro's 2011 data is warmer, rather than cooler, than the Fort St. John mean temps for May to September, the period they say they are evaluating. This would affect Hydro's estimates of growing degree days and frost free days. Hydro should reconcile this problem and carry its new conclusions on through the exercise of determining climate capability for the lands that would be flood destroyed. Does the 2011 FSJ airport data represent a variation from the norm in relation to historical data. Hydro should provide proof that 2011 was a normal year. It is being used as Hydro says at 11-172 volume 2 binder 1 that their study area covers the reservoir, which is 108 km east to west and 68 km north to south. But their weather stations do not venture outside the Peace River Valley at all. Hydro has oversimplified a complex climatic and microclimatic geophysical reality. In doing so Hydro has short-changed the public and the review in our efforts to understand the value of the valley.	Correct temperature data was used in the analysis of climatic capability for agriculture; therefore, the suggested revision would not change the outcome of the agriculture assessment. The statement that the 2011 May to September temperature at the Fort St. John Airport was “slightly cooler by -0.2 degrees Celsius” compared to the 1971 to 2000 normal has been updated. The updated statement has been included in the List of Errata and Updated Information. Volume 3, Appendix D, page 17, line before Table 3.2 should state: “In 2011, May to September precipitation at the Fort St. John Airport was 128 percent of normal, and was warmer by 0.6 degrees Celsius”.

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pub_0605-009	Hadland, Randal	at 11-173 The influence of global climate change on the local microclimate was determined by examining various previous studies of GCC and extracting results for the Peace River Valley. and references From Page 22 of 79 of Volume 3 appendix D 3.3 Analysis of the Effects of Predicted Global Climate Change The effect of potential climate change on future climatic capability for agriculture using the IPCC B1 and A2 emission scenarios was assessed using temperature and precipitation anomalies calculated by the Pacific Climate Impacts Consortium (PCIC) at the University of Victoria (Schnorbus, et al. 2011) for 2050 and 2080. The data provided by PCIC are shown in Tables 3.6 and 3.7. The PCIC model predicts warmer conditions in 2050 in all seasons of the years for each emission scenario, and similarly wetter conditions except during the summer months for the A1B scenario. For 2080 the model predicts warmer and wetter conditions for all seasons for all emission scenarios. Table 3.6: Mean 2050 temperature and precipitation anomalies for the Peace River Valley Region of B.C. But there is no Peace River Valley Region, and a direct extrapolation for a unique landform with already unique climatic capabilities from a regional high plain kind of landform probably doesn't identify all the change that might occur.. If this is the best information that is available to BC Hydro then the applicant should do some original research to determine realistic impacts for the valley itself	BC Hydro considered the results of studies undertaken by the University of Victoria's Pacific Climate Impacts Consortium (PCIC) who have led a variety of studies related to climate change scenarios in British Columbia, including a projection of regional climate change scenarios for the Peace watershed in British Columbia. The results of this study, specifically relevant to the Peace region, were used to consider the anticipated changes in future Peace Region climatic and land capability for agriculture, as presented in Section 20.2.2.1.5 and outlined in detail in Volume 3, Appendix D, Section 3.3. This work was undertaken at a watershed level, and was supported by BC Hydro.
pub_0605-010	Hadland, Randal	From page 23 of 79 in VOLUME 3 APPENDIX D December 17, 2012 Report No. 11-1422-0001 Table 3.7: Mean 2080 temperature and precipitation anomalies for the Peace River Valley Region of B.C. Hydro footnotes, ?Modified from Pacific Climate Impacts Consortium, University of Victoria (Schnorbus, et al. 2011)? Hydro should provide detail on how modification was done and the effects that modification had on their Schnorbus, et also information. Questioning the viable crops, and viable crops after a hundred years of global warming. There are estimates available of the variation in crop suitability and plant species migration due to increased temperatures from global warming. With the loss of agricultural capability in more southern regions, the crops used to estimate the value to society of keeping our Peace River Valley in production should be based on highest value crop production.	The term “modified” in the footnote to Table 3.7 in EIS Volume 3, Appendix D indicates that the data were not reproduced in exactly the same format as it appeared in Schnorbus et al. 2011. The data shown in Table 3.7 is the same as is contained in Schnorbus et al. 2011; it has not been changed. EIS Volume 3, Section 20, Table 20.31 describes future agricultural development scenarios, two of which include vegetable production which is dependent on the more favourable existing and predicted future climate of the Peace River Valley. EIS Volume 3, Section 20.3.8 and Appendix D, Section 6.0 describe changes to agricultural economic activity, including consideration of changes in farm revenues and expenses (primary agricultural economic activity) based on the future agricultural development scenarios. Section 20.3.8.7 describes changes in secondary agricultural economic activity.

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		Using the 2050 predictions for emission scenario B1 the CCA at Stations 1, 2, 3, and 4 is projected to improve from Class 2 to Class 1; at Station 5 CCA improves from Class 3 to Class 1; and at Station 7, the improvement is from Class 1 to Class 1a. For emission scenario A2 the CCA improves to Class 1 at Stations 1, 2, 4 and 5, and to Class 1a at Stations 3 and 7. For the 2080 predictions for emission scenario B1 the CCA improves to Class 1 at all stations except Station 7 where the CCA improves to Class 1a. For the 2080 predictions for emission scenario A2 the CCA improves to Class 1 at Station 5 and to Class 1a at the other stations. Where is the determination of the value of production based on such a future? From the EIS guidelines, 16.2.4 Potential effects of the project and proposed mitigation This will include estimating changes in costs and revenues at the farm level, changes in opportunities for potential new agricultural economic activity, and changes to primary and secondary agricultural economic activity. Opportunities for potential new agricultural economic activity. I don't think Hydro once used the word opportunity in relation to agriculture. Changes to primary and secondary agricultural economic activity justifies the use of ?at table? prices for agricultural production. Hydro must provide this for the highest valued production capability in order to show potential value. Section 20 Agricultural Economy 20.1 Regulatory and Policy Setting ; Some of the land that would be temporarily or permanently occupied by the Project is in the province's Agricultural Land Reserve (ALR), and would need to be approved as either ?non-farm use? or the lands would need to be excluded from the ALR. The ALR is managed in B.C. under the Agricultural Land Commission Act (S.B.C., 2002). You have to love Hydro's phraseology , ?temporarily or permanently occupied.? or flood destroyed, not to put too fine a point on it. This is an example of why the people of the review process should consider the word-smithing of the proponent when evaluating the EIS.	
pub_0605-011	Hadland, Randal	Spatial and Temporal Boundaries ; ?20.1.5.1 Spatial Boundaries The Local Assessment Area (LAA) in the EIS Guidelines for the assessment of the VC of Agriculture is the Project activity zone and the Peace River valley between the Peace Canyon Dam and the Alberta border. The Regional	Section 20.3.11 addresses potential Project effects on regional food production and consumption, in accordance with the EIS Guidelines. The EIS concludes that in the long term, the Project would not affect the future ability of the Peace

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		Assessment Area (RAA) in the EIS Guidelines is the Peace River Regional District Peace River Census Division (Census Division 55, Agricultural Region 8). The areas used for reporting in this assessment were updated from the originally proposed spatial boundaries in the EIS Guidelines. The agricultural land LAA used in this agriculture assessment for reporting on changes to the agricultural land base and changes to individual farm operations is the Project activity zone and the remainder of any farm operations that are within the Peace River valley and that overlap the Project activity zone. The agricultural economy LAA for changes to agricultural economic activity and changes to food production and consumption was expanded to include the Peace River Regional District and the Northern Rockies Regional Municipality, which comprise the Peace River Agricultural Region (Statistics Canada Agricultural Region 8, Statistics Canada 2012a). This wider area coincides with the reporting areas on agricultural economic activity. The RAA for all components of this assessment is the Peace River Regional District and the Northern Rockies Regional Municipality, which comprise the Peace River Agricultural Region, Statistics Canada Agricultural Region 8 (Statistics Canada 2012a). Figure 20.1 shows the boundaries of the agricultural LAAs and the RAA. ? Even if Hydro can get away with the limited spatial boundaries set up through the Guidelines they should still have to consider the economic/ecologic impact on the Peace Region of not exporting food from this section of the Peace Valley in the future, and the impact on future exporters. ie Hydro has fallen short in its considerations and research here as well, the size of area recognized as impacted in Hydro's RAA has shrunk from the earlier site C studies which included an analysis of the area that could be economically supplied by food from the Peace Valley that included much of northern BC. The conditions which make exports from the Peace Valley more likely in the future than they were in the eighties, include higher transportation costs. I think that this was a mistake made during the EIS guidelines review. Since Hydro has already recognized in that earlier work that food produced in the Peace River valley could compete with outside sources of food across northern BC there should have been an update on how that would work out in the future.	region to be food self-reliant in vegetable crops that are climatically adapted and in dairy, meat, and egg and poultry products, considering regional population growth projected over 100 years (EIS, Section 20.3.11).

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pub_0605-012	Hadland, Randal	20.1.5.2 Temporal Boundaries; Project components and activities that could affect agriculture would occur during the construction and operation phases of the Project. Agricultural resources located within the agricultural land and economy LAA would be affected in Years 1 through 8 of the Project. Effects related to the operations phase would begin in Year 8 and may continue through the operating life of the Project. May continue? Perhaps hydro has some insight into a technological advance that would allow us to farm the land when it is under water and the valley slopes are sliding into the reservoir. Society has to have an evaluation of the agricultural potential that would be lost due to the proposed dam and that would last until Hydro decommissions the dam and returns the valley to its agricultural productive capacity. Please see comments on my page 22 concerning Hydro's obligations with respect to natural environment restoration. BC Hydro said in their consultation process that they would look at Potential impacts on Agriculture and Forestry. Hydro is trying to mislead the Environmental assessment authorities by ignoring the input of the public and their own commitments during the public consultation process. With respect to BC Hydro's use of discounting, to minimize the value, of agricultural production from the valleys future. This is nothing short of stealing candy from babies. This aspect should be dropped from the analysis in recognition of the need for intergenerational equity in our decision making.	EIS Volume 3, Section 20, Table 20.16 summarizes permanently lost agricultural land within the Project activity zone by capability. This includes land permanently required for operation of the Project. The analysis adopted the recommendations of recent work by Anthony Boardman of UBC and Mark Moore and Aidan Vingin of SFU on Social Discount Rates for Canada. The rate schedule used is substantially below the social discount rates recommended by current Canadian benefit-cost guidelines and is close to the 3% hybrid rate used by the Ministry of Agriculture and Food in its 1981 Blue Paper evaluation of the effects of the Project on Peace River Valley agriculture. Varying the social discount rate as described in Section 20.3.8.4, page 20-58, lines 21 through 23 is to illustrate the sensitivity of the net present value estimates to changes in the social discount rate. Spending from the agriculture compensation fund will generate secondary economic activity.
pub_0605-013	Hadland, Randal	Energy related concerns. From a recent newspaper editorial comment, ?In late January of this year the Province announced an Industry Electricity Policy Review of the electricity rates that industrial users pay. Barring a substantial increase in industrial rates, the responsibility for dealing with the ongoing deficit and long-term debt at BC Hydro will fall entirely to residential and commercial ratepayers, the latter of whom will simply pass on increased costs to consumers in the form of higher prices for goods and services.? Which is all very true, but the debt and repayment responsibilities also include the economic/ecological costs of Hydros system. These costs have never been calculated for the so-called Heritage resources that Hydro built in the 60?s and 70?s. And yet	Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. BC Hydro serves its customers, including oil and gas customers, pursuant to tariffs (rates) approved by the BCUC and in accordance with the legislated Heritage Contract. Please see the following Technical Memos: - Project Costs - Alternatives to the Project - Cumulative Effects Assessment – Hydro-Electric Storage and Dispatchable Capacity

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		these are costs that the people of BC and Canada are paying and will continue to pay. The cost of human lives, the people who lived in the Peace, Finley, and Parsnip reaches of Williston Reservoir, the cumulative loss of agricultural land, forestry potential, recreation opportunities and wildlife habitat, mineral resources etc. have been largely ignored whenever our ?low cost electricity? is discussed. The province has effectively been subsidizing Industrial consumers by sacrificing our best river valley bottom land. Industry demands for electricity from BC Hydro to power liquified natural gas plants on BCs coast are just another extension of this misguided policy. How misguided it has been in the past we will never know, but for any future projects, including the proposed site c, our politicians and economists and this assessment need an holistic accounting so that rational decisions can be made about what is demand, what is need, and what is profit taking at the expense of the future. We have heard a great deal in the last decade or so about how open markets, free enterprise, and democracy cannot tolerate subsidies. The response to BC Hydros application will be an indicator of the seriousness of our governments and industry to live by the ecological economic bottom line. page 5-1 over the last 7 years, BC Hydro has purchased large quantities of intermittent clean or renewable energy resources.... Intermittent resources are not dispatchable ... their electricity ...cannot be controlled to respond to variations in customer demand...(they) require dependable capacity backup resources. BC Hydro is asking BC society to take responsibility for bad decisions, to sacrifice the Peace River Valley so that energy sources which Hydro has purchased, which don?t match demand, and which are very expensive in other ways as well, can make use of the Provincial system and grid. Sorry, but if that was the deal then Hydro should have made that clear to the public in time for those agreements to be viewed in that light. As mentioned above for the Agricultural studies this lack of clarification until the EIS was presented denied the public the opportunity to have a clear understanding of the project as soon as possible. The public consultation process was short changed. Making an additional mistake to cover an earlier one will make the situation worse. Hydro has not made the case that a shortage of alternatives justify building another costly and dirty dam on the Pace River Valley.	Matters related to other provincial policy issues are outside the scope of the environmental assessment.

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pub_0605-014	Hadland, Randal	Conservation If hydro were to pay ratepayers each a relatively insignificant portion of the 8 billion it is preparing to pay for this proposal I think it would go a long way to reducing demand, load, and environmental destruction of a beautiful and productive river valley. Hydro should provide evidence that they have considered this option. In VOLUME 1 APPENDIX F PROJECT BENEFITS SUPPORTING DOCUMENTATION PART 1 ? PROJECT COST ESTIMATE Hydro gives its proposal a Capacity Credit in developing its Unit Energy Cost, on page 5 of that document. Hydro should provide evidence that its analysis of options give conserved energy and capacity that same credit, as well as a credit for capture of line losses which the Site C proposal accumulates, (from that same page). 5-2 line 25-30 Section 5.4 also surveys the potential alternatives that were screened out on the basis that they are not viable (defined as meaning not practicable or not capable of being implemented) because 1) in the case of certain supply-side resources, they are not permitted by or are inconsistent with B.C. Government legal requirements, or are not technically or economically feasible, and 2) in the case of increased DSM levels, cannot reasonably be relied on because of delivery risk. Hydros approach has been to tell people and businesses in BC that their next project is a ?clean? Site C with images of cool flowing water, white clouds and happy people. Perhaps the risks associated with insufficient public participation in conservation measures would be reduced if BC Hydro were capable of telling the truth about the impacts of its dam building. Hydro should provide the range of options available to them when determining their public awareness campaign for achieving their conservation targets. BC Hydro says that despite their extensive efforts to increase conserved energy and capacity this option still cannot be relied upon because of delivery risk... But risk is everywhere. Hydro has spent hundreds of millions preparing its cases for building the proposal applied for here, and societal reaction should turn them down again. This is a far more worrisome risk because it is such a huge, expensive, and costly project. there has been a preference, in the past, for megaprojects. There is a belief in economies of scale which is not justified when such risk is present. Hydro should analyze the relative risk of small incremental DSM programs and compare them to a	The EIS describes in Section 5 how Demand Side Management (DSM) is BC Hydro's preferred option for addressing BC Hydro customers' future needs, but that BC Hydro must balance DSM's relatively low cost and environmental benefits against the risk that anticipated DSM energy and capacity savings do not materialize. Deliverability risk for DSM is described in Section 5.2.3 (page 5-18). For additional information, please see the following Technical Memos • Demand-side Management • Alternatives to the Project

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		fully costed megadam. Both a planning stage cost comparison and finished product comparison.	
pub_0605-015	Hadland, Randal	Load and demand are used interchangeably.; Chapter 5 introduction Need for the Project page 5-3 Load and demand are not the same thing, but it depends on your priorities, similarly in Page 5-3 Lines 13-18 The BC Hydro demand-side management target To begin this discussion, it is important to underscore BC Hydro?s obligation to serve its customers in accordance with standards established by the British Columbia Utilities Commission (BCUC) pursuant to a number of sections in the B.C. Utilities Commission Act (R.S.B.C., 1996, c.473), including Sections 25, 28, 29, and 30. This service obligation drives BC Hydro?s long-term resource planning process. The obligation of BC Hydro is to serve its customers. The purpose of the BC Utilities Commission, and environmental reviews such as this one is at a minimum to determine that no action of the BC Hydro and Power Authority should leave the province in poorer condition. That cannot be determined unless all factors have been included. Societies priorities have to be different from BC Hydros simply because Hydro does not represent a variety of social concerns. Generating electricity is relatively shallow compared to the larger economy. The potential impacts on the environment, the economy, and the provinces resource base of the proposed dam and reservoir have not been provided to the assessment review. Page 5-3 lines 36-40 BC Hydro continues to face considerable uncertainty in its long-term resource planning environment, including: Load growth and the risk that load growth exceeds or falls below expectations DSM delivery risk, the risk that the response to DSM is less than planned or required Has Hydro done an estimate of the financial risk associated with those two concerns? Hydro should provide details on how it has improved its forecasting over the last thirty years. There should be proof that overbuilding won?t happen this time. In addition, Hydro should do an evaluation of where it will go this time if it is turned down again. Hydro has been not building site c for the last fourty years, and have had exceptionally poor payback for their investment. It is time Hydro and BC try another	As described on page 5-3, BC Hydro uses the terms load and demand interchangeably in the EIS. The role of the BCUC is described in Section 1.2, page 2 of the EIS Guidelines and Section 7.2.3, page 7-4 of the EIS: • Section 1.2 of the EIS Guidelines, which sets out the purpose of the EIS, states: “The EIS is not intended to constitute a Certificate of Public Convenience and Necessity for the Site C Project. The Site C Project is exempt from the requirement for a Certificate of Public Convenience and Necessity as per section 7 of the B.C. Clean Energy Act”; • Section 7.2.3 of the EIS describes the role of the BCUC with respect to the Project, which is to review the costs associated with the Project should it proceed in the context of BC Hydro’s revenue requirements: “Costs associated with generation projects are recovered from ratepayers based on the revenue requirements collected by BC Hydro, as regulated by the [BCUC] … The manner of cost recovery is determined by the BCUC …”. The environmental assessment process for the Project is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada “Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project” (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. Please see the response to pub_0605-016 and the Technical Memo on Alternatives to the Project.

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		option.	
pub_0605-016	Hadland, Randal	Page 5-5 lines 7-10 ?The 2012 Load Forecast has been prepared in accordance with the BCUC?s Resource Planning Guidelines (copy in Volume 1 Appendix D Need for and Alternatives to the Project Supporting Documentation, Part 2), using the same methodological approach for the mid-forecast accepted by the BCUC in long-term resource plan proceedings, including a sector-by-sector analysis of load. The 2012 Load Forecast incorporates the most current third-party economic indicators available to be incorporated, including gross domestic product (GDP) forecasts from the B.C. Ministry of Finance, external economic consultants and customer-by-customer information included in the industrial customer forecast.? A printout of Hydro's record of twenty year forecasts since they started doing them should be provided. A very expensive mistake isn?t something we need right now. Unfortunately we do not have the benefit of the BC Utilities Commission analysis of Hydros application data. What are the relative risks to the economy/ecology of over and under building? The BCUC hearings and orders focus primarily on the financial values. The economic/ecologic costs of overbuilding are just as real as the financial ones. Hydro should provide an analysis of the total costs involved in such a risk.	Producing BC Hydro's "record of twenty year forecasts since they started doing them" would lead to the production of annual load forecast for about the last 50 years, and will not assist with assessing the 2012 Load Forecast to determine if the EIS is sufficient. Load Forecasting methodology has changed significantly over the course of the last 50 years making comparisons not instructive. The major cause of uncertainty in predicting future demand is the inherent uncertainty about the underlying conditions that drive demand. Refer to Section 5.2.3 of the EIS. BC Hydro is basing its analysis of the need for the Project on the 2012 mid-level load forecast. Use of the mid-level load forecast has been endorsed by the BCUC in prior proceedings and is consistent with other public utilities. The 2012 Load Forecast was prepared in accordance with the BCUC's Resource Planning Guidelines (provided as Volume 1 Appendix D Part 2), and was developed using the same methodological approach approved by the BCUC in past long-term resource plan proceedings. Please also refer to the response to pub_0605-017 for additional detail. Please see the Technical Memo on Project Need, which includes a copy of the 2012 Load Forecast. A description of BC Hydro's future DSM savings target, together with the reasons for choosing the DSM target, are found in Section 5.2.2.2 of the EIS. The current DSM target of 7,800 gigawatt hours per year (GWh/yr) of energy savings and 1,400 megawatts (MW) of capacity savings is aggressive and strikes the right balance. Please see the Technical Memo on Demand-side Management for additional information. Based on the 2012 Load Forecast and after taking into account projected future DSM-related energy savings (i.e., net of DSM), BC Hydro forecasts annual energy system demand growth of about 0.8% per year. BC Hydro analyzed the risks of overbuilding and underbuilding vis-à-vis the Project in the EIS as part of the evaluation of uncertainty in Section 5.2 and the portfolio analysis in Section 5.5. BC Hydro attempts to match the in-service date of projects with the need for new energy and/or capacity resources. To address the potential uncertainty in the timing of energy and capacity requirements, the EIS portfolio analysis examines two Project in-service dates – F2022 and F2024. There is a need for new energy resources in F2024 and a need for new capacity resources in F2025

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			based on the mid-level 2012 Load Forecast, and after taking into account both BC Hydro's current DSM target and proceeding with Revelstoke Unit 6 which is a capacity project anticipated to deliver 488 MW of dependable capacity; refer to tables 5.8 and 5.9 of the EIS. A number of load-resource balance (LRB) uncertainties are described in Section 5.2 3 of the EIS that must be considered in establishing the need for the Project. Given these LRB uncertainties, BC Hydro considers it prudent to proceed with the Project for its earliest in-service date; refer to page 5-22 of the EIS. The portfolio analysis addresses a situation where the Project is placed in-service in advance of the need for energy or for capacity. For example, in a situation where the Project's energy output is surplus for a period of time, the financial/economic implications are analyzed using the difference between the cost of the Project's energy and what can be obtained from 'the market'. The market is valued using a third party forecast for Mid-Columbia post market electricity prices ranging from about $25/MWh to $50/MWh; refer to Section 5.5.3.5 of the EIS. The EIS also describes the environmental and socio-economic attributes of the Project in Volumes 2 and 3, and thus addresses the 'risks to ecology and the economy of overbuilding'. BC Hydro assessed the risk of underbuilding in qualitative terms in Section 5.2.3 of the EIS. BC Hydro has a legally binding service obligation set out in the Utilities Commission Act; refer to the EIS, page 5-3. The consequences of not being able to meet customer demand at the peak load in particular could be severe. Generally external markets can be counted on to supply some volume of energy across the year, although this creates financial risk with respect to the cost of purchased energy. However, as described on page 5-19, it may not be possible to secure capacity from the external market during winter peaks because of: (1) the illiquid (thinly-traded) nature of the market for capacity; (2) insufficient transmission capacity; and/or (3) the U.S. market not having a surplus to sell. Consistent with good utility practice and prior BCUC decisions, BC Hydro develops Contingency Resource Plans because the consequences of not being able to meet customer demand at the peak load in particular could be severe. Refer to table 5.12 and pages 5-20 and 5-12 of the EIS for a description of BC Hydro's Contingency Resource Plans. Please see the Technical Memo on Alternatives to the Project.
pub_0605-017	Hadland, Randal	Page 5-4 lines 14-19 In Section 5.2.2, the resulting energy and capacity LRBs (Load Resource Balances) are provided. First, the LRBs are shown without the current BC Hydro DSM target. Second, the LRBs are depicted with the DSM target and Revelstoke Unit 6, as this is a project that BC Hydro proposes to undertake in advance of the Project, due to the need for dependable capacity. It is this second set of LRBs that provides the basis for	Please see the response to pub_0605-016 with respect to questions and statements regarding the 2012 Load Forecast. BC Hydro rejects the claim that in setting out the Electricity Self-Sufficiency Regulation with respect to use of the mid-level forecast for planning purposes, or indeed other relevant legislation and regulations referred to in Section 5 of the EIS and elsewhere, BC Hydro is somehow only expressing

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		demonstrating the need for the Project and sets the context for potential alternatives to the Project. The EIS is based on BC Hydro?s mid-load forecast because The B.C. Electricity Self-Sufficiency Regulation (B.C. Reg. 315/2010) enacted under the Clean Energy Act prescribes the mid-load forecast as the forecast to be used for the purpose of determining the self-sufficiency requirement The mid-load forecast is the forecast that BC Hydro uses to determine the need for capital projects, both internally and in applications to the BCUC. The BCUC endorsed the use of the mid-load forecast for purposes of determining need in its 2008 Long-Term Acquisition Plan Decision (BCUC Order G-91-09, Reasons for Decision, page 54 and Directive 6). Use of the mid-load forecast is consistent with other public electric utilities This all may be true but it doesn?t mean that any given mid load forecast can?t be examined for error, or excessive optimism. It may be entirely true that BC Hydro is expected to develop a mid range forecast for planning purposes, but that process is not infallible, in fact it is very fallible, and when society is considering spending 8 billion dollars plus associated interest into eternity, plus suffer the destruction of equally or more valuable resources arising from that investment, additional information, beyond that supplied by the proponent is necessary. The self serving aspects of such a forecast are evidence enough of the need for a third party forecast. Lots of emphasis on the need to accept mid range forecast. Compare to 1980 forecast. The fact that Hydro is using a mid range doesn?t mean that it is a good forecast, only that it is a mid range one. The point that Hydro is making; that they have certain regulations that they have to follow is only an expression of those regulations which they want to follow. Consider the material from the Provincial Energy Plan concerning restoration of the environment. ? Aim not only for the lowest impact, but also for restoration of the ecological features of the surrounding landscapes. referenced on page 22 of my submission	‘those regulations that it wants to follow’. Consistent with other environmental assessments and Section 4.1 of the EIS Guidelines, BC Hydro set out “the fundamental rationale for proceeding with the development [of the Project] at this time within the relevant legal and policy context” (EIS Guidelines, page 15). It is unclear what “Provincial Energy Plan” is being referred to for purposes of considering “restoration of the environment”; regardless, the EIS describes BC Hydro’s proposed Project mitigation measures in Section 39 of the EIS.

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pub_0605-018	Hadland, Randal	Page 5-9 lines 35-43, The Electricity Self-Sufficiency Regulation provides that the water conditions prescribed for purposes of the Heritage hydroelectric capability are ?average water conditions?. ?Water conditions? refers to how much water BC Hydro has in its reservoirs, and ?average water conditions? refers to the mean output of the BC Hydro Heritage hydroelectric resources over the 60-year recorded period of stream flows between October 1940 and September 2000. The energy LRBs in this EIS are based on firm energy capability ? for the heritage hydroelectric resources, this capability is defined under average water conditions; for all non-heritage hydroelectric resources, like run-of-river hydro, BC Hydro uses critical water conditions (the most adverse sequence of stream flows occurring within the same 60-year period). Is mean capacity output of the system over the 60 years an accurate measurement of todays updated system? ie with Revelstoke and Mica improvements, with the increased capacity of WAC Bennett Dam won?t that average water condition produce more capacity than it did during that averaged span? BC Hydro has been subject to the worst kind of government intervention in the marketplace. It has been subject to un-informed, prejudiced, and non-transparent kind of government intervention. The fact that this process has gone this far based on such a faulty regulation is evidence that Hydros system is broken and needs to be fixed. Allowing BC Hydro to build Site C would just prolong the agony of financial recovery from past mistakes.	The Heritage hydroelectric capability reflects an analysis of the mean energy output of the BC Hydro Heritage hydroelectric resources based upon today's facilities but with inflows based upon the 60-year streamflow record described in Section 5.2.1.2 of the EIS. This analysis includes and models resources that are existing or committed since 2000 such as Revelstoke Unit 5, Mica Units 5 and 6 and additional Resource Smart projects. The prescribed water conditions do not change the capacity contribution of these facilities.

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pub_0605-019	Hadland, Randal	page 5-10 5.2.1.2 Existing and Committed Supply-Side Resources BC Hydro used Effective Load Carrying Capability (ELCC) to represent the capacity contribution from intermittent clean or renewable IPP resources such as wind and run-of-river resources in Table 5.5 below, and the capacity LRBs in Tables 5.7 and 5.9. The ELCC method for evaluating wind and run-of-river capability uses a probabilistic approach that is sensitive to wind and run-of-river availability, rather than relying on a deterministic value for available dependable capacity. The ELCC contribution to the system is largely drawn from BC Hydro?s large and reliable hydroelectric system. The ELCC method may overstate the capacity contribution of these intermittent clean or renewable resources. The incremental ELCC contributions of intermittent clean or renewable resources will decrease as more of these intermittent resources come into service. But does Hydro have any evidence of this? Hydro should present its calculations and considerations as done using an effective load carrying capacity method. Hydro must show why it must rely more on intermittent clean or renewable resources? ie Hydro outlines options like geothermal but don?t state whether this clean and renewable non-intermittent resource has the benefit of a capacity credit similar to the one that the proposal gets, or that DSM should get.	BC Hydro's use of effective load carrying capability to represent the capacity contribution from intermittent clean or renewable IPP resources is consistent with other utilities. For intermittent clean resources that have a low deterministic value for available dependable capacity, additional capacity benefits can be recognized through the use of a probabilistic approach where the intermittent resources are aggregated with the storage and dependable capacity of BC Hydro's hydroelectric system. Please see the Technical Memo on Hydro-Electric Storage and Dispatchable Capacity. As shown in Table 5.23 of the EIS, it is expected that a geothermal resource would be able to deliver dependable capacity. For resources with high levels of dependable capacity, both the dependable capacity and ELCC become similar numbers. As shown in table 5.17 of the EIS, geothermal was considered an available resource in the analysis of alternatives. In Section 5.5.2.7 of the EIS, BC Hydro describes the attributes of geothermal and concludes that the geothermal resource option should not be in the portfolio analysis in Section 5.5.4 for the reasons stated on Page 5-52 Lines 24-31 and Page 5-53 Lines 1-7.

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pub_0605-020	Hadland, Randal	page 5-10 lines 8-12 ? Pursuant to Section 2 of the Burrard Thermal Electricity Regulation (B.C. Reg. 319/2010), Burrard?s dependable capacity of 900 MW will be phased out as Mica Units 5 and 6, the Interior to Lower Mainland Transmission Reinforcement Project, and the third transformer at the Meridian Substation are introduced into service For about thirty-five years Burrards thermal capacities has been phasing out. Those nine hundred megawatts of capacity just keep getting left in the system, because their value to society for peaking and emergency use has, so far, outweighed the benefits of that shutdown. That is likely to continue to be the case. In fact from the Provincial Energy Plan page 14. Burrard Thermal generating Station A decision regarding the Burrard Thermal Natural Gas Generating Station is another action that is related to environmentally responsible electricity generation in British Columbia. Even though it could generate electricity from Burrard Thermal, BC Hydro imports power primarily because the plant is outdated, inefficient and costly to run. However, Burrard Thermal still provides significant benefits to BC Hydro as it acts as a ?battery? close to the Lower Mainland, and provides extra capacity or ?reliability insurance? for the province?s electricity supply. It also provides transmission system benefits that would otherwise have to be supplied through the addition of new equipment at Lower Mainland sub-stations. By 2014, BC Hydro plans to have firm electricity to replace what would have been produced at the plant. Government supports BC Hydro?s proposal to replace the firm energy supply from Burrard Thermal with other resources by 2014. However, BC Hydro may choose to retain the plant for ?reliability insurance? should the need arise. So Hydros assertion that Burrard will be phased out is not based on fact but rather on future possibilities, and those possibilities while touted during the ?82 hearings, have not happened so far. There is every indication and past experience confirms that in the face of need the province does not throw away a backup contingency unit like Burrard thermal. Hydro should respond to the reality of Burrards continuing existence.	The B.C. Environmental Assessment Office, the Canadian Environmental Assessment Agency, other government agencies and indeed any Joint Review Panel must recognize existing legislative parameters. Thus consistent with Section 4.2.1 of the EIS Guidelines, BC Hydro identified those potential resources that are legislatively barred in Section 5.4.2.1 of the EIS, including Burrard Thermal Generating Station (Burrard) and spot-market power: • BC Hydro is prohibited from planning to rely on Burrard for energy (sections 3(5), 6(2)(d) and 12 of the B.C. Clean Energy Act) or for capacity after Mica Units 5 and 6, the Interior to Lower Mainland Transmission Reinforcement Project and the third transformer at Meridian are in-service (Authorization for Burrard Thermal Electricity Regulation). Therefore, Burrard is not a viable alternative to the Project; • BC Hydro is prohibited from planning to rely on spot-market power (section 6(2) of the Clean Energy Act). Therefore, spot-market power is not a viable alternative to the Project.

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pub_0605-021	Hadland, Randal	page 5-11, In Table 5.5 Dependable Capacity in F2022 Hydro makes the case that their dependable capacity is not as great as it is. Aside from the fact that the numbers in a, b, and c do not add up to d, one has to wonder about the wisdom of turning large sums of money, for example 8 Billion dollars, over to an organization whose credo seems to be, Ours Is Not To Wonder Why? This further example of backcasting electricity demand in the form of an order from the previous Liberal government of BC for additional security, which Hydro simply must obey, which the BC Utilities Commission is unable to look at anymore, And which is referenced here...., {from BC energy plan page 15 BC utilities Commissions role in Social and Environmental Costs and Benefits The BC Energy Plan clarifies that social, economic and environmental costs are important for ensuring a suitable electricity supply in British Columbia. Government will review the BC Utilities Commissions? role in considering social, environmental and economic costs and benefits, and will determine how best to ensure these are appropriately considered within the regulatory framework.} and which is a large part of the justification for Hydros application to build this one last megadam on the Peace River, is itself, not justified in this EIS. If the public does not have the opportunity to examine this issue in a full and transparent environment here, in the environmental review process for the proposed site c, then we, the participants in this process are not doing the job the BC Government considers important enough to ask the Federal government for help with. The BC Minister of Energy should be called upon to explain the rationalization behind the necessity of additional 14% reserve.	Consistent with other utilities and as described in Section 5.2.1.2 of the EIS, BC Hydro uses dependable capacity for non-intermittent resources and effective load carrying capability (ELCC) for intermittent resources in the capacity load resource balance (LRB). These values represent the reliable capacity supply which is presented in Table 5.5 of the EIS and used in determining the need for the Project presented in Table 5.9. In Section 5.2.1.2 of the EIS, BC Hydro stated that the ELCC method may overstate the capacity contribution of intermittent clean or renewable resources. This sentence was referring to the uncertainty associated with knowing the actual operation of these intermittent facilities once they are constructed and associated with a probabilistic calculation that may not represent what happens physically in the system during contingency or high load conditions. As such, the ELCC is an estimate at this time that is subject to modification with operational experience. As described in Table 5.5 of the EIS, reserve requirements are subtracted from the system generating capacity to reflect the reliable generating supply that is likely to be available to meet load at all times during the year. BC Hydro's current load and generating resource characteristics indicate that a generating capacity reserve margin of 14% is appropriate for planning purposes. The calculation of reserve requirements is informed by periodically conducting probabilistic generating capacity adequacy studies that determine the generating capacity reserve required to achieve a loss of load expectation of one day in ten years, a criterion widely used by electric utility resource planners. The 14% reserve margin provides an adequate buffer over customer load conditions to have generators that can vary with customer load changes, can vary with the output of intermittent clean resources, can backup generators should they face a forced outage or can backup generators to allow the utility to remove them from service periodically for maintenance purposes. As described in Section 5.2.1 of the EIS, throughout Section 5.2 and Section 5.3, capacity values have been rounded to the nearest 50 MW – this is the reason why the values [(a), (b) and (c)] in Table 5.5. of the EIS do not sum to the value shown in (d) - the values in Table 5.5 were rounded after the sum was determined.

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pub_0605-022	Hadland, Randal	page 5-13 Lines 27-33 Programs are designed to address remaining barriers to energy efficiency and conservation after codes and standards, and rate structures, and thereby capture additional conservation potential. Programs include load displacement projects, which reduce the energy demand that BC Hydro must serve as a result of existing customers self-supplying through conservation or through customer self-generation. While BC Hydro has extensive experience working with customer groups to encourage energy conservation and efficiency, the fact that DSM programs are targeting more aggressive levels of savings and that they depend on voluntary participation makes forecasting DSM savings uncertain. Two key drivers of DSM program savings are 1) participation rate of customers for that program, and 2) energy savings per participant. Voluntary and volunteered, If it was depending on voluntary surrender of our river valley then I could accept that DSM must depend on voluntary conservation. There is an obligation on the part of BC Hydro to at least stress to their customers that the valley could be saved with their savings. Instead Hydro comes out with this nonsense Clean Energy project proposal in an effort to slide their dam through under our noses. Some justification for Hydros position that conservation must be customer initiated would be of help to the public and the Review.	BC Hydro approaches DSM by utilizing a strategic framework which provides three contexts through which conservation and efficiency actions can be influenced, which are not limited to the actions of the individual. The strategic framework which guides BC Hydro's efforts contains the following elements: • Individual context – refers to the context of the individual consumer who makes decisions about energy-using equipment and buildings and how to operate or use them. • Market context – refers to the context of the marketplace where a number of broad parameters, such as energy prices and energy efficiency regulations, influence all consumer decisions and energy consumption. • Societal context – refers to the context of the community or society where societal norms and expectations and patterns of living and work influence market parameters and individual choices. As described in the EIS, BC Hydro employs three DSM tools (codes and standards, rate structures, and programs) and a number of supporting initiatives spanning the individual, market and societal contexts to influence energy consumption and achieve targeted energy savings. While BC Hydro has extensive experience working with customer groups to encourage energy conservation and efficiency, the fact that DSM programs depend on some level of voluntary participation introduces an element of uncertainty in forecasting DSM savings.
pub_0605-023	Hadland, Randal	Page 5-13 Demand-Side Management Tools The DSM target consists of expected savings from the following three main tools: ? Codes and standards are public policy instruments enacted by governments ? such as building codes, energy efficiency regulations, tax measures, and local government zoning and building permitting processes ? to influence energy efficiency. The DSM target relies on both Federal and Provincial Government implementation of a suite of changes to existing codes and standards. ? Rate structures are aimed at conserving energy, promoting energy efficiency, or reducing the energy demand that BC Hydro must serve, such as inclining block (stepped) rate structures. BC Hydro has conservation rates in place (or with planned implementation) for over 90% of its domestic load. Over the past five years, Hydro implemented four conservation rate structures for residential, commercial, and industrial customers. Estimates of energy savings from rate structures is uncertain,	BC Hydro's approach to DSM includes both contract and non-contract measures within its programs. As suggested, programs within the industrial sector can, at times, be suitable to a contract approach, which BC Hydro pursues as warranted. Typically, this approach is not conducive to smaller DSM programs, particularly in the residential sector because of transaction and management costs along with customer acceptance and uptake

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		particularly in a low electricity rate jurisdiction such as BC Hydro?s service area. ? Programs are designed to address remaining barriers to energy efficiency and conservation after codes and standards, and rate structures, and thereby capture additional conservation potential. Programs include load displacement projects, which reduce the energy demand that BC Hydro must serve as a result of existing customers self-supplying through conservation or through customer self-generation. While BC Hydro has extensive experience working with customer groups to encourage energy conservation and efficiency, the fact that DSM programs are targeting more aggressive levels of savings and that they depend on voluntary participation makes forecasting DSM savings uncertain. Two key drivers of DSM program savings are 1) participation rate of customers for that program, and 2) energy savings per participant. In addition to these tools, there are six supporting initiatives ? public awareness and education, --community engagement, --technology innovation, --codes and standards support, -- information technology, --and indirect and portfolio enabling ? that provide a critical foundation for awareness, engagement, and other conditions to support the success of BC Hydro?s DSM initiatives. Demand side resources, the option of BC Hydro buy back of conserved power has been around for a long time. Given that Conservation is widely acknowledged to be the most economically sensible option; has Hydro considered issuing its own contracts with consumers in which Hydro would pay for conservation measures that would then allow Hydro to sell the power elsewhere? ; Isn?t Hydro essentially doing this in its industrial conservation programs? I haven?t seen any figures describing how electricity efficiency in any of Hydros customer classes have been affected by the last twenty years of conservation efforts. Hydro should provide this information to allow the public an understanding of where we are in relation to our options for the future. A breakdown by sector as well as a breakdown by energy consumption unit, and the relative efficiency of the full range of electricity using appliances for each sector.	

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pub_0605-024	Hadland, Randal	page 5-15 Load resource balance uncertainty Factors that can lead to lower load than forecast include: o An increase in the value of the Canadian dollar, which would slow commodity exports from B.C. o Reduction in growth in China and elsewhere, leading to a slowing of commodity demand and lower prices Another factor which might lead to lower load than forecast might be conservation efforts if the proponent were to try and get more. And from page 5-16, lines 16-18 The uncertainty bands generated as part of the Load Forecast do include the effects of variable economic drivers such as GDP (as provided from third-party economic forecasts), but the mid-load forecast inherently assumes smoothed projections of future growth. --- but is such inherent optimism justified by a necessary co-relation between gdp and electricity usage? An economic development plan that emphasized a conservation economy would reverse any existing experience. Hydro should provide copies of its forecast and all backup material. and from the same page, 5-16 lines 30-32 For the purposes of this EIS, potential non-compression LNG demand could be between about 800 GWh/year to about 6,600 GWh/year of additional energy demand, corresponding to about 100 MW to 800 MW of additional peak demand. And yet from page 5-5 lines 30-32 Liquefied Natural Gas Load; The 2012 mid-load forecast presented in this section does not include potential LNG load, which is discussed in Section 5.2.3. Hydro needs to clarify whether this possible load has been included in its forecast or not.	Smoothed out projections of future load growth that do not expressly include future recessions or booms does not mean that there is "inherent optimism" in the 2012 Load Forecast. The purpose of the mid-level 2012 Load Forecast is "to predict average long-term trends in load growth, which will invariably include periods of lower and higher economic growth than the average" (EIS, page 5-16). The EIS in Section 5.2.3 provides that consistent with BCUC decisions, the mid-level 2012 Load Forecast "assumes smoothed projections of future load growth" because among other things the BCUC found that "it is not credible to forecast the precise timing of economic boom and bust cycles". Please see the response to pub_0605-016 with respect to questions and statements regarding the 2012 Load Forecast. Please see the Technical Memo on Project Need, which includes a copy of the 2012 Load Forecast executive summary. BC Hydro's overall plan to address the energy and capacity gaps does emphasize conservation. DSM is BC Hydro's preferred resource and this is why it is the first resource looked at to address the gaps depicted in tables 5.6 and 5.7. A description of BC Hydro's future DSM savings target, together with the reasons for choosing the DSM target, are found in Section 5.2.2.2 of the EIS. Additional information concerning DSM delivery risk (the risk that forecasted DSM energy and capacity savings do not materialize) is found in Section 5.2.3 of the EIS. BC Hydro believes that the current DSM target of 7,800 GWh/yr of energy savings and 1,400 MW of capacity savings is aggressive and strikes the right balance between the low cost/footprint and the level of deliverability risk. For additional information, please see the following Technical Memos: • Project Need • Demand-side Management There is a need for new energy and capacity resources within the next 10 to 15 years without any potential liquefied natural gas (LNG) demand. Please see the Technical Memo on Project Need for additional information.

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pub_0605-025	Hadland, Randal	Page 5-19 energy conservation risks, there are risks associated with delivery of site c electricity as well. There is the risk that people won?t want to pay for site c power, and that our provincial utility will succumb to the Utility death spiral of higher rates and lower demand. There is the risk that social factors will get out of balance with the urban and industrial footprint impacting too heavily on remote and beautiful areas. There is the risk that the food that can be produced in the valley will be needed. I want to know whether Hydro has given consideration to the risk that Hydro will receive more DSM than they are aiming for? I was at a BC Hydro rate hearing about 1991 where hydros chief economics witness (1) said he didn?t know what Hydro would do with all the conserved power it would get if it seriously went out to get it. So has Hydro done an analysis recently, of any sort, that would advise them of such a risk? lines 8-9 The Utilities Commission Act service obligation means that BC Hydro must make sure its customers demand is met at the peak load every day Since this Act is so important to Hydro and its application to destroy another section of the Peace Valley, and since this Act is the responsibility of the Government, the Minister responsible should be questioned, and the Ministry provide evidence as to the logic and evidence that this destruction is necessary in order to have this modicum of security.	All methods of meeting need considered in the EIS portfolio analysis will result in financial obligations to BC Hydro. The comparison of financial attributes between the Project and alternative generation options is provided in Section 5.5.4.3, while the effect of the Project on ratepayer costs is provided in Section 7.1.3. As stated in 7.1.3, "… the Project is expected to result in lower long-term costs to ratepayers than alternative resource options." As a result, the Project would result in a lower financial obligation to BC Hydro than the other available alternative resource portfolios considered. Please see the Technical Memo on Project Costs for an additional description of the financing of the project. Please see the response to pub_0605-016 for discussion of the risks associated with underbuilding or overbuilding.

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pub_0605-026	Hadland, Randal	page 5-20 As noted above in Section 5.2.1.2, the ELCC method may overstate the capacity contribution of intermittent clean or renewable resources. Would the Effective Load Carrying Capacity method have overstated the capacity contribution of Site C if it had been used in 1980? Hydro has to give a list of the criteria and assumptions used in the ELCC method. Was the ELCC method used on tidal, geothermal, and passive solar heating? and, IPP Delivery Uncertainty ? IPP Attrition and Price Risk and EPA Renewals Has Hydro eased its mind by contacting the existing bioenergy EPA holders in an effort to forecast their perseverance in the industry? Has Hydro included any future bioenergy projects that do not already have EPAs? Hydro is carrying on its longstanding tradition of backcasting future demand. Hydro determines where it wants to go, in this case it wants to build the Site C dam, then it determines how to manipulate the numbers to come up with an energy demand that would justify building Site C. It would that is if we weren?t aware of their old tricks. In the same way that former Hydro employees justified building earlier mega dams long before they would otherwise have been developed.	As described in Section 5.5.1.2 of the EIS and shown in Table 5.23, BC Hydro uses dependable generating capacity (DGC) to characterize the capacity contributions of non-intermittent resources, including the Project, in the load resource balance (LRB). The effective load carrying capability (ELCC) method is used to determine the LRB capacity contributions of all intermittent resources including tidal, wave, wind, solar and run-of-river hydro. As described in the response to pub_0605-019, and shown in Table 5.23 of the EIS, BC Hydro relies on the DGC from geothermal projects rather than the ELCC. IPP capacity contributions in Table 5.5 of the EIS reflect the sum of DGC for non-intermittent IPP supply and ELCC for intermittent IPP supply as prescribed by resource type. Generally, the DGC and ELCC assumptions for each resource type are consistent with the assumptions shown in Table 5.23 of the EIS. As described in Section 5.2.3 of the EIS, BC Hydro reviewed its existing bioenergy EPAs and has increased its reliance on bioenergy EPAs in the LRB by assuming that about 50% of bioenergy EPAs will be renewed. As shown in Figure 5.11, BC Hydro included future biomass projects from the 2010 Resource Options Report in the portfolio evaluation described in Section 5.5.4.1 of the EIS. In the Clean Generation Portfolio approximately 900 GWh of future biomass projects were included and in the Clean + Thermal Portfolio approximately 300 GWh of future biomass projects were included. The characteristics of these were determined as part of the 2010 Resource Options Report described in Section 5.4.1.1 of the EIS. Please see the Technical Memo on Project Need.
pub_0605-027	Hadland, Randal	page 5-21 Decommissioning of the proposed Site C From the provincial energy plan Aggressive Public Sector Building Plan The design and retrofit of buildings and their surrounding landscapes offer us an important means to achieve our goal of making the government of British Columbia carbon neutral by 2010, and promoting Pacific Green universities, colleges, hospitals, schools, prisons, ferries, ports and airports. British Columbia communities are already recognized leaders in innovative design practices. We know how to build smarter, faster and smaller. We know how to increase densities, reduce building costs and create new positive benefits for our environment. We know how to improve air quality, reduce energy consumption and	Please see the response to pub_0254-001.

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		make wise use of other resources, and how to make our landscapes and buildings healthy places for living, working and learning. We know how to make it affordable. Government will set the following ambitious goals for all publicly funded buildings and landscapes and ask the Climate Action Team to determine the most credible, aggressive and economically viable options for achieving them:.... ? Capture the productivity benefits for people who live and work in publicly funded buildings such as reduced illnesses, less absenteeism, and a better learning environment. ? Aim not only for the lowest impact, but also for restoration of the ecological features of the surrounding landscapes. BC Hydro is to aim for the restoration of the ecological features of the surrounding landscapes. I would think that part of that process would be developing a funded plan for doing so. And yet Hydro says,,, ?4.6 Project Decommissioning BC Hydro expects that the Project would be operated for over 100 years, and that decommissioning of permanent structures is not currently contemplated. In addition to the dam, generating station, and spillway, the following permanent facilities would be retained and maintained: ? Substation ? Transmission lines ? Project access road ? Realigned Highway 29 ? Hudson?s Hope shoreline protection ? North bank access roads Should a proposal be made to decommission the Site C dam and generating facilities in the future, BC Hydro would address a plan for decommissioning and restoration in accordance with the applicable regulations at that time. An Environmental Protection and Monitoring Plan would be developed for decommissioning to implement applicable measures for environmental protection, and to restore the area to conditions deemed acceptable at the time of decommissioning. Further details on decommissioning would depend on regulations and practice at the time of a decision to decommission.? Hydro wants to build the dam, without recognizing the existing and future values of the land, it wants to operate and sell electricity from the dam without including the costs of resources lost or increased expenses for consumers because of the lost resources, and it wants to shovel the costs of	

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		decommissioning the project off onto the residents of the future who it is currently harming. Priceless. Hydro should provide a detailed plan for the restoration of the ecological features of the landscapes, and provide Hydros preferred method for funding this restoration from rates collected.	
pub_0605-028	Hadland, Randal	Page 5-22 5.3.1 Meeting Identified Need The Project would provide about 5,100 GWh/year of average energy and up to 1,100 MW of dependable capacity. Up to 1100 megawatts of dependable capacity? Either it is dependable capacity or it isn?t. Hydro needs to explain why dependable capacity isn?t. Under what river flow conditions, and what downtime conditions. As well, taking the proposed dams generating capacity from 900 megawatts to 1100 megawatts infers a change in reservoir flow patterns, Hydro needs to explain how this change will impact on shoreline stability on a resulting reservoir.	As described in Section 5.5.1.2 of the EIS and shown in Table 5.23, BC Hydro uses dependable generating capacity (DGC) to characterize the capacity contributions of non-intermittent resources, including the Project, in the load resource balance (LRB). The Project's 1100 MW of capacity will be dependable capacity. Section 11.2 of the EIS describes the impacts on geology, terrain, and soils. Please also see the Technical Memo on Reservoir Impact Lines.

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pub_0605-029	Hadland, Randal	5.3.2 page 5-24 Aligning with the Clean Energy Act and B.C. Government Policy Section 2 of the Clean Energy Act sets out B.C. Government objectives, referred to as ?British Columbia?s energy objectives?, that BC Hydro must respond to and that the BCUC must consider and be guided by in various applications. The alignment of the Project with the relevant Clean Energy Act energy objectives is described in Table 5.15. Table 5.15 Project Alignment with Clean Energy Act Objectives To ensure that BC Hydro?s rates remain among the most competitive of rates charged by public utilities in North America The Project is a cost-effective resource for energy and capacity compared to alternative supply options; refer to Section 5.5 The Clean Energy Act is something that the BC Minister of Energy should be summoned to speak to. Any future changes being envisioned might be very helpful to the review panel. For example, is the BC government considering requiring Hydro to provide the most competitive rates in North America consistent with good economic/ecologic/nonsubsidizing principles? and To encourage economic development and the creation and retention of jobs .....The Project is a job-intensive capital project that will create employment in B.C. during the construction period. Refer to Section 7.3 in Volume 1 Section 7 Project Benefits.... Does Hydro have a comparable estimate of the jobs created through small scale alternative energy development or conservation? Hydros assertion that the proposed Site C is job-intensive needs to be backed up with sufficient examination of its relative job-intensity in order to provide the comparison necessary for a good social decision in this case.	The comment regarding the BC government's intentions is outside the scope of the environmental assessment. Sections 5.4 and 5.5 of the EIS describe the analysis of alternatives to the Project. Economic development attributes for the portfolios, including jobs, are provided in Section 5.5.4.5.

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pub_0605-030	Hadland, Randal	Page 5-30 Screened resources and page 5-31 external power markets. line 33-35 As a result of the self-sufficiency legal requirement, the following external market/import energy and capacity resources are not alternatives to the Project because they do not result ?solely from electricity generating facilities within the Province? : The spot market and imports from the U.S., Alberta, or other markets external to B.C. under long-term contract ? The Canadian Entitlement, which is the Canadian portion of the additional electricity produced in the Columbia River in the western U.S. as a result of provisions of the Columbia River Treaty of 1961, because the Canadian Entitlement is produced from electricity generating facilities in the U.S. and is delivered to the U.S.-B.C. border These exclusions are curious enough to justify calling the BC Energy Minister before the panel for examination of the reasonableness of such a decision. In recognition of that, Hydro and ministry personnel should provide the review with a justification. In an era when increased transmission interties are hailed as the way to solve many such problems for utilities, Hydro, and the minister responsible should explain why BC should be trying to shrink its options. Having finally reached the point where BC can make proper use of the Columbia River treaty rights accorded to us and use our share of the power generated because of dams in BC, Hydro interprets government regulation to mean that we should not do so. Hydro and the ministry should explain this.	The B.C. Environmental Assessment Office, the Canadian Environmental Assessment Agency, other government agencies and indeed any Joint Review Panel must recognize existing legislative parameters. Thus consistent with Section 4.2.1 of the EIS Guidelines, BC Hydro identified those potential resources that are legislatively barred in Section 5.4.2.1 of the EIS. The potential large hydroelectric resources listed in schedule 2 to the Clean Energy Act are legislatively barred pursuant to sections 10 and 12 of the Clean Energy Act; refer to Section 5.4.2.1 of the EIS.

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pub_0605-031	Hadland, Randal	Page 5-33 Tidal, Tidal energy can be captured in two different ways ? tidal barrages and tidal current systems. Tidal barrage is not considered a realistic prospect in B.C. due to its need for dam construction and its negative estuary ecosystem impact. This assessment focuses on tidal current systems. This is similar to the earlier mention of large hydro projects being dismissed by government. The recognition of the adverse environmental impacts of these projects is obvious, relevant, and correct. As I said earlier there is nothing in Site C that makes it inherently more acceptable. The review panel and the public require a complete definition of the difference between all of these other proposals, and Site C.	The EIS Guidelines in Section 4.2 provides that alternatives must be "technically and economically feasible". As described in Section 5.4.1.1 of the EIS, the information regarding potential alternatives to the Project is derived from the 2010 Resource Options Report. Potential alternatives were first screened to determine if they are technically and economically feasible in Section 5.4.2, and in particular Section 5.4.2.1 of the EIS. To be considered in the analysis of potential alternatives BC Hydro considered the following criteria: • Whether resource developers have bid into BC Hydro's past power acquisition processes; • Whether there are any commercial electricity projects in North America. As described in Section 5.4.1.1, the 2010 Resource Options Report-related engagement process consisted of working with people and organizations with technical expertise to gather and review information on Demand Side Management (DSM) and supply-side options in B.C. including focused workshops with third-party consultants, government and industry. In this review, tidal energy was not identified as a commercially available resource; therefore, it is not a technically and economically feasible alternative. Please see the Technical Memo on Alternatives to the Project.

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pub_0605-032	Hadland, Randal	page 5-33 Solar Solar power is generated from sunlight and can be achieved directly using photovoltaic cells (crystalline silicon or thin film) or indirectly by using concentrating solar power technologies. Both technologies are commercially proven. Globally, the costs have achieved dramatic decline and are projected to continue to decline, but are not expected to become cost-competitive in Canadian jurisdictions over the next 10 years in the absence of price support. When Hydro says that solar won?t be competitive in Canadian Jurisdictions within the next ten years, Hydro should provide a breakdown of their calculations so that the review and the public can determine whether or not Hydro is comparing solar with uneconomic and subsidized hydro-electricity. Hydro should provide a an estimate of the price support that would be needed for solar to be competitive within 10 years. And given that the proposed Site C would not be built within those ten years, has Hydro analyzed the risks that they could be spending the 8 billion dollars to add a relatively small fraction of their hydro-electric resources just at a time when solar energy might be competitive. Can Hydro show the review an examination of the option of providing that price support to photovoltaic in order to avoid the damage done by building the proposed Site C. Solar energy is collected in a variety of ways. While Hydro might want to focus on Utility scale generation of electricity from photovoltaics this in itself will not make that use of solar the primary one. The use of solar for light and heat can be enhanced in a variety of cost effective ways. These methods could reduce Hydros need for economically/ecologically costly proposals like Site C. Hydro provided more information on these alternatives at the BC Utilities Commission Hearings into Site c in the early 1980s. Given that precedent Hydro should update that information for the current review.	The EIS Guidelines in Section 4.2 provides that alternatives must be “technically and economically feasible”. As described in Section 5.4.1.1 of the EIS, the 2010 Resource Options Report-related engagement process consisted of working with people and organizations with technical expertise to gather and review information on Demand Side Management (DSM) and supply-side options in B.C. including focused workshops with third-party consultants, government and industry. Section 5.4.2.2 of the EIS describes that although solar power technologies are commercially proven and the costs have declined; the cost declines are not expected to become cost competitive in Canadian jurisdictions over the next 10 years in the absence of price support. Table 5.20 demonstrates that the price of solar would need to be reduced by more than $250/MWh to come close to the unit energy cost of the Project. A full review of the costs of solar is provided in the 2010 Resource Options Report. There are no known utility-scale solar power installations in B.C. As such, BC Hydro concluded that solar is not an economically feasible alternative to the Project. Given this, BC Hydro is also of the view that information on the use of solar for light and heat will not be material to the analysis of alternatives presented in Section 5.

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pub_0605-033	Hadland, Randal	page 5-35 DSM options 4 and 5 DSM Option 4 is founded on new or more aggressive conservation rate structures, and significant government intervention and regulation in the form of codes and standards, to generate additional savings. and DSM Option 5 is the most aggressive DSM option that BC Hydro considered within the range of DSM resource options. DSM Option 5 aims to create a future scenario where buildings are net-zero consumers of electricity, with some buildings being net contributors of electricity back to the grid. Energy efficiency and conservation activities would be pervasive throughout society and ingrained in a business decision-making culture. These options are interesting and show some potential. Hydro should provide the public and the Review with backup data showing how Hydros promotional and implementation campaigns would be carried out in the case of Hydros estimates of capacity and energy delivery as well as the risk assessment developed for this analysis in case this turns out to be the preferred option. Hydro should do this for the various conservation alternatives to the same level of involvement and data as it has for the section 5.5 Available Resources. BC Hydro should provide the public and the review with a comparison of its expenditures for conservation and Site C over the last fifty years. Hydro should also provide the review with copies of the documents put together by the respective conservation potential review collaboratives starting with the early 1990s.	BC Hydro concludes that neither DSM Option 4 nor DSM Option 5 are viable for the reasons set out in Section 5.4.2.3 of the EIS, and thus they have not been included in the Section 5.5 portfolio analysis. Please see the Technical Memo on Demand-side Management. The request for a comparison of expenditures over the past fifty years is outside the scope of the environmental assessment.
pub_0605-034	Hadland, Randal	page 5-36 5.4.2.4 Category 4: DSM Capacity Initiatives BC Hydro concludes that DSM capacity options are not viable alternatives to the Project, given the number of significant uncertainties underlying such DSM initiatives described above. If Hydro were to look at it from the point of view they learned in 1982 when the Site C proposal was denied last time, and recognize the uncertainty of getting approval this time too, what would be its course of action needed to develop these capacity initiatives? For Hydro to demand the right, or even to assume some certainty in the possibility of building Site C, without showing how they have examined such alternatives to destroying a river valley and peoples lives in the process, is arrogant	The Project was not denied in 1982. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the Project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007, page 112);

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		and wholly unwarranted. When Hydro dismisses the acknowledged best option for electricity supply/demand with the statement that, ?Since BC Hydro is just starting to develop long-term DSM capacity savings options, implementation success is an important issue.? you have to wonder what they have been doing for the last thirty years. Capacity was a major issue in 1981 as well, and if Hydro hasn?t been doing their homework in the meantime because of some false hope that eventually they will be able to build this one last mega dam, it is not the fault of the Peace River Valley or its residents. Hydro should explain what they have been doing for some thirty years besides refining their arguments in the hopes that someone will let them build this dirty energy project.	• In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's ling-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139). Section 5.2 of the EIS contains the need for the Project analysis and Section 5.4.2 of the EIS describes the potential alternatives to the Project that BC Hydro considers are not viable, with reasons provided for each alternative reviewed, including demand side management (DSM) options and initiatives incremental to the current DSM target. BC Hydro has offered DSM programs to its customers since 1989. As described in Section 5.2.2.2 the current DSM target is a major element in BC Hydro's long-term resource plan to fill the load-resource gap. This target is driven by savings from conservation and energy efficiency gains expected to deliver both energy and capacity savings. BC Hydro's current DSM target is 7,800 GWh/year of energy savings, with associated capacity savings of 1,400 MW, in F2021. The current DSM target is aggressive and comprehensive, as it includes a broad range of codes and standards, rate structures and programs that provide BC Hydro customers an opportunity to participate in virtually all market segments. Section 5.2.3 of the EIS goes on to discuss the large reliance on the capacity from BC Hydro's current DSM target – approximately 85% of the capacity LRB gap in F2021. Ensuring an adequate capacity supply is the primary concern for BC Hydro, since capacity is required at specific times to meet peak load requirements and to maintain system security and reliability. A shortfall caused by missed DSM targets could undermine BC Hydro's fundamental obligation to serve its customers. In Section 5.4.2.3 and Section 5.4.2.4 of the EIS, BC Hydro examined incremental capacity savings from both traditional DSM initiatives (expected to deliver both energy and capacity savings) like DSM Options 4 and 5, and DSM capacity initiatives. BC Hydro concluded that DSM Options 4 and 5 are not viable alternatives to the Project for the reasons set out in Section 5.4.2.3. BC Hydro concluded that DSM capacity initiatives are not viable alternatives to the Project for the reasons set out in Section 5.4.2.4. Please see the following Technical Memos: • Project Need • Alternatives to the Project • Demand-side Management

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pub_0605-035	Hadland, Randal	page 5-38 5.5.1 Measurement Criteria: Attributes Attributes are the measurement criteria by which impacts of resource alternatives are measured. There are several reasons why BC Hydro considered a broad set of attributes for purposes of the EIS: ? The Agency Need/Alternatives Policy Statement (CEA Agency 2007) states that ?the major environmental, economic and technical costs and benefits? should be identified and described ? The EIS Guidelines provide that BC Hydro will describe the major financial, technical, environmental, and economic development attributes of the ?supply-side alternatives to the Project ? Has Hydro declined to recognize conservation measures as a possible supply? Conservation Potential Review Collaborative 1991-95 found that we could produce twice as much value from our current electricity usage as we did then. Looks like a supply option to me. ? The Clean Energy Act stipulates that BC Hydro must carry out resource development consistent with good utility practice; this includes understanding the broader implications of BC Hydro?s planning actions ? As part of the IRP and Project-related First Nations and public engagement processes, BC Hydro found that First Nations and the public are interested in a broad set of effects beyond financial impacts ? As described in Section 5.3, the B.C. Government explicitly laid out a number of objectives in the Clean Energy Act. These objectives include a mix of financial and non-financial considerations, including a focus on clean or renewable electricity and GHG emissions. Refer to Table 5.22.	BC Hydro has recognized conservation as possible supply. Please see the Technical Memo on Demand-side Management.

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pub_0605-036	Hadland, Randal	page 5-38 and 5-39 5.5.1.1 Financial Attributes Financial attributes describe the cost of resource options. The Clean Energy Act and good utility practice underscore the importance of tracking costs when comparing resource options. The financial implications of the supply-side resource options or strategies to fill the load-resource gap are tracked at a portfolio level as set out in Section 5.5.4, which provides the portfolio results, both for the cost of acquiring new resources and for how these resources interact with the existing system and the external electricity market. Financial attributes considered include: ? UEC: reflects the real levelized cost (as described in Volume 1 Appendix F Project Benefits Supporting Documentation, Part 1 Project Cost Estimate) of a unit of energy from a resource option or portfolio (typically in $F2013/MWh). The values serve as an initial ranking of energy resources in scheduling resources to fill a load/resource gap. ? UCC: reflects the real levelized cost of a unit of capacity from a resource option (typically in $F2013/kW-year). UCCs are calculated by taking the levelized annual cost of a capacity resource divided by the resource?s dependable capacity. As a planning criteria UECs and UCCs work as a measure of worth to society of the various options. One of the options open to society is that of keeping the agricultural, forestry, recreational, etc. values, and the cost to society from production of those resources would be a levelized estimate of worth of that resource. Hydro should provide similar calculations for the resources of the valley without this proposal.	The analysis of Alternative portfolios is sufficient and in accordance with the EIS Guidelines. An analysis of natural capital valuation is not required. Please also see the Technical Memo on Alternatives to the Project. Please see the response to pub_0605-014.

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pub_0605-037	Hadland, Randal	page 5-40, 5.5.1.1 Financial attributes All of the available resources have more cost uncertainty than the Project because they are feasibility- or conceptual-level estimates only. and then at page 5-46 , 5.5.2.1 lines 12- 16 BC Hydro 10 examined the results of its two most recent broadly-based power acquisition processes, the 2009 Clean Power Call and the F2006 Call. The Clean Power Call is considered to be the best comparator derived from BC Hydro?s power acquisition processes, given that it reflects the most recent BC Hydro power acquisition process pricing, and a large volume and broad array of clean, renewable technologies, including both hydro-based and wind-based projects. This would be more than feasibility or conceptual level figures. How do small scale hydro dams compare within Hydros examination?	As described in Section 5.5.2.1 of the EIS, BC Hydro's 2010 Resource Options Report outlined the characteristics of potential run-of-river generating sites that were selected using a Geographical Information System tool in collaboration with Kerr Wood Leidal. As shown in Table 5.26 of the EIS this assessment demonstrated a range of unit energy cost (UEC) at point of interconnection of between $82/MWh - $600/MWh ($F2013). BC Hydro compared those costs to bids into BC Hydro's power acquisition processes because historically some of the run-of-river resource options with the lowest unadjusted UEC values have not always bid into those processes. In the Clean Power Call, BC Hydro's most recent broadly-based power acquisition process run-of-river projects made up about 50% of EPAs awarded. The Clean Power Call weighted average levelized price is $109/MWh ($F2013) at plant gate. As shown in Figure 5.10 of the EIS, future run-of-river projects made up less than 5% of the portfolio composition for both the Clean Generation Portfolio and the Clean + Thermal Generation Portfolio. For additional information please see the Technical Memo on Alternatives to the Project.
pub_0605-038	Hadland, Randal	Page 5-52 Geothermal, As described above in Section 5.5.2.1, historically, resource options with the lowest unadjusted UECs values have not always bid into BC Hydro?s power acquisition processes. Despite its relatively low cost (an unadjusted UEC of $88/MWh in $F2013), geothermal resource developers have never bid into BC Hydro?s power acquisition processes. From the 2010 Resource Options Report, BC Hydro understands that there are some challenges with geothermal development in B.C. related to the risk/reward of making a significant upfront capital investment at the early exploration and initial production drilling stages. Has Hydro explained to potential geothermal developers that a capacity credit is due for geothermal projects? Would Hydro explain to the review and the public how the use of the capacity credit might impact on development of geothermal. The engineers at BC Hydro have been told on a number of occasions by responsible ministers and the 2010 Clean Energy Act that this would be the last mega dam they might be allowed to build because the people of BC realized quite awhile ago that we can?t go around flood destroying our best lands. That being the case we should not even be entertaining this proposal because there is nothing that is inherently better in this proposal than in any other of Hydros megadam options.	In the quantitative evaluation of alternatives in BC Hydro's most recent broadly-based power acquisition process, the Clean Power Call, projects that were able to deliver hourly firm energy were deemed to have dependable capacity and received a capacity credit adjustment to their unit energy cost (firm energy price) for the purposes of that evaluation. This evaluation methodology was disclosed to proponents as part of the Evaluation Criteria as part of the Clean Power Call Request for Proposals (Clean Power Call RFP – June 11, 2008). As shown in Table 5.23 of the EIS, it is expected that a geothermal resource would be able to deliver dependable capacity and would therefore get the benefit of a capacity credit in such an evaluation. As shown in table 5.17 of the EIS, geothermal was considered an available resource in the analysis of alternatives. In Section 5.5.2.7 of the EIS, BC Hydro describes the attributes of geothermal and concludes that the geothermal resource option should not be in the portfolio analysis in Section 5.5.4 for the reasons stated on Page 5-52 Lines 24-31 and Page 5-53 Lines 1-7.

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		If we are going to have a Hearing into whether or not Site C should go ahead, and here Hydro could save us a lot of time and useless effort by withdrawing their application, but if we are, then it has to be a full and public hearing. The concept of public convenience and necessity was established to ensure the public good, and it cannot be determined in private, behind closed doors. The joint environmental review cannot recommend for the proposed dam, because the process does not address this concern. The fact that BC Hydro has done some aspects of their required research is not justification for the project. The fact that the Crown Corporation has evaded doing some things they did agree to do during the consultation process is justification for turning this application down. I am looking forward to the Reviews acceptance of the need for the public to have equity in consideration of our ability to have meaningful input to this process. I am looking forward to a response from the proponents of the Dirty Site C dam proposal to my concerns outlined here. I hope to hear soon, that my, and the public ongoing examination of the shortfalls raised by BC Hydros Environmental Impact Statement will be accepted by the review. Thank you for your time and consideration	
pub_0606-001	Carmichael, Rebecca	*Attachment - 15 pager an article from the Tyee on Site C and people's comments online* The people of BC do not consent to Site C Dam. A river is a sacred and publicly held resource and does not belong to the Provincial government or any Crown corporation to do with as they wish. If you cannot prove that the majority of public in this region and BC as a whole consent to this project, then it is fundamentally wrong and in violation of natural law. In particular, if you do not have consent of people who own and live on the land, including First Nations who have protected the river and land for thousands of years. If you flood land without the consent of people who own and farm it, this is outright theft, which is criminal and the worst thing that can be done to a farmer. Why was BC Hydro allowed to write their own statement instead of hiring a neutral body to assess this? The report is obviously biased, spending much time pushing economic benefits and downplaying real impacts. This environmental impact	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 12 (Fish and Fish Habitat) - Section 13 (Vegetation and Ecological Communities) - Section 14 (Wildlife Resources) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 20 (Agriculture) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: - Agriculture - Project Need

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		statement is very extensive and addresses many values, but it does show that there will be massive destruction to a unique ecosystem and rare fertile agricultural land. This should be more than enough reason to not allow this go through, but apparently the values of healthy ecosystems and local food security in the North are not important to Hydro or the government. (http://thetyee.ca/News/2010/04/06/VitalBreadbasket/) The mitigation strategies offered are extremely weak and inadequate. The supposed economic benefits are dubious, given how many billions of dollars this project is likely to cost from a corporation already in debt, with payback only realized over many years later. Also given that the energy is only for liquid natural gas exports and fracking, which are also not generally supported by the people, and would negate any claims of this being a "Clean Energy" project. (http://energeticcity.ca/article/news/2012/02/09/site-c-essential-lng-developmentclark) We do not need this project for domestic energy use. Why not invest in alternative technologies, including wind, solar and geothermal and become a global leader in energy that actually is clean? I am currently living on the Columbia River, which has been heavily dammed and sold out many years ago as the government agreed to the Columbia River Treaty. This has deeply hurt fish and wildlife populations and ruined shoreline habitats, and pushed thousands of people off their farm land, wrecking communities. Now that the Treaty is up for review, we are negotiating with the Province and Hydro simply to modify reservoir management in ways that would allow some ecological restoration, and even this is a struggle. From the lessons of the Columbia, we should all know that the soil and habitat destroyed by creating reservoirs can never be restored the way it was. (crtactiongroup.wordpress.com) Avoid expensive and impossible mitigation struggles in the future and just leave it alone! Think of what legacy this will leave for future generations. This river is not yours to dam, it belongs to us all, and mostly to the people who live on it. Listen to them and to all of us. Also, there was very little time available for people to comment on this, I would recommend extending the comment period and greater publicizing of this proposed project.	- Alternatives to the Project The environmental assessment process for the Project is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act.

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pub_0607-001	Armitage and Brereton, Guy and Mary	*Attached: PVEA form letter at the end* In last minute fashion, we are responding to the Environmental Impact Statement on the proposed Site C Dam. We completely agree with the template letter supplied by the PVEA . (See below) We would also like to add some additional concerns relating to our livelihood. In particular, the references to beekeeping operations in the Valley indicate a decline. This is attributed to 2 larger operations that closed down. One in Ft St John and another in Dawson Creek. Neither of these operations were in the affected area. The info gathered by the panel is for the 'PEACE REGION', not for the affected area for the dam. We have operated a prosperous beekeeping operation in the Valley for the past 15 yrs. Prospective partners and expansion plans for our business have been greatly stymied by the prospect of this project hanging over our heads. It is unlikely that we will survive the construction phase and it will be very difficult to establish anything much later on. I think this will apply to many agriculture ventures, present, and more important, future opportunities. I think the most important concern that has emerged from this review (this being only one example) is the lack of accuracy and completeness in many of the studies. I will acknowledge that BC Hydro has done more work than in the previous dam projects, but that said, it is not nearly enough. A project of this size, paid for by our taxpayer dollars, deserves to have a much more extensive review and especially cross examination. The more and accurate information released will certainly show that this project is unnecessary and a complete waste of money and unjustifiable impacts. The short-term benefits in jobs, for example will never out-weigh the long term impacts. Mega projects like this must undergo much more scrutiny and take into consideration the 'bigger' picture and a more 'global' perspective. Strongly recommend that the period of review be substantially extended until ALL issues and concerns have been addressed. One other, and very important concern that we've had is the way that the 'Open House, Public Consultation' meetings were structured. BC Hydro had a large number of employees there to offer 'technical' advice. There is no way that the proponent should be included in an 'independent review process. Maybe one or two, but not a whole army. There are many dam experts that could be brought in to answer these questions objectively. Perhaps they	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Potential effects of the Project on agriculture are described in Section 20 (Agriculture) of the EIS. Please also see the Technical Memo on Agriculture. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The EIS was prepared by a team of technical specialists who are listed in the Authorship Section of each Volume of the EIS. Section 3.1 (Project Governance Process) of the EIS describes the international Technical Advisory Board that was established to provide technical advice on the Project engineering and design.

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		are not so easy to find since the rest of the world is moving away from these types of energy projects. Please accept this and the comments below as our reply.	
pub_0610-001	Dotson, Lorraine	As a resident of Northern BC, I am opposed to the Site C Dam. The environmental costs are far too high and there are other less costly and less destructive alternatives. It doesn't make sense to destroy valuable farmland, forests, vegetation, wildlife and the natural beauty of the area to bring in more industrial activity that will bring even more dust, noise and lower air quality in addition to land and water pollution? The aboriginal way of life will be degraded as wildlife and habitat is destroyed forever. I don't see how this dam will improve the quality of life for any of us. The Peace area and river shouldn't be sacrificed for the sake of consumption without considering future generations. It's not worth it. Thank you for considering my comments.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.
pub_0611-001	Campos, Tamo	I am frightened to learn about site C. It is insane that we are destroying arable farm lands to power the fossil fuel industry! I am on a 5 month trip In a bus running on waste vegetable oil, to make a documentary film about alternative energies. This makes absolutely no sense to me why projects like this are being put through instead of alternative energy projects that could contribute to a sustainable future, such as Bio mass, and solar power. Oil Is a dying industry and it is ruining ecosystems and the places that surround them. We recently learnt about wind power in Tumbler Ridge and Cape Scott. Is this not a viable option? It is too scary to think about what my kids will not be able to see if projects like this keep happening. Please make a decision on this project that doesn't support runaway climate change. I hope that you read this and realize that there is no amount of money that is worth destroying our future.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The matters raised are described in Section 5 of the EIS, Need for, Purpose of and Alternatives to the Project.

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pub_0612-001	Oleary, Laura	please consider pulling the plug on this project. there are many things we can and should be doing and this is not one of them.we should be investing in develping alternatives and utilizing the "byproduct" resourses from the forest, beef, and waste industries. I would like to see my taxes support cleaner and healther projects for our future generations.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see Section 5 of the EIS, Need for, Purpose of and Alternatives to the Project. Please also see the Technical Memo on Alternatives to the Project.
pub_0613-001	Whitney-brown, Carolyn	It seems we're at a turning point, where every day more ordinary citizens like myself realize we must not keep destroying farmland and our natural environment. I'm writing to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. As I understand it, the EIS assesses an area that is too limited. There are regional impacts that it therefore overlooks, especially on wide-ranging local species that are crucial parts of the whole heritage ecosystem. Further, the EIS seems to omit any assessment of the the impacts of the dams and reservoirs that already are in place on the Peace River. The statement seems too narrowly focused. We will regret a decision like this in years to come. Please refuse it until there is a more adequate study done.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried out. The approach was applied and is described in more detail in Section 10 of the EIS. As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is provided in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project. Regarding the Project's area of assessment, the scope of the environmental assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. For more information, please also see the following Technical Memos: • Spatial Boundary Selection • Cumulative Effects Assessment
pub_0615-001	Winter, John	The Site C Clean Energy Project is a vital source of electricity for the future of British Columbia and a key generator of power to support growth in British Columbia's population and industry in the coming years. The efforts of BC Hydro in its long-term energy planning and for working to secure B.C.'s energy future are to be commended. As a province, we are fortunate to have had consistent economic development opportunities for hundreds of years thanks to a resource-rich environment. These opportunities, including Site C, continue today and must be welcomed, at least for careful consideration, in hopes of continued prosperity in British Columbia. It is my conclusion that the Environmental Impact Statement (EIS) represents a	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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		thorough assessment of the potential effects of the project. I have confidence in the joint provincial and federal assessment process and am certain the benefits of Site C will be weighed carefully against the effects listed in the EIS. I commend the efforts of BC Hydro for its commitment to avoiding or mitigating these potential effects, wherever possible, which are clearly demonstrated in the EIS. This review, combined with a keen understanding of the benefits of t.he Site C Project, assures me of the positive contribution this project will make. An estimated $3.2 billion in provincial gross domestic product and 10,000 direct jobs through construction are just two of the outstanding potential outcomes presented in the EIS. The benefits do not stop after construction, however. Once operational, Site C's generating capacity will position British Columbia at a competitive advantage to attract investment, in turn creating jobs and revenue. Finally, I would like to acknowledge the comprehensive consultation with public and the business community BC Hydro has undertaken regard ing Site C. I was pleased to see this documented in the EIS, and would like to highlight the collaborative approach BC Hydro has taken in this regard. Whether it was engagement through annual Business Information Sessions (which the BC Chamber of Commerce was pleased to co-host with the Business Council of British Columbia), public comment periods or open houses, my colleagues at the Chamber and I appreciate BC Hydro's commitment to hearing from stakeholders and can speak to the seriousness with which they consider the input they hear. In summary, while there are potential effects from this project, as with nearly all significant investments, it is our view that BC Hydro has assessed these impacts thoroughly and will address them wherever possible through strong mitigation commitments. We are also confident that BC Hydro will continue its record of community engagement and consultation throughout the development of the project. We hope the many benefits Site C will bring not only to the business community, but to all British Columbians - will be given strong consideration as part of the environmental assessment process.	

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pub_0616-001	Neale, Muriel	After being rejected twice, I don't understand why this issue is being re-visited. For me, besides the fact that so many people do not want it, the problem is the destruction of a resource that will never be recovered and that is the farmland. This is a micro-climate, making it of even further value. Farmland just isn't being make anymore!!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The Project has not been rejected twice before. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the Project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139). BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.

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pub_0617-001	Russow, Joan	Given that Site C will have significant and irreversible environmental, health, social, economic and heritage effects, under no circumstance or conditions should it proceed; it is imperative to invoke the precautionary principle, and realize that where there is a threat to human health and the environment etc. , the lack of full scientific certainty should not be used as a reason to prevent the threat. This principle is prominent in the legally binding Convention on Biological Diversity, UN Framework Convention on Climate Change, the Rio declaration, and in the World Health Organization. There is sufficient evidence of the harm That to proceed would be grossly negligent. So often in proposing major projects the rights of future generations are ignored; these rights are guaranteed under the legally binding 1972 Convention on Cultural and Natural Heritage. For the sake of present and future generations, Site C must not proceed, the threat to these rights is too great. As a result of years of socially inequitable and environmentally unsound development biodiversity and food security have been threatened, and now with the additional threat of climate change through extreme weather occurrences, more than ever it is essential to conserve fertile farm land such as in the area that will be destroyed by Site C. The Site C will lead to the destruction of areas of viable farm land which must be protected for the survival of communities.. Since the adoption of the UN Declaration on the Rights of Indigenous Peoples, many of the downstream impacts of Site C will be felt by the First Nations who have not given their "free and informed prior consent," an obligation under art 19 of the UNDRIP.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for Site C is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. BC Hydro began consultation with Aboriginal groups in regard to the Project in late 2007 and prior to any decision to advance the Project to an environmental assessment. Aboriginal consultation for the Project is ongoing. BC Hydro and Aboriginal groups are engaged in a process that will continue through all stages of the environmental assessment process, as well as through the proposed construction and operations stages, as described in Section 9.2 (Aboriginal Group Information Distribution and Consultation) of the EIS. The matters raised are described in Section 14 of the EIS, Agriculture. Please also see the Technical Memo on Agriculture.
pub_0620-001	Lindelauf, Perrin	The Peace River is clearly already over developed and furthermore, this project seems intended to merely fatten the purses of energy-hungry tar sands projects, all at the tax-payers' expense. No thank you. As a young voter who cares only for our planet and the environment bequeathed to future generations, I urge you to reconsider this plan.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0624-001	Gibbs, Peter	I just wanted to send a quick note saying that as a BC resident, I am 100% opposed to the Site C dam. It had broad opposition from farmers, ranchers, conservationists and First Nations and is costly, unnecessary and destructive.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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pub_0626-001	Vander Schaaf, Sandra	I understand that the Canadian Environmental Assessment Agency is on the verge of making a decision with regard to plans for a new dam in Northern BC. I urge you to do all you can to stop the plans as they stand. I am very concerned about the implications of the proposed Site C dam. I believe the consequences of proceeding with the plan are both devastating and irreversible. Environmentalists, First Nations leaders, and other stakeholders have serious concerns that must be heard before the plan proceeds in any way. Please do what you can to protect the land and its people by blocking plans for the Site C dam.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for the Project is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. The matters raised are described in the following sections of the EIS: - Section 8 (Assessment Process) - Section 9 (Information Distribution and Consultation) Please also see the Technical Memo on Aboriginal Consultation.
pub_0629-001	Lancia, Amoura	I am writing to you IN OPPOSITION of the Site C megadam which is being proposed to be built in BC. As a resident of BC, this dam is not in my best interests or the interests of the province environmentally, nor is the incredible amount of money I - and other BC taxpayers - will have to put up to pay for it. This megadam would destroy virtually all of the historic Peace River that remains in B.C. and the populations of animals which depend on it. I am a life-long resident, voter, and taxpayer in BC, and I DO NOT WANT this project or the damage it will cause this beautiful province.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The matters raised are described in Section 14 of EIS, Wildlife Resources.

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pub_0633-001	Chapman, Lynn and Turnbull, John	I am deeply concerned about the risks the Site C Dam project poses and believe that the EIS will not allow adequate assessment of the environmental impacts that will result. Regarding the agricultural assessment: • the key indicators fail to provide an instrument to assess the impact of loss of agricultural land and capability on the rest of the province and particularly on Northern BC and the Yukon. The unique agricultural and food production capabilities of the Peace River Valley need to be considered in the context of what other significant food (and in particular vegetable crop) producing areas exist north of Quesnel and in the context of how much agricultural land exists in the province (ie the context of food security and sustainability for the people of BC). There is not an endless supply of agricultural land and the ongoing potential of the Peace River Valley to produce food security for future generations must be weighed against the relatively short term benefit of power production. • the EIS fails to acknowledge or adequately address the principle of sustainable development, the precautionary principle, or the consideration of the cumulative effects of the loss of food production capability. Assessing the effects on individual farm operations and the agricultural economy and regional food production and consumption will not provide sufficient guidance for the panel to make a wise decision regarding the far reaching consequences of destroying this prime agricultural land for all time. • the EIS fails to consider the impact of the proposed body of water behind the proposed dam on the local climate and on the remaining ability for agricultural activity once the unique microclimate of the Peace River Valley is destroyed. • there is no mitigation possible for the loss of the agricultural lands of the Peace River Valley especially for future generations who will very likely be in desperate need of its food production capacity.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The scope of the agriculture assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. Comparisons have been provided, in accordance with the EIS Guidelines for agricultural land within the Project activity zone and land remaining within the Peace River valley, the region and the province, in Table 20.4 for baseline conditions, and Table 20.17 showing the permanent land loss caused by the Project. Cumulative effects on agriculture was undertaken in accordance with the EIS Guidelines and presented in Section 20.6 of the EIS. Consideration of effects on lands adjacent to or near the reservoir is taken into account in the EIS. Farm mitigation plans will be developed to address site-specific changes that may affect agricultural operations on individual farms, and where changes cannot be determined in advance, a follow-up program is proposed, as described in Section 20.7. It includes monitoring, within a defined area, of potential Project induced changes to wildlife habitat utilisation and effects on farm operations, changes to humidity and effects on crop drying, and changes to groundwater elevations and effects on crop productivity. Changes to regional food production and consumption were assessed using measures of food self-reliance is described in Section 20 of the EIS.

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pub_0633-002	Chapman, Lynn and Turnbull, John	Regarding climate change: • the EIS acknowledges public concerns in the areas of greenhouse gases and climate change and the lack of knowledge, understanding and regulatory guidance currently existing but it fails to provide useful information upon which to judge the significance of the project's impact on climate change, instead focusing it's attention on GHG's and the relative benefits of hydro electric power. It completely fails to consider the growing body of research and evidence on the very real value of intact natural ecosystems or the impacts of biodiversity loss on ecosystem function and services. (e.g. the June 2012 research entitled "Biodiversity loss and it's Impact on humanity".) While the remaining portion of the Peace River Valley is not untouched by development it is a fundamentally intact ecosystem which deserves to be preserved, protected and valued as a net benefit in our struggle to deal with climate change.	The scope of the greenhouse gases effects assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. Please see the Technical Memo on Uncertainty and Precaution.

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pub_0633-003	Chapman, Lynn and Turnbull, John	Regarding public participation: - the EIS concludes that the public has been adequately consulted and yet it ignores the fact that only 6 public meetings were held none of which included the southern half of the province where the majority of people live who will ultimately pay the vast majority of the costs of the project. Relatively few people in the south of BC are even aware of the project or the environmental assessment process.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Since 2007, the Project team led or participated in more than 500 consultation meetings, presentations, local government meetings, community events or open houses. For example, as part of Stage 2, the consultation and technical review phase of the Project — which took place from 2007 to 2009 — 121 meetings were held over three rounds of consultation, including open houses and stakeholder meetings in the Lower Mainland and Vancouver Island. BC Hydro has provided regular and publicly-available Project updates, information sheets, field study notices, public consultation notifications, consultation guides, brochures and videos regarding the technical and environmental studies and activities taking place in the Project activity zone since 2007. This information has been posted at the Project website and in the community consultation offices, via the Project's public stakeholder mailing list, and, where appropriate, through the media. The public also had an opportunity to provide input through the Project's toll-free line, public inquiries program, Project website, public open houses, public consultation feedback forms and other submissions, and stakeholder and property owner meetings. BC Hydro has also responded to approximately 3,000 inquiries received via email, in-person at the consultation offices, or through written submissions, which are in addition to information requests made as part of the environmental assessment process. The CEA Agency and the BCEAO administer the environmental assessment process. The locations and format of the open houses during the public comment period for the EIS were determined by the CEA Agency and the BCEAO.
pub_0633-004	Chapman, Lynn and Turnbull, John	Regarding the need for this project and alternatives to the project: • the EIS fails to adequately demonstrate the need for Site C Dam by over-inflating customer demand; by failing to identify the real purposes for this project which have been predetermined by the government to be entirely for industrial use; and by failing to adequately estimate the committed power supply from existing IPP contracts. • the EIS fails to demonstrate any concerted effort by BC Hydro to examine alternative zero carbon sustainable energy options and envisions more of the same manner of energy generation that has created the climate crisis we are facing. The real environmental assessment question is how are we going to meet energy needs in a way that does not contribute to global climate change? We are at a crossroads	Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers, not only requirements related to oil and gas activity. The Project is needed whether or not any new LNG projects proceed. The EIS sets out the methodology and assumptions underpinning, and the results of, the 2012 Load Forecast in Section 5.2.1.1 of the EIS. Please see the Technical Memo on Project Need for further information regarding the Load Forecast. Section 5.3 of the EIS states that the purpose of the Project is to: • Cost-effectively meet BC Hydro's forecasted need for energy and capacity identified in Section 5.2.2.

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		where every energy generating project must justify itself through the lens of negative net carbon generation. Arguing that hydroelectric power is clean energy is a tragic error.	Refer to Section 5.3.1. • Align with the relevant objectives of Section 2 of the Clean Energy Act and relevant B.C. Government policy statements, which in turn were used to develop Project-specific objectives, including the objective to cost-effectively maximize the development of the hydroelectric potential of the Site C Flood Reserve. Refer to Section 5.3.2. As described in Section 5.2.3 of the EIS, the existing and committed IPP supply volumes in the load resource balances reflect that there is uncertainty with respect to IPP deliveries. IPP projects are subject to attrition, with EPAs being terminated for various reasons such as unexpected cost increases, financing obstacles, and permitting difficulties. For the most recent broadly-based BC Hydro power acquisition process, the Clean Power Call a 30% attrition factor was assumed. The attrition rate for the F2006 Call is about 55% (excluding two coal-fired projects). The EIS Guidelines in Section 4.2 provides that alternatives must be "technically and economically feasible". Section 5.4 of the EIS describes the potential alternatives to the Project and screened resources. BC Hydro considered a number of alternative clean energy options as shown in Table 5.17 and described in Section 5.4.2 and Section 5.5.2 of the EIS. As described in Section 5.4 of the EIS, only technologies that are cost-effective and commercially available with sufficient potential are considered as potential alternatives to the Project. As described in Table 5.15 of the EIS, the Project is a clean or renewable resource as defined by Section 1 of the Clean Energy Act. Please see the Technical Memo on Alternatives to the Project.
pub_0633-005	Chapman, Lynn and Turnbull, John	Regarding safety of the project: • the safety of Site C Dam relies on the integrity of the Bennet Dam which has had documented near disastrous sink holes from internal erosion as recently as 1996. • While Hydro confidently projects the expected life of Site C Dam to be 100 years it does not address the ages of the Bennet and Peace Canyon Dams without which Site C Dam will fail. • Consequences of Dam failure will be catastrophic.	Please see the Technical Memo on Dam Safety.

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pub_0636-001	Green, Mary	I appreciate your dedication to public service. Please say "No" to the Site C dam---it is entirely inappropriate for Beautiful British Columbia. We MUST preserve the prime agricultural land in that area. Thank you for your attention.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in Section 20 (Agriculture) of the EIS. Please also see the Technical Memo on Agriculture.
pub_0637-001	Starr, Matthew	Please reconsider the Site C Dam project. The environmental impacts are too great. BC Hydro should push more solar projects instead!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the Section 5 of the EIS, Need for, Purpose of and Alternatives to the Project.
pub_0641-001	Lissau, Julia	I wish to comment on the proposed Site C dam on the Peace River that BC Hydro wishes to build. We need to reduce our consumption of electrical energy, not increase it, despite how many people move into BC. Instead it is assumed we will continue to consume despite the loss of glaciers (a water source for many of us) and the weather changes and drying trends that will accompany climate change. WE NEED TO LEARN TO LIVE WITHIN OUR MEANS! The Peace River valley is too valuable a feature in northern B.C. to destroy just to satisfy our greed for more and more energy. We do not have the right to displace many locals or ignore First nations cultural and historic values in the area. The environmental assessment must consider the fact that we soon will have the weather of southern California and cannot assume there will always be lots of 'extra ' water. There is no concern shown for displaced species - plant and animal - especially those that migrate or require large areas to survive. They are already at risk. Please deny approval to the Site C dam and implement a comprehensive management approach that will ensure the recovery of at risk species like grizzly bears and caribou.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 13 (Vegetation and Ecological Communities) - Section 14 (Wildlife Resources) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 32 (Heritage Resources) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: • Aboriginal Consultation • Caribou • Consideration of Historical Context in Assessment of Potential Effects and Impacts on Aboriginal Groups • Demand-side Management • Methodology for the Assessment of the Potential Impacts of the Project on the Exercise of Asserted or Established Aboriginal and Treaty Rights • Movement of Grizzly Bears and Large Carnivores • Alternatives to the Project • Project Need

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pub_0643-001	Fitzpatrick, Michael	There is a long and shameful history of regret surrounding dam projects of this nature. Please don't let this become another source of regret for Canadians.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0644-001	Reeves, April	No form letter here. I'm just saying it as it is. The time has come to ask yourself if we truly need such a project or are we just bending over for the Corporations again? Are we forgetting the next 7 generations that get to clean up this mess? Could you not find another source of power that's cleaner and less damaging? Our time is running out, in fact, it's likely past the tipping point, where we will be working in cleanup mode more than building mode. The actions you take and the decisions you make must be based on future vision, not immediate Corporate advancement. Every day, more and more people are waking up and getting ready to rise and take this country back from the sociopathic decisions our government makes. There is a better way. There is another choice. Please think again long and hard about this project. I believe greater minds like <personal information removed> have sent in their environmental reviews. Please take them seriously. Bye <personal information removed>. You won't be missed. At all.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The matters raised are described in Section 5 of the EIS, the Need for, Purpose of and Alternatives to the Project. Please also see the following Technical Memos: • Alternatives to the Project • Project Need
pub_0653-001	Sandborn, Paul	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. As a professional agrologist and soil scientist, I am particularly concerned by the potential loss of highquality arable land that would result from this project. There is no credible means of mitigating this loss, and the case for protecting this resource is even stronger than when Site C was rejected a generation ago.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The Project was not rejected before. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's

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			long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139). Section 5 of the EIS addresses the need for and alternatives to the Project. Section 5.2.1.1 describes the methodological approach and results of BC Hydro's 2012 Load Forecast, the most recent load forecast. Section 5.4.2 of the EIS canvasses the potential alternatives to the Project that BC Hydro considers are not viable, with reasons provided for each alternative reviewed, while Section 5.5 provides details of the available alternative resources to the Project and examines these available alternative resources using financial, technical, environmental and economic development attributes. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The matters raised are described in Section 20 (Agriculture) of the EIS. Please also see the Technical Memo on Agriculture.

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pub_0657-001	Manering, Kasandra	I think it would be wise to reconsider this environmentally damaging and unnecessary project. Were this for domestic consumption, I may not be writing to you today,. But, as this is supporting the oil fields, which are already causing a huge amount of environmental damage as it is, not to mention the future environmental impact should the pipeline go through. Just stop it now, surely there are other options. In a province like BC with so many brilliant minds, we should be able to come up with some other ideas - we need to look to a sustainable future - gas and oil are the past - rooting up good agricultural land is the past - creative processes and new innovations are the future! Pose the conundrum to some university students, see what they come up with because the government isn't coming up with anything new. Thank you for listening.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 7 (Project Benefits) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Alternatives to the Project • Project Need
pub_0661-001	Anderson, Laura	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* While I could repeat the many facts and features of the arguments against Site C that you will receive from many citizens across the province, I feel that I must comment on the issue from my heartfelt, gutfelt, human reaction that proposed site, and the motivations for its development, are just wrong on every level. As one of many issues facing the North, currently, that so many of us know are crossing lines that cannot be restored or recovered. I feel exhausted by the constant sense that no one is listening to the voices of opposition -- coming from people like me -- well-educated, taxpayers who are tired of being overridden by government and industry to achieve goals that mean nothing to me at all. It's time to listen to us. It is not just the number of voices, and the votes that they	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.

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		represent, that need to be taken into account. It is the quality of the voices; the integrity, where they come from. First Nations, conservationists, ranchers, farmers, -- a broad spectrum of people motivated by their love and concern for LAND and WILDLIFE. How can it be right, on any level, to wipe out land and wildlife to feed the very habits we, as a society, need to curb? Habits that affect the lives and well-being of nature and people outside of our limited political and geographical landscape? I am one of the people who live outside the area but are deeply affected by the notion that our values are so skewed that we ignore the intelligence of our hearts -- in particular, as these affect the northern landscape which is the foundation of our Canadian (and British Columbian) identity. My grandparents homesteaded on the very land Site C would obliterate. Last summer, camping there with my daughter and her young friend, I was so ashamed to have to tell them about the proposition for Site C, and what that says about the generation of people -- my generation -- and what their values are. Please take into account, in a deep way, the messages of those who oppose this. It is so, so important.	
pub_0664-001	Campbell, Yvonne	I apologize for partaking in the mass-mailing of this cause, as I know that it is a nuisance to you, however I am not aware of an alternate method, particularly at this time where time is of the essence, to let you know that I am not in favour of the Site-C proposed mega-dam. Please help us to protect the gift we have in this area. It is not something for using or giving, it is merely something to enjoy as it is. I am gravely concerned about the current as well as the future environmental health of our province, nation and planet. I understand our standards of living and yet would like to urge those who make decisions for the public to consider standards that help us be more self-sustaining, both as individuals and as a nation.	Thank you for providing your input during the Public Comment Period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project.

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pub_0667-001	Rivas, Enrique	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. This project does not seem to be for the benefit of most British Columbians but instead it is for private sector profits. It unnecessarily jeopardizies the social and environmental integrity of the Peace River region.	Thank you for providing your input during the Public Comment Period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers.
pub_0673-001	Cooper, Sherindan	Proposals to build a Site C dam have been rejected twice and there are no plausible reasons for it to proceed in 2013. I am appalled at the possible loss of prime farming land and pristine areas which wild life rely on for survival. Having read the many pieces of informed writing opposing this project, I want to add my voice and my vote to theirs.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The Project has not been rejected twice before. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139). The matters raised are also described in Section 20 of the EIS, Agriculture. Please also see the Technical Memo on Agriculture.

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pub_0679-001	Webb, Jane	This dam is simply not needed, will cost us taxpayers over 8 billion dollars and will be used to provide power to commercial and industrial interests to significantly increase the carbon load this planet must deal with! It simply makes no sense for the vast majority of BC citizens who will be expected to pay for it. This is lunacy and I urge you to deny the site C dam.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The matters raised are described in Section 5 of the EIS, Need for, Purpose of and Alternatives to the Project of the EIS. Please also see the Technical Memo on Project Need.
pub_0681-001	McAllister, Stephanie	This exploitation of natural resources is obscene and wrong. You will be doing untold damage to many generations to come. Your mistake will last forever. People will remember YOU for what you have stolen from them.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0682-001	Ranta, Alan	The cost, both financially and environmentally, for the proposed Site C dam on the Peace River is far too high, if at all necessary. The Environmental Impact Statement (EIS) submitted by B.C. Hydro is biased in favour of short term gains for export, rather than being focused on providing any lasting good for the province, and future generations. Please, do the right thing and stand up for B.C.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 7 (Project Benefits) Please also see the Technical Memo on Project Need.
pub_0693-001	Helmer, Doug	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. The EIS is deficient in not considering cumulative effects of Site C and existing dams on wildlife, agriculture land, fish, heritage values etc. Public opposition to short sighted and inadequate environmental reviews is growing. It is up to all of us, especially people like you, to halt Site C until politicians start to pay attention.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for Site C is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada “Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project” (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried

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			out. The approach was applied and is described in more detail in Section 10 of the EIS. As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is provided in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project. The matters raised are described in the following sections of the EIS:: - Section 8 (Assessment Process) - Section 12 (Fish and Fish Habitat) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) - Section 32 (Heritage Resources) Please also see the following Technical Memos: • Agriculture • Cumulative Effects Assessment • Archaeology
pub_0696-001	Louise, Amy	This is outrageous! If you are in any position to stop this mega-dam from mega-destruction. PLEASE DO SO! We are a brilliant and enterprising, innovative race of peoples who can find alternatives for energy generation and distribution that DOES NOT require the destruction of wolrds within worlds. Our plant and animal life DOES have a voice and it is echoed through the voices of the very people who oppose this action. PLEASE LISTEN! Please be aware of the recent oil spills and the overall destruction the tar sand extraction is having upong the land and STOP IT RIGHT NOW! This isn't just for us now and today but our legacy we are to leave for our children and our childrens children. The world needs compassion and you are in a position to lead by example. PLEASE BE AN EXAPMLE OF UNIFIED SUSTAINABILITY THAT DOES NOT INVOLVE SQUASHING LIVES AND DESTROYING NATURAL RESOURCES THAT COULD POTENTIALLY HELP US ON LEVELS NOT YET DISCOVERED.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 14 (Wildlife Resources) Please also see the following Technical Memos: • Alternatives to the Project • Project Need

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pub_0701-001	Larstone, Andrew	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative and the Peace Valley Environmental Association, and provided additional comments as shown below:* Fort St. John has been my home for over 30 years and in that time I have enjoyed (what is left of) the Peace River immensely. I am an avid fly fisherman, boater, hiker and lover of nature. I have fished and boated the two existing reservoirs (Williston and Dinosaur Lakes) and the Peace River below the dams extensively. My condensed observation/experience is this: The reservoirs are sterile and dangerous The river is alive and inviting The Peace River Valley is truly unique and it's destruction can never be mitigated. It would be a loss to all people and all of the wildlife and fish that currently share this precious corridor.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the responses to the letters in the standard form suggested by the Yellowstone to Yukon Conservation Initiative and the Peace Valley Environmental Association, located after this table. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 14 (Wildlife Resources) - Section 24 (Harvest of Fish and Wildlife Resources) Please also see the Technical Memo on Methylmercury.

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pub_0702-001	Sheriff, Valerie	I grew up on a farm in the Peace River area, very close to the area that would be affected if the proposed Site C dam were to be built. My brother and his wife still farm there. Constructing this dam is not a good idea for so many reasons. I know that the ecosystem is a fragile one. Besides removing prime agricultural land and boreal forest, the project would destroy not only First Nations heritage sites but post-contact historical sites. The river serves as a major area for recreation - I have many childhood memories or rafting, swimming and camping along the Peace. And what about the wildlife? The animal population is already heavily impacted due to the amount of human activity in the Peace River area. We do not need the electricity that would be generated, and I fear that the water will be used for the purposes of fracking - another short-sighted disaster in-the-making. I do not believe the Environmental Impact Statement for the Site C dam adequately assesses the significance of potential and cumulative impacts for the area. Please do the right thing and say NO to this expensive and unnecessary mega project.Thank you for the listening to my concerns.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried out. The approach was applied and is described in more detail in Section 10 of the EIS. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) - Section 25 (Outdoor Recreation and Tourism) - Section 32 (Heritage Resources) Please also see the following Technical Memos: • Agriculture • Consideration of Historical Context in Assessment of Potential Effects and Impacts on Aboriginal Groups • Cumulative Effects Assessment • Methodology for the Assessment of the Potential Impacts of the Project on the Exercise of Asserted or Established Aboriginal Rights and Treaty Rights • Alternatives to the Project • Archaeology

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pub_0703-001	Barkley, Jeff	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. The proposed Site C dam is not in the best interests of BC taxpayers. All of the power generated, by destroying a massive amount of land forever, is to be used to provide power to compress our natural gas resource so it can be sold to China. The people of BC already are saturated in debt and this will add another 8 billion. The interest payments on that debt will be taken from our schools and hospitals while the profits of selling our gas to China will be reaped by multinational corporations. There are far better ways to spend 8 billion dollars that would enhance the environment and save our natural gas for the future.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. The matters raised are described in Section 5 (Need for, Purpose of and Alternatives to the Project). Please also see the following Technical Memos: • Alternatives to the Project • Project Need
pub_0705-001	Morris, Jacques	As I understand it: This dam will only be supplying to power to the fossil fuel industry at a reduced rate compared to consumers, while the full costs for the project are borne by the provinces tax payers. The industries power requirements can be met using natural gas powered generators at less than 1/4 of the cost, and fully paid for by the fossil fuel industry. I "vote" for the latter solution.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. The matters raised are described in Section 5 of the EIS, Need for, Purpose of and Alternatives to the Project. Please also see the Technical Memo on Alternatives to the Project.

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pub_0706-001	Whitehouse, Pattie	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. I don't quite understand why we are even considering this project. We know that it will destroy prime agricultural land and important wildlife habitat. We know that we don't need it to produce power for domestic consumption. We know that we MUST stop building infrastructure to support fossil fuel extraction and transportation if we are to have any hope of mitigating the effects of climate change. Isn't it high time we humans moved past the supreme arrogance we use to justify invading and destroying the homes of other creatures for our sole short term benefit?	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 14 (Wildlife Resources) - Section 15 (Greenhouse Gases) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Greenhouse Gas Emission Merits of the Project • Alternatives to the Project • Project Need

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pub_0708-001	Baijius, Warrick	I've been prompted to voice my concern about the development of the Site C dam; out of the many pleas that end up in my inbox, I am taking the time to write to you about this specifically. While low-carbon energy is certainly a priority when looking at feeding the growing demand within BC and along the coast, I feel it is necessary to step back and question "to what end?" Who will this dam impact, and who will it truly benefit? Is it wise to spend billions of dollars on a dam to provide power for industrial purposes? Certainly the public will benefit to a small degree, but it would likely be more beneficial to spend a few billion dollars on programs to reduce consumption through behaviour change and upgrades to the housing stock. In keeping with the concerns associated with the campaign that prompted me to send this letter, I would also question the use of "clean" energy in fostering or supporting the growth of an industry that fouls fresh water with "secret" chemicals, all in the search for a raw export recently suggested to be in lesser supply than originally touted. Simply stating that hydro power is "clean" does not give us license to use as much as we can. It is especially imprudent to invest in a dam that will be providing massive quantities of industrial power when BC Hydro has been deferring large amounts of debt. If you read this, I hope that it inspires you to be critical of the intent behind such a development. Critical to the point of questioning whether or not society would benefit as a whole from the continuation of business as usual, or if such funds would be better spent on reducing our reliance on energy and increasing the value of our housing stock.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. Please also see the Technical Memo on Project Need.

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pub_0709-001	O'Leary, Jesse	Thank you for the opportunity to comment. I am visiting my family in Nova Scotia at this date. We live in a vast and beautiful country. My uncle and I had a conversation just the other day. In the conversation we stumbled into the realm of how detrimental human activity is to countless other life forms on the planet. We talked about the effects highways and habitat loss, the tar sands and conveniently mega-dam projects. He told me a true story of the effects the construction of a dam had on a caribou migratory path. It when something like this. When the caribou got to the river, they search for a ideal place to cross, but the waters were much deeper and more violent now. There was no ideal place to cross, but the caribou had no choice but to try. There was wolves never to far behind and promises of greener grass just on the other side. So you may say instinctively the animals set out. Mothers downed waiting for their calves, that had already bin swept away. By the end of the day thousands of lifeless caribou washed down stream. Sure a couple made it, but not many, and before there ware very many. I'm not against clean energy, but I am against "Clean ;) wink wink" energy. you know what I'm saying? We need a complete redesign of our culture! That is why I advocate The Venus Project...thevenusproject.com please check out there website. this could be the organization to effect intelligent and humane change to the way business is done on our planet in the future.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in Section 14 of the EIS, Wildlife Resources. Please also see the Technical Memo on Caribou.

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pub_0710-001	Gerard, Roland	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. As a geographer with some background in Pedology, I find it unacceptable to fully submerge excellent agricultural soils in a province that is so incredibly limited in these quality soils. Climate change will make such soil deposits incredibly valuable as more drought hits further south and east in the not too distant future. (Just look at the multi-year drought in the SW USA, long prior to this the past 2012 year. Then to have this project paid for by taxpayers, essentially for the benefit of the fossil fuel industries' extraction processes, notably natural gas fracking, is ludicrous. The IPP fiasco is already costing residential Hydro users more than enough.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Project Need
pub_0713-001	Matthews, Brenda	In the 35 years of standing by while one mega-project after another has raped the soul out of BC, this time I must plea to the powers that be; BE STRONG. Protect our future, Our children, and generations to come, will have to live in this bleak world where mega corporations have complete control. Please, you know the facts & the devastation this dam will create.You are there representing we Canadians. Please speak loudly against this project. Thanking you for the time you took to read this plea.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0714-001	Gosse, Bonnie	I am writing to express my grave concerns over the site C Dam proposal in the Peace River area. I am against this mega project for the following reasons: It will flood vital farmlands. It will flood environmental sensitive areas. The construction will produce a huge amount of carbon dioxide. The decaying of the flooded forests will also produce a huge amount of carbon dioxide. The majority of this 'dirty' energy will be used by the fracking industry which is a an environmental catastrophe. (Check out the problems with the water table in Australia due to fracking in that country) I sincerely hope that the Panel of the Canadian Environmental Assessment Agency will will act for the mutual benefit of all.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 13 (Vegetation and Ecological Communities) - Section 15 (Greenhouse Gases) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Greenhouse Gas Emission Merits of the Project • Project Need

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pub_0715-001	Milward, Elizabeth	A) Policy considerations Judging from what I have read on the subject, the main need for the Site C Dam is to power LNG for export. I have paid a great deal of attention to natural gas obtained by fracking in the USA, and believe the bubble in investment has ended. With the high depletion rates of fracked wells, this means the price of LNG has likely hit bottom and will go up a good long way as yet, since it is not yet at the break-even point that will lure in new investment. Basically, I don't see the point in building an expensive dam to subsidize shipping BC gas to the far east when we can wait a few years for the gas price to rise on this continent, then use it here. Site C is not a good use of BC's limited money and natural resources. It also uses CO2 light energy to subsidize CO2 heavy energy.	The need for the Project is described in Section 5.2 of the EIS, and is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The Project is needed whether or not any new LNG projects proceed. Section 5.2.2.2, and in particular tables 5.8 and 5.9, of the EIS set out BC Hydro's energy and capacity load resource balances which do not include potential LNG demand. Please see the Technical Memo on Project Need. Please see Sections 7.4.2 and 15 of the EIS for discussion of GHG emissions.

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pub_0715-002	Milward, Elizabeth	B) The Environmental Impact Statement As for Site C as a dam site, I am very loathe to submerge that much farmland without a much better reason. Then there are the First Nations claims to the land, which are likely to result in justified lawsuits if the government goes ahead with this. This area has already been heavily impacted by previous dams and reservoirs, but that isn't considered by the EI assessment. This is not adequate. Also inadequate is the exclusion of the delta from the assessment and the exclusion of many animals with large home ranges.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried out. The approach was applied and is described in more detail in Section 10 of the EIS. As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is provided in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project. The matters raised are described in the following sections of the EIS: - Section 8 (Assessment Process) - Section 11.1 (Previous Development) - Section 20 (Agriculture) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: • Agriculture • Cumulative Effects Assessment • Methodology to Assess Impacts on the Current Use of Lands and Resources and the Exercise of Aboriginal and Treaty Rights • Peace Athabasca Delta
pub_0726-001	Jones, Caitlin	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. I would like to register my whole hearted disapproval of this mega-project. The Peace River valley is a significant historical, cultural and natural feature in northern B.C. This significance is recognized by the B.C. government's designation of the Peace as a Heritage River. The river is heavily used by local residents for boating, swimming, rafting and fishing. The Peace River has significant cultural and historic values associated with First Nations settlement. Peace River region wildlife populations already are unacceptably impacted due to the intensity of human activity and development. The only appropriate response is to deny approval to the Site C dam and implement a comprehensive management approach that will ensure the recovery of at risk species like	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.

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		grizzly bears and caribou.	
pub_0727-001	Foy, Joe	Save the Peace River Valley - Stop the Site C Dam! I am writing this letter on behalf of the Wilderness Committee. We are a grass-roots wilderness preservation organization with over 60,000 members and supporters all across Canada. Our organization was founded in 1980 in British Columbia. Our head office is in Vancouver and we have field offices in Victoria, Winnipeg and Toronto. The Wilderness Committee is opposed to the building of the Site C Dam. I am very surprised to see that the Site C dam project is still working its way through the Environmental Assessment process given BC's current state of affairs. I had thought that this foolish project would have been dumped for good long ago. British Columbia has more than enough electrical power for the province's needs into the future. BC has access to a great deal of electrical power as a result of the Columbia River Treaty. We now choose to sell this power to the Americans because we do not need it - but if we ever did need more hydro power we could use our Columbia Treaty power instead of building the costly Site C Dam. The BC government says that the Columbia Treaty power cannot be considered. In our view that is utter nonsense and the Environmental Assessment Agency should not stand for it. The Columbia Treaty power should be included in the assessment of "need" for the Site C Dam. Due to bad decisions made by the BC government to order BC hydro to enter into long term energy purchase agreements with private hydro-power companies for power BC does not need and can only sell at a loss, BC Hydro is now spiralling around a widening debt that threatens to sink it. If BC Hydro were to go under it would be a disaster for the people of BC because BC Hydro has up to the recent past, been a major revenue generator, helping to fund schools and hospitals for the province - and BC Hydro is our best tool for fighting climate change as we move away from fossil fuels. Perhaps the main reason that the Site C dam has not yet been cancelled is that the BC government has decreed that the BC Utilities Commission (BCUC) is not allowed to assess this project. It has been the BCUC's job to determine if power projects are in the best interest of the people of BC. The BCUC has turned down the Site C Dam twice before – and we believe would do so again if only they were allowed to do their job.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The environmental assessment process for the Project is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried out. The approach was applied and is described in more detail in section 10 of the EIS. As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is provided in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project. The Project has not been rejected twice before. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans:

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		The Site C Dam project is very expensive - currently projected to be $8 billion, but many think the project could spiral to well over $10 billion due to the unstable nature of the land where the dam is planned to be sited. This project would be the most expensive public project in the province's history, with the potential to impact every person in BC. It is foolish in the extreme to disallow oversight by the BCUC. The Environmental Assessment Agency should require the BC government to reinstate BCUC oversight. Also foolish is the refusal of BC Hydro to hold open house public meetings outside of the region around the proposed Site C Dam. This project is a looming threat to the financial wellbeing of BC Hydro - and the province - and every person in the province. Community members throughout BC deserve an opportunity to have their say and hear what their neighbours have to say. This is made all the more important now that the BCUC has been gagged. Imagine the rage across the land if the Site C Dam were actually built, BC Hydro collapsed under the crushing debt - bringing the province with it in a Greek style melt down. It is immoral to ask people to face this financial risk - but deny them even an open house public meeting to ask questions, express their views, and hear what their neighbours have to say on the matter. BC Hydro should be told by the Environmental Assessment Agency to hold open house public meetings on the proposed Site C Dam project the length and breadth of the province. If the Site C Dam were to go ahead, at least 3,800 hectares of prime agricultural land would be lost to flooding. Actually the number is much larger when we add in the lower quality food lands that would be lost and when we add in the food lands that would be lost to erosion and landslides. Such a huge loss of farmland would stunt the future of farming in the Peace District forever. More needs to be explained in the EIS about the long-term community development effects of removing so much farmland from one region of the province. This would be the largest deletion of lands from the Agricultural Land Reserve in the history of the province. Every decade the province's ability to feed itself has been diminishing. When I was born back in 1954 we were close to producing the same amount of calories of food required to feed our people. Now we produce less than half the amount we eat. We have more than enough electricity for our needs - but less than half the food that we need.	• In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139). Section 5 of the EIS addresses the need for and alternatives to the Project. Section 5.2.1.1 describes the methodological approach and results of BC Hydro's 2012 Load Forecast, the most recent load forecast. Section 5.4.2 of the EIS canvasses the potential alternatives to the Project that BC Hydro considers are not viable, with reasons provided for each alternative reviewed, while Section 5.5 provides details of the available alternative resources to the Project and examines these available alternative resources using financial, technical, environmental and economic development attributes. The matters raised are described in the following sections of the EIS: - Section 9 (Information Distribution and Consultation) - Section 14 (Wildlife Resources) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Cumulative Effects Assessment • Methodology for the Assessment of the Potential Impacts of the Project on the Exercise of Asserted or Established Aboriginal and Treaty Rights • Project Costs

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		How does the BC government propose to remove this much land from the Agricultural Land Reserve? They need to be more clear on this in the Environmental Impact Statement. This is another reason why open house public meetings need to be held all over the province. BC Hydro should be required to stand before citizens in the Okanagan, Delta, Saanich etc and tell them why it's a good idea to drown so much food lands. This is the people's future. Many of us are wondering what kind of place we are leaving for our grandkids - people deserve to have their say in their own communities, surrounded by friends, family and neighbours. First Nations' opposition to the Site C Dam is very strong and wide spread. Why is the Site C Dam project continuing to advance in the face of such strong First Nations' opposition? We had thought that Canada was moving to be a fairer more thoughtful, less colonial place - where Federal, Provincial and First Nations government decisions are taken into account and balanced in a fair manner. In the case of the Site C Dam project First Nations government decisions to oppose the construction of the dam are being ignored. This is wrong. It is un-Canadian in our view. And with more countries supporting the United Nations Declaration on the Rights of Indigenous Peoples (including Canada, who has endorsed the declaration) I wonder how in the world Site C Dam can still be moving forward in the face of such clear First Nations government opposition. The Environmental Assessment Agency needs to require BC Hydro to explain how it would be legally entitled to build the Site C Dam project despite such strong and united First Nations' government opposition. Part of the reason for this strong opposition is the heavy impact industrial development has had on the lands that First Nations people rely on in the Peace River watershed. BC Hydro and other industries have had a heavy impact - and this should be better accounted for in the Environmental Impact Statement. Fisheries polluted by mercury from the previous BC Hydro Dam projects on the Peace River, major caribou herds reduced to almost nothing, surface water resources polluted or pumped deep underground by the gas industry. Downstream impacts of the existing BC hydro projects on the Peace River have reached all the way to Wood Buffalo National Park in Alberta. Yet in many cases no attempts have been made to mitigate these impacts or reimburse communities or people for their on-going heavy cost in wellbeing. All of these impacts should be in the EIS as well as an explanation of what is being done (or not done) to repair the damage that has already occurred. Many of the surviving wildlife populations of the Peace River Valley are wide ranging and use	

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		specific parts of the landscape at specific parts of the year. The EIS needs to look at a much wider region to take into account the entire life cycles of wildlife in the region. The EIS also needs to explain all the impacts on wildlife of removing up to 100 kilometres of low elevation valley bottom habitat – including important wintering grounds, birthing habitat and travel corridors. BC has no endangered species legislation, so protection of at-risk wildlife from poorly planned projects, like the Site C Dam project is essential. This issue is made all the more important when one considers the disaster that has befallen certain populations of wildlife in the Peace River area from past BC Hydro projects. Thank you for giving us the opportunity to make these comments.	
pub_0728-001	Martin, Bonnie	Please accept my comments regarding the adequacy of B.C. Hydros EIS for Site. C. I feel that the EIS Draft is not adequate, and does not give the full picture, only what B.C. Hydro wants to portray. This is a further example of how they conducted their Information Meetings. All outside information was given "lip Service" and then ignored. I feel the Draft downplays the potential effects, which are huge and important. How can they downplay the potential of the loss of 15,000 plus acres of Class 1 and 2 Agriculture lands to the future of food security? This is an extremely fertile area. They also do not compare the effects of the WAC Bennett Dam with the possible negative effects of the proposed Site C dam. (30 years later, trees are still shooting up from the bottom of Williston Lake). Also, the banks of the lake are still sloughing that were built in that area. This is due to the nature of the soils. I am hoping that you will not approve their draft until it fulfils all the necessary requirements.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The Project is currently in a cooperative environmental assessment process led by federal and provincial regulatory agencies, which includes a joint review panel. Consultation is part of this process and includes opportunities for input and participation by the public, Aboriginal groups, stakeholders, and communities. Feedback received to date has been considered, along with technical and financial information, in refining Project designs and plans, including engineering and environmental mitigation plans which have been submitted as part of the EIS. An environmental assessment of the Project must be completed and various permits and approvals must be issued before it can proceed to construction. In addition, the Crown has a duty to consult with, and where appropriate, accommodate Aboriginal groups. Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried out. The approach was applied and is described in more detail in Section 10 of the EIS. As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is provided in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project. The matters raised are described in the following sections of the EIS: - Section 8 (Assessment Process) - Section 9 (Information Distribution and Consultation)

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			- Section 11.1 (Previous Development) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Cumulative Effects Assessment
pub_0729-001	Gareau, Kimball, Virginia	i am troubled by the lack of information given to the citizens of B.C. about the proposed development of the Site C dam.It also concerns me that the Provincial and Federal governments have no Long Term Energy Plan and so development plans seems to be done often in an 'ad hoc' manner. B.C. and Canadian energy plans should be discussed thoroughly in the Legislature and Parliament so that the public can be part of that discussion.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Comprehensive consultation with the public – including local and regional governments, communities, stakeholders, property owners and the general public – has taken place since 2007. This consultation includes BC Hydro-led consultation, as well as agency-led public comment periods as part of the environmental assessment process. Since 2007, the Project team led or participated in more than 500 consultation meetings, presentations, local government meetings, community events or open houses. For example, as part of Stage 2, the consultation and technical review phase of the Project — which took place from 2007 to 2009 — 121 meetings were held over three rounds of consultation, including open houses and stakeholder meetings in the Lower Mainland and Vancouver Island. BC Hydro has also responded to approximately 3,000 inquiries received via email, in-person at the consultation offices, or through written submissions, which are in addition to information requests made as part of the environmental assessment process. The CEA Agency and the BCEAO administer the environmental assessment process. The locations and format of the open houses during the public comment period for the EIS were determined by the CEA Agency and the BCEAO. The Agency required representatives of the proponent to attend. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. Please also see the Technical Memo on Project Need.
pub_0730-001	Ramsay, James	Thank you for the opportunity to comment on BC Hydro's Environmental Impact Statement (EIS) for the proposed Site C dam on the Peace River. The Peace River valley has been heavily affected by previous large hydro projects but	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for the Project is being conducted in a thorough and

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		nevertheless retains very significant environmental, cultural and socio-economic values which would be irreversibly damaged if the proposal goes ahead. I am particularly concerned that the treatment of the following three topics in the EIS is inadequate: (a) the permanent loss of ecological connectivity in the strategic Yellowstone to Yukon corridor; (b) the cumulative effects of the dam and reservoir on the river and its downstream reaches; and (c) the global environmental consequences of the dam, through its principal purpose of providing electrical energy to power the thermal fuel industry.	independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried out. The approach was applied and is described in more detail in Section 10 of the EIS. As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is provided in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 8 (Assessment Process) - Section 14 (Wildlife Resources) - Section 11.1 (Previous Development) Please also see the following Technical Memos: • Cumulative Effects Assessment • Project Need
pub_0731-001	Forgues, Candice	Please stop this from happening!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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pub_0739-001	Chow, N	Why are you doing this? Have you no respect for the environment? The Site C dam would ruin the area and for what? Not exactly for environmentally sound reasons; you would be using the energy to power fracking and tar sands extraction, both of which are decidedly environmentally unfriendly. By building the dam, you would be showing your disdain for: * the local residents who use the river for fishing, swimming, and boating * the significance of the river for First Nations, both historically and culturally * the various species that live in the area, including caribou, wolverine, and grizzly bears. Some of these species are at high-risk. Oh, but maybe you think that we need the energy. We already have other dams, but we need this one. We must destroy the area so we can frack, power LNG plants, and fuel tar sands in our greed for money and oil. Those people can find other rivers to enjoy. Those First Nations are clinging to the past. And besides, they are always whining, and it is high time we ignore them properly. As for those stupid animals, there are other places for them to live. Why should we care about some dumb beasts when we humans are at the top? I ask you, do you have morals? Do you have a heart? Do you have sympathy? Do you have reason? If you possess such traits, and I hope you do, you will not approve the unnecessary Site C dam.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The environmental assessment process for the Project is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 14 (Wildlife Resources) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 25 (Outdoor Recreation and Tourism) Please also see the following Technical Memos: • Caribou • Methodology for the Assessment of the Potential Impacts of the Project on the Exercise of Asserted or Established Aboriginal and Treaty Rights • Movement of Grizzly Bears and Large Carnivores • Project Need

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pub_0740-001	Couture, Samuel	As a young British-Columbian I would appreciate having access to the same natural beauty in our province that the proponents of the site C dam did as children. Although I understand our province's thirst for energy must be quenched, I would hope that our government pursue alternative sustainable energy sources such as geothermal energy which other countries along the geothermally active Pacific Rim such as the Philippines have wisely harnessed. Thank you for your time,	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Please also see the Technical Memo on Alternatives to the Project.
pub_0742-001	Labatch, Shana	I take this opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. I am not usually comfortable with sending my name and information to the government in protest and disagreement of the government's actions. In the past, throughout the world, this has resulted in negative, illegal and immoral treatment by those under government influence. So please note that the fact that I am putting my comments forward means that I have firm belief that the Peace River valley is a must remain as it is: important to First Nations and to our agricultural and tourism community. Our people have lived here for over 15,000 years (I am sure the Dune-zaa are similar in history) and have left a minimal footprint on the land and waters. We were advanced in our way of being and living within this eco-system. In only 200 years we have seen the destruction of forests, fish habitat, culture, historical features and language and physical, emotional and mental health of humans. I have heard stories of how the Kenney Dam project flooded a whole village and a millenia of history. The bones of the ancestors floated to the surface and houses were destroyed with people's items still in them. This was about 60 years ago. My grandfather's mother was Cheslatta. How is this current government any different? The only way I would believe it is different is if it does NOT move forward with this project. Otherwise, perhaps the process seems more "humane" but the end is the same: Destruction, based on greed of money and power, and the hydro-electric power to feed more of the same. B.C. Hydro is seeking federal and provincial approval to construct Site C and create a third reservoir on the river. Others will tell you of the limitations of the assessments such as habitat loss, decrease to secure agricultural base (increase in dependency on world and big business food	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried out. The approach was applied and is described in more detail in Section 10 of the EIS. As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is provided in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project. The matters raised are described in the following sections of the EIS: - Section 9 (Information Distribution and Consultation) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: • Agriculture • Caribou • Cumulative Effects Assessment • Methodology for the Assessment of the Potential Impacts of the Project on the Exercise of Asserted

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		markets--which are not healthy)...etc. I am just saying NO. As a spiritual person of aboriginal and caucasian heritage this is my prayer: "Father Creator, the land and earth are yours and you have put us as trustees upon it to do good to others, to avoid greed and the worship of money and to learn to live within your creation and respect your creation. Please give our government and the people of the world, including Ms. Jones, a deep insight into not just the path that we are on as humans, but the path that we could be on. This new path can draw from the old ways of sustainability, crafted from thousands upon thousands of years of living research, and from new ways of social systems and livelihood. Let us not have our grandchildren and great grandchildren suffer any more from the choices we make now. We forgive our recent forefathers and mothers for the choices and patterns of unsustainability that they have chosen and passed on to us and we ask for Your help and guidance in walking this earth in a new way. Ndohoneh (let it be)." * Wide-ranging animals – such as wolverine, lynx and woodland caribou – are virtually excluded from the assessment. * The cumulative effects assessment appears to have omitted a number of past projects and potential new projects. Peace River region wildlife populations already are unacceptably impacted due to the intensity of human activity and development. The only appropriate response is to deny approval to the Site C dam and implement a comprehensive management approach that will ensure the recovery of at risk species like grizzly bears and caribou.	or Established Aboriginal and Treaty Rights • Movement of Grizzly Bears and Large Carnivores • Archaeology
pub_0748-001	Adams, Philip	I see no economic or environmental asset to the people of N. BC or for that matter the entire province. I do not support this project or it's "spin-offs". I see nothing but disaster.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0749-001	Epp, Ellie	Please halt this.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

IR #	Name/ Organization	Information Request/Comment	Response
pub_0750-001	Hash, Colton	I am deeply concerned about the continuation of habitat fragmentation in an area that already has severe impacts from rapid industrial development. I understand that the Peace River is a critical wildlife corridor, and that crossing the river safely is necessary for the migration of many animal herds. Additionally, I am aware that there are many small islands within the river, that would be flooded if the dam is constructed. These islands are also important habitat to many species already coping with stress from development.. After visiting this region, I am more than convinced that its beauty and agricultural productivity should be protected- I am also aware that this project is being built to power the developing fracking industry in North Eastern British Columbia, and will probably serve as a reservoir for industrial use. I believe the impacts of what this dam will enable should be taken into account as well. Whether it supplies water for fracking operations, or energy for LNG plants, I believe the cumulative impact of this project has potential to spread far beyond the Fort St. John region, and poses a significant threat to the vitality British Columbia's environment.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Project Need
pub_0770-001	Name withheld, Name withheld, Edgewood	The people of BC do not consent to Site C Dam. A river is a sacred and publicly held resource and does not belong to the Provincial government or any Crown corporation to do with as they wish. If you cannot prove that the majority of public in this region and BC as a whole consent to this project, then it is fundamentally wrong and in violation of natural law. In particular, if you do not have consent of people who own and live on the land, including First Nations who have protected the river and land for thousands of years. If you flood land without the consent of people who own and farm it, this is outright theft, which is criminal and the worst thing that can be done to a farmer. Why was BC Hydro allowed to write their own statement instead of hiring a neutral body to assess this? The report is pretty obviously biased, spending much time pushing economic benefits and downplaying real impacts. This environmental impact	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for Site C is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). Comprehensive consultation with the public – including local and regional governments, communities, stakeholders, property owners and the general public – has taken place since 2007. This consultation includes BC Hydroled consultation, as well as agency-led public comment periods as part of the environmental assessment process. Please also see the following sections of the EIS:

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		statement is very extensive and addresses many values, but it does show that there will be massive destruction to a unique ecosystem and rare fertile agricultural land. This should be more than enough reason to not allow this go through, but apparently the values of healthy ecosystems and local food security in the North are not important to Hydro or the government. (http://thetyee.ca/News/2010/04/06/VitalBreadbasket/) The mitigation strategies offered are extremely weak and inadequate. The supposed economic benefits are dubious, given how many billions of dollars this project is likely to cost from a corporation already in debt, with payback only realized over many years later. Also given that the energy is only for liquid natural gas exports and fracking, which are also not generally supported by the people, and would negate any claims of this being a "Clean Energy" project. (http://energeticcity.ca/article/news/2012/02/09/site-c-essential-lngdevelopment-clark) We do not need this project for domestic energy use. Why not invest in alternative technologies, including wind, solar and geothermal and become a global leader in energy that actually is clean? I am currently living on the Columbia River, which has been heavily dammed and sold out many years ago as the government agreed to in the Columbia River Treaty. This has deeply hurt fish and wildlife populations and ruined shoreline habitats, and pushed thousands of people off their farm land, wrecking communities. Now that the Treaty is up for review, we are negotiating with the Province and Hydro simply to modify reservoir management in ways that would allow some ecological restoration, and even this is a struggle. From the lessons of the Columbia, we should all know that the soil and habitat destroyed by creating reservoirs can never be restored the way it was. Avoid expensive and impossible mitigation struggles in the future and just leave it alone! Think of what legacy this will leave for future generations. This river is not yours to dam, it belongs to us all, and mostly to the people who live on it. Listen to them and to all of us. Also, there was very little time available for people to comment on this, I would recommend extending the comment period and greater publicizing of this proposed project.	- Section 7 (Project Benefits) - Section 11 (Environmental Background) - Section 20 (Agriculture)

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pub_0776-001	Brian, Mary	I would like to add my voice to those saying "No!" to the proposed Site C megadam. Monetary gains cannot outweigh long term losses to the Peace River, the natural habitat, the animal balance and First Nations heritage.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0777-001	Grignon, Tsiporah	Please do not allow the Site C dam to go ahead. At a time when food security is a high priority all over the world, it is important to maintain prime agricultural farmland to be used for growing food. The Peace River is heavily used by local residents for boating, swimming, rafting and fishing. It also has significant cultural and historic values associated with First Nations settlement. Please realize that a dam is not as important as what is there right now. Destroying the environment that is part of the fossil fuel industry makes no sense when this land is suitable for growing food. After all, we can't eat fossil fuels.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 20 (Agriculture) - Section 25 (Outdoor Recreation and Tourism) Please also see the following Technical Memos: • Agriculture • Methodology for the Assessment of the Potential Impacts of the Project on the Exercise of Asserted or Established Aboriginal and Treaty Rights
pub_0779-001	Anderson, Arlene	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. There are just too many negative reasons why this Dam should not be constructed.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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pub_0783-001	Wallace, Catherine	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. Investing billions in fossil fuel infrastructure is going in completely the wrong direction! Our climate is changing because we burn too many hydro carbons today. The Site C dam will power the unsustainable resource extraction industry. Peace River region wildlife populations already are unacceptably impacted due to the intensity of human activity and development. The only appropriate response is to deny approval to the Site C dam and implement a comprehensive management approach that will ensure the recovery of at risk species like grizzly bears and caribou.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 14 (Wildlife Resources) Please also see the following Technical Memos: • Caribou • Movement of Grizzly Bears and Large Carnivores • Project Need
pub_0788-001	Reeves, Trevor	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* The reduction in sediment loads will have negative effect on the downstream riparian environment and the delta of the Peace River. The change in flow pattern, especially the spring freshet, will also negatively impact the downstream riparian environment. The effects on the river. locally plus the downstream riverine and riparian environment to the delta of the Mackenzie River should be factored into the value versus detriment assessment for the project.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. The matters raised are described in the following sections of the EIS:: - Section 11.8 (Fluvial Geomorphology and Sediment Transport Regime) - Section 13 (Vegetation and Ecological Communities) Please also see the Technical Memo on Peace Athabasca Delta.

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pub_0795-001	Varey, Kim	I am writing with regard the proposed Site C dam on the Peace River. My reading on this project indicates that the environmental impact study completed on this project was of limited scope. Building of this dam poses serious risks to critical and threatened species such as caribou and wolverine. As well, farmland, boreal forest and traditional native sites will be flooded. The information submitted to date does not support the continuance of this important wildlife (and all other related species in the ecosystem), nor the way of life and environmental integrity of the area. I believe that permission for this dam to proceed should be denied. Thank you for your consideration of my letter.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for the Project is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. The matters raised are described in the following sections of the EIS: - Section 14 (Wildlife Resources) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 20 (Agriculture) - Section 21 (Forestry) Please also see the following Technical Memos: • Agriculture • Caribou • Methodology for the Assessment of the Potential Impacts of the Project on the Exercise of Asserted or Established Aboriginal and Treaty Rights • Movement of Grizzly Bears and Large Carnivores
pub_0796-001	Kopecky, Arno	I'm writing to express my concern about the social, economic, and environmental implications of the proposed Site C dam. I recognize that energy needs are growing throughout BC, Canada, and the world; but the area to be inundated by Site C would compromise a vital wilderness corridor for wide-ranging species such as wolf, cariboo, lynx, and many others; considered solely on its own merits, Site C might not be such a disaster, but when placed in the context of the cumulative impacts that two centuries of wilderness fragmentation have had on North America's biosphere, Site C starts to resemble the straw that broke the camel's back. I'm worried that cumulative impacts are not being properly taken into account through the Environmental Impact	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any

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		Assessment process. I also worry that Site C is being built to power bitumen extraction in the Alberta Oil Sands. I'm not opposed to oil sands development, but neither do I support it at any cost. If Site C is indeed meant for that purpose, I feel the flooding of the Peace to be an unacceptable cost (borne by the taxpaying public) for the profit of private energy firms operating in the oil sands. Lastly, I'll add that a strong energy policy designed to level off our growing energy use (forcing homes & cities to become more energy efficient) would be a better alternative to yet another mega-project. I realize such policy decisions lie outside your jurisdiction, but perhaps it isn't unreasonable for an EIA process to take into consideration the direction our pursuit of infinite energy consumption is taking us as a society. Eventually, we must reach some sort of energy equilibrium; why not start now? Thanks for your time; best of luck balancing the many competing priorities for this decision.	potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried out. The approach was applied and is described in more detail in Section 10 of the EIS. As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is provided in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 8 (Assessment Process) - Section 11. 1 (Previous Development) - Section 14 (Wildlife Resources) Please also see the following Technical Memos: • Caribou • Cumulative Effects Assessment • Movement of Grizzly Bears and Large Carnivores • Project Need
pub_0807-001	Imam, Bassam	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. The Peace River valley and the wildlife therein are an incredibly beautiful creation and gift from GOD. Please help to protect this pristine place!.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0821-001	Shaw, Verena	I don't want the Site C dam to go ahead. It's too expensive and from an environmental perspective is also too costly.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0828-001	Mackenzie, Patrick	The Site C dam is a bad idea. Please don't let it happen.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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pub_0836-001	Hickey, Jodi	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* The entire stretch of the Peace River, with the exception of two townships, is an Environmentally Significant Area of national importance. Peace River-Dunvegan is an Environmentally Significant Area of national importance. From the 1997 survey of the Environmentally Significant Areas for the province (Alberta Environmental Protection): Peace River-Dunvegan is an Environmentally Significant Area of national importance. It comprises 55,864 ha and stretches from the vicinity of the Smoky River upstream (the town of Peace River) to the B.C. border. The natural subregions are Peace River Parkland and Dry Mixedwood. This is one of the most diverse and productive river valleys in the Parkland and Boreal Forest of Canada. The river valley provides key year-round habitat for moose, elk and deer, as well as significant habitat for rare birds of prey such as golden eagles, bald eagles and osprey. The river contains high species diversity of fish, including lake whitefish, mountain whitefish, bull trout, northern pike, goldeye, walleye, yellow perch, and burbot. Bull trout overwinter in the river. Northern squawfish are only present in the Peace River, and distribution of rare largescale suckers is restricted to the Peace River drainage system. The river valley is an important movement corridor and provides provincially significant geese staging habitat. Wandering and red-sided garternakes hibernacula are common along the banks of the river. Diverse vegetation community types occur along the river. South-facing slopes support typical prairie vegetation such as grasses and cacti. The microclimate at Dunvegan results in a warm dry community of species such as cacti, western meadowlarks, and savannah sparrows. Fossil beds are abundant in bedrock exposures along the valley walls. Hoodoos occur along the south slopes along the upper reaches east of the B.C. border. The Dunvegan Natural Area is located within the Peace River valley. Altered flow regime due to upstream dams may negatively impact riparian ecosystem functioning. Maintenance of natural cover will support the widest variety of wildlife and native plants. The construction of this dam will negatively affect a part of the province that has	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 11.4 (Surface Water Regime) - Section 12 (Fish and Fish Habitat) - Section 13 (Vegetation and Ecological Communities) - Section 14 (Wildlife Resources) - Section 32 (Heritage Resources) Please also see the following Technical Memos: • Palaeontology • Peace Athabasca Delta

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		already been over exploited for the benefit of the rest of the province! The impact of this dam will be felt throughout this river system all the way to the Peace-Athabaska Delta and beyond to the Arctic Ocean!	
pub_0837-001	Foss, Lorna and Gene	We would like to comment on the Environmental Input Statement from BC Hydro re the proposed Site C dam. It is absolutely essential that we retain all the land possible to grow food in our country. That alone should negate any approval of the EIS. Take into consideration the First Nations land and the range for wildlife and that should also say no. We have been through this before- that decision should be adhered to. BC Hydro should have to prove that we need more energy for domestic use (other than to provide power to process "fracked" gas), and also that there is no other way to obtain it. Destroying our land is not the way.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 14 (Wildlife Resources) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Methodology for the Assessment of the Potential Impacts of the Project on the Exercise of Asserted or Established Aboriginal and Treaty Rights

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pub_0840-001	Dolf, Ben	I don't oppose generation of electricity in principle, but I think the case has not been made for such a massive intervention when so much can still be done through energy conservation.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The matters raised are described in Section 5 of the EIS, Need for, Purpose of and Alternatives to the Project. Please also see the following Technical Memos: • Project Need • Demand-side Management

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pub_0841-001	Jensen, Sophie	Having worked recently in northern BC, and seeing the large amount of habitat fragmentation, environmental degradation, and general disrespect for the environment that has been going on up there, I want to state my CLEAR OPPOSITION to site C dam. Now just learning about the actual reasons for the construction of this dam - to supply the fracking industry - with power, is appalling. Clearly we know enough about this industry to know that it is extremely unsafe and shame on the BC government for promoting it. You already are dealing with water shortages in the area, and to allow the unsustainable use of such a precious resource is very irresponsible. The fragile ecosystems that depend on the Peace River are going to be changed forever, and you are also willing to lose some of the best crop land in northern BC?? Get your priorities straight!!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 13 (Vegetation and Ecological Communities) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Project Need
pub_0844-001	Andrews, Linda	As a life long resident and taxpayer of British Columbia, I ask that my rejection of the Site C dam be duly noted by your agency. This project has been rejected twice before in the 1980's. BC has enough hydro electric power for consumption needs and this project is being considered now to fuel the needs of the LNG industry and the oil sands of Alberta. It will have catastrophic impact on the environment and loss of valuable agricultural land and First Nations heritage sites. For all of these reasons I hope you and your agency will refect this plan.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The Project has not been rejected twice before. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the Project until BC Hydro provided: (1) a load forecast demonstrating that construction of the Project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the Project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's

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			long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139). The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 20 (Agriculture) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) Please also see the following Technical Memos: • Agriculture • Methodology for the Assessment of the Potential Impacts of the Project on the Exercise of Asserted or Established Aboriginal and Treaty Rights • Project Need
pub_0846-001	Lamont, Myles	As a biologist and proud citizen of this province, I cannot support this project due to the long term impacts the proposed Site C Dam would have, not only on the land that would be lost to both human and wildlife use, but due to the shortsightedness of this project. With the oil and gas industry being the main beneficiaries from this power source in the short term, this is an unneeded burden on provincial tax payers and an additional unneeded source of power for BC Hydro which already has a surplus of electricity. The impacts that this large of a body of water would have on the surrounding environment is also not known, with fog already being an issue for the local airport, a body of water this large would undoubtedly only exasperate this problem, which would obviously have an impact on the local economy.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the

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		This project represents a loss to local farmers, local wildlife resources and a burden on taxpayers, I highly encourage all those involved to consider the long term implications this project will have on our province.	need for, and benefits of, the Project. Section 26.4.10, Navigation, describes potential effects of fog on aviation operations at the airport. The Project is not expected to have an adverse effect on aviation visibility due to changes in fog at the North Peace Regional Airport. Section 20.3.6 describes potential effects of the Project operations on agricultural operations, including changes in microclimate. Reservoir induced local climate effects on agriculture are anticipated to be limited to possible effects on crop drying within 1km of the reservoir. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 20 (Agriculture) - Section 14 (Wildlife Resources) Please also see the following Technical Memos: • Agriculture • Project Costs • Project Need

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pub_0847-001	Bailey, K.	I am sorry that this dam is being considered for the Peace River valley. Losing 3800 hectares of arable land is a significant one, and the fact that the ground is unstable in the area of the proposed dam is also something which will lead to spending large amounts of money to stabilize the support for the dam. B.C. Hydro already has a large surplus of energy produced. Please rethink this project.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 11.2 (Geology, Terrain, and Soils) - Section 20 (Agriculture) - Section 37 (Requirements for the Federal Environmental Assessment) Please also see the following Technical Memos: • Agriculture • Project Need • Seismic Considerations
pub_0850-001	Seaton, Stephanie	I have done a considerable amount of research on the Site C Dam issue. It would be tragic if this Dam were allowed to proceed - the up side is negligible considering the environmental damage the dam would cause. I have spoken with the Treaty 8 First Nations group in the Peace River area - their opinion (official opinion) was that they were "open for business" but drew the line at the Site C Dam proposal. They've had enough development of this kind in the region. There is too much at stake here. Please see my blog that primarily deals with the connections to the Site C Dam issue http://thieverycorp.wordpress.com/ I hope that you will look into this issue further. If you have done the research, I'm sure	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. BC Hydro began consultation with Aboriginal groups in regard to the Project in late 2007 and prior to any decision to advance the Project to an environmental assessment. Aboriginal consultation for the

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		you would agree that this would be a bad idea to approve it for the sake of a few.	Project is ongoing. BC Hydro and Aboriginal groups are engaged in a process that will continue through all stages of the environmental assessment process, as well as through the proposed construction and operations stages, as described in Section 9.2 (Aboriginal Group Information Distribution and Consultation) of the EIS. The matters raised are described in the following sections of the EIS: - Section 9 (Information Distribution and Consultation) - Section 11.1 (Environmental Background - Previous Development) - Section 34 (Asserted of Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: • Aboriginal Consultation • Consideration of Historical Context in Assessment of Potential Effects and Impacts on Aboriginal Groups • Methodology for the Assessment of the Potential Impacts of the Project on the Exercise of Asserted or Established Aboriginal and Treaty Rights

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pub_0852-001	Floody, Eileen	I am constantly appalled at the way that BC Hydro is being operated: the waste, the corruption and the bowing and scraping to accommodate extractive industries that do not benefit the people in the long term. Usually they leave big messes that have to be cleaned up by the taxpayer at enormous expense, while those who profit likely hide their money in overseas tax havens. Site C dam is an old idea that needs to be scrapped. Healthy farmland and clean water has enduring value for generations of people. Dams always silt up, fail or cause unintended consequences through the massive rearrangement of natural systems. Wildlife as well as people will suffer and the damage cannot be fixed. Just once, it would be heartening to stop this now, for the powers that you represent to listen to ordinary people who love this land and want it protected, not exploited.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 12 (Fish and Fish Habitat) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Dam Safety
pub_0855-001	Storey, Cassandra	I am fully aware of BC's reliance on resource development and hydro in this province. I am not anti development, but I would say that I am very uncomfortable with the scale of hydro development along the Peace River, not to mention the considerable amount of current and proposed gas / LNG projects in the northern part of this province. I spent a summer based out of Fort St John, BC, working for a forestry company, and had the pleasure of spending much of my free time camping along the Peace River - exactly where it would be flooded if Site C was to go through. The amount of opposition within the valley versus the the pro-Site C mentality just outside of the valley was quite a harsh reality. Of course development has to be in somebody's back yard - but again, I'm uncomfortable with the amount of development in the Peace Region. Especially because of the amount of fish and wildlife habitat, agricultural land and historic sites that would be flooded with Site C. Furthermore, many speculate that Site C will power proposed LNG projects. I think	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project)

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		LNG in itself is a bad investment for our province, given the carbon targets our province has set out verus the carbon footprint of LNG when looking at the whole life cycle of it's development and use. LNG is not carbon friendly in this way. Profits will only be made over the long term, and I am quite certain that these projects will not be socially considered 'clean' development for much longer. I would urge you to reccomend to BC Hydro that it's time to take a diversified approach to electricity production in this province. There is not one answer. The answer lies in the diversity of types of power development that can happen given a specific region's strengths. Yes, BC is rich in powerful rivers, but there is also wind, currents, solar, etc, etc, options that could work better for specific regions. This will take more work, but it will provide a long term and solution to power development in our province. If power was visually developed in everyone's backyard (instead of very harshly in specific areas), maybe we'd all be a bit more aware of our power consumption and the impact it has on our finite environment. And the conservation targets the province and BC Hydro sets out would be a little more attainable. I appreciate the immense job you have to do in weighing what is best for the public interest. Thank you for your time, and carefully considering the points in my letter.	- Section 15 (Greenhouse Gases) Please also see the following Technical Memos: • Agriculture • Demand-side Management • Greenhouse Gas Emission Merits of the Project • Alternatives to the Project • Project Need • Archaeology
pub_0856-001	Booth, Dudley R.	Would it surprise you to discover that you and I and every living thing exist in a small ball of matter 8,000 miles in diameter? That the atmosphere that surrounds it would be the thickness of Saran Wrap, were the Earth the size of a beach ball? You live on a very fragile planet, yet you and others are determined to destroy it through the destruction of the very environment that supports all life. We are in the midst of uncontrollable Global Heating, yet industry wants to export more hydrocarbons to be burned by other countries. Do you have no children or grand children whose future you care about? The site C dam will do permanent and irreparable damage to the environment of the area. The Site C Dam proposal is tied in with the production of LNG for export. This is the only thing this power is needed for, because we have abundant power already. The real story is that it is proposed so that the government and industry can build LNG plants and ship more CO2 producing hydrocarbons. Does it not seem strange to you, that that many would destroy the planet if it produced profits? If you have been keeping	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project)

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		up with the scientific community, including NASA, you would have discovered that the Arctic Ice Cap is now almost totally destroyed with little or no chance of recovery. The Arctic Ice cap is the thermostat that controls the temperature of the planet, and we have broken it by burning uncontrolled amounts of fossil fuels. Instead of governments and industry trying to find a way to restore the natural climate to the planet, they are hell bent on exporting more fossil fuels to increase global heating. You are in a position to make a lasting critical difference with you decision and I urge you to stop the Site C dam from going ahead. Might not $10 Billion Dollars be better spent on protecting and preserving the place in which you and I live?	- Section 15 (Greenhouse Gases) Please also see the following Technical Memos: • Greenhouse Gas Emission Merits of the Project • Alternatives to the Project • Project Need
pub_0857-001	Wilkinson, Mary Ruth	I would urge you and anyone else who is making decisions about whether this dam should be built to read a recent book by Stephen Gardiner, A Perfect Moral Storm: The Ethical Tragedy of Climate Change. One of the "storms" he mentions is the global effect of climate change. Nobody should make decisions which will facilitate continuing to focus on non-renewable energy (which certainly seems like the main focus of this dam--and would be even if it were for meeting general electrical needs). We don't need more carbon energy; we shouldn't even need more energy. What we DO need is to what all of us as children should have learned as part of growing into dulthood and that is to live within our limits. Another "storm" is the legacy we are leaving to future generations. Gradually (though with increasing speed) we are changing the world that they will inherit from us. They will need the rivers, the soil, the beautiful areas of our country for food and for joy. A few years more of energy for us to use and to sell will deprive them of yet another space that has been used and loved and could continue to be used and loved. Both these "storms" (I mention only 2 of Gardiner's 3) show complete irresponsibility and shallow, shortsighted, selfish thinking. Canada is fortunate enough to be a leader in using renewable energy (estimate is 85%). And yes, much of it is from hydro, but we need to learn to use less rather than a profligate more and we should not build another dam to enable the Canadian economy to earn money by providing nonrenewable energy to other countries such as China and the US who are already the world leaders in irresponsible dependance on "dirty" energy. Please, please do your part in halting this dam. And do it because, years from now	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in Section 5 of the EIS, the Need for, Purpose of and Alternatives to the Project. Please also see the following Technical Memos: • Alternatives to the Project • Project Need

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		(and probably all too few), you will be deeply thankful that you had the courage and foresight to do what you could to halt this. I am only afraid that you may have far fewer people sending you these sorts of messages. I know many people I talk to who have the response: What's the use? Nobody seems to listen. Nobody in government is thinking about long-term effects. There are some things that are more important than money--and even than the best possible life for you and I. One of those "things" is what we leave as our gift to future generations. Read the Gardiner book--published by Oxford University Press. Then follow your heart. Not the lobbyists, not the government, not the back--slappers in your office, but listen to the people who deeply care about the future generations, the people that will be affected by the dam, the gift of the Peace River and that beautiful area. Thank you--I do hope you or someone on your team has listened to me and to others who still act with hope. Mary-Ruth Wilkinson: lover of "Places", mother of dedicated BC adult children who are trying to train children to love and care for creation, grandmother of 3, and surrogate "mother" of many with whom, as a teacher, I have loved all the amazing beauty of our creation and who see any encouragement to nonrenewable energy as a death knell to much that we want to pass on to the children yet to be born-- if not the planet as a place for humans to even live.	
pub_0858-001	Krobish, Kip	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. This is where the form letter ENDS! Now please read We all know Dams have massive impacts, A string of dams has even more impacts. I live along in the Columbia Basin with Farmers thrown-off their lands, Salmon destroyed migratory bird habitat disappeared, There is no way an EIS can come back saying "Not Significant Enough to Derail the Value of the ELECTRICITY for Society" I am in the solar power industry. That means distributed electrical generation. AKA power being made where it is used with no transmission losses. A presentor at a Canandian Solar Industry Association meeting I went to in Vancouver commented that the electrical generation potential from the site "C" proposal could be made much	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The environmental assessment process for Site C is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada “Agreement to

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		closer to Vancouver in the Frazer River Interior with solar for less money and in only a couple of years without throwing ranchers off their land. This price estimate is even lower today with the drop in PV prices. For an example of What a Feed In Tariff would look like in BC, look at the Ontario Power Authority FIT program. BC Hydro is blind to this option. Totally blind because they fear solar like most utilities do until they accept it into their mix of options. So, of course there are huge impacts. Are they justified? No not in the face of cheaper quicker alternatives. What is the point of an EIS if the government has already decided that impacts are never greater than the need for another project and centralized power generation. Politically BC Hydro's board seems to be trying to make the Crown Corp go bankrupt. This will lead the way to a sweetly priced buy-out by a private corporation that will control both water and power in a wet corner of an increasingly thirsty world. Please do not participate in this high stakes game. The environmental impacts are there and I am asking for a strong statement that they are greater than the uneeded power source this project could provide. If they take away your jobs, come be a part of the EIS crews on the new solar farms that will be created in BC within a few short years. Thank you! I know you understand what I am saying.	Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 8 (Assessment Process) - Section 11.1 (Environmental Background - Previous Development) - Section 14 (Wildlife Resources) Please also see the following Technical Memos: • Alternatives to the Project • Project Need
pub_0859-001	Gillis, Damien	As someone whose family settled in the Peace Valley a century ago before losing our home, , , I take very seriously this latest threat to the valley - Site C Dam. Peace country is home to some of the best agricultural land in the province and critical fish and wildlife habitat. The unique soil and topographical conditions of the valley yield one of the longest growing seasons in BC. My family grew all manner of fruits, vegetables and grains there decades ago - until that sustainable way of life was taken away from us. I never got the chance to work my family's land. Today, we face a food security crisis in BC, producing just 40% of our total food needs. We do not have an energy self-sufficiency crisis. I direct you to the work of my colleague, who has clearly demonstrated that we have plenty of power for the foreseeable future...Unless, that is, we ramp up fracking operations, mines, and build 5-6 massively energy intensive LNG plants on BC's coast. For evidence of this, you need look no further than our own premier's recent	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. The environmental assessment process for Site C is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment

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		comments. Ms. Clark told Global TV last week, "You can't power up these huge [LNG] facilities without more power, so BC Hydro's going to have to build Site C - we're in favour of making that happen." Last year, she acknowledged to a crowd in Fort St. John that just one of these proposed plants - Shell's joint project with three Asian partners - would eat up the entire load of Site C, that being 1,100 megawatts. Incidentally, how is the public supposed to take seriously this process when the outcome has clearly already been decided by our political leadership? Despite the premier's Orwellian assurances to the contrary, fracked natural gas, converted to LNG, then shipped halfway around the world to be decompressed and burned is not in any way, shape or form "clean energy". Nor is a massively economically destructive mega-dam to power this gas development. In this era of climate change and drought conditions, I do not support using taxpayers' and ratepayers' dollars to subsidize the fossil fuel industry - nor to divert, contaminate and destroy billions of litres of precious fresh water - which is what these projects will do. I respect First Nations' rights and voice, as I respect the farming families still tilling the yet unspoiled land of the valley. I take very seriously the unified, unambiguous opposition of Indigenous peoples and farmers in the valley to this project. Moreover, I take the forced removal of the BC Utilities Commission from its role as the public's watchdog in evaluating this project as patently undemocratic. The lack of review of the project from a meaningful cumulative effects approach is also deeply troubling - especially in light of a recent report from the David Suzuki Foundations showing that over 65% of the region has already been marred by heavy industrial impacts - dams, roads, logging, mining, oil and gas. This process, this project, and the draconian values that underpin it are deeply flawed. I am steadfastly opposed to the $8+ Billion subsidy of the fossil fuel industry, the destruction of vital ecosystems and farmland, and the trampling on First Nations and citizens' democratic rights that the proposed Site C Dam represents. I urge you to do the right thing and reject this project.	periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 8 (Assessment Process) - Section 11.1 (Environmental Background - Previous Development) - Section 12 (Fish and Fish Habitat) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Dam Safety • Alternatives to the Project • Project Need

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pub_0861-001	Soderquist, Jen	About the Site C. We all know its ill-logical to build it for different reasons, the reasons are : the land is unstable (sloughing), will kill certain species of fish, farms are more important than poisonous "natural" gas (we can't drink frack or gas, but it sure does cause permanent damage to land and water sources), it well destroy homes (more displaced people, it's not like christy Clark is going to buy them new homes, land, farm business) business, recreation, fishing and swimming areas, history, destroying parts of native reserve (so, they will be displaced again, isn't that kinda racist?), history (of course you don't know history about it if you haven't lived here many years). The Site C doesn't support the people here, not the public or anyone, our town will bust, it happened before in early 80's, it was really bad. Site C only supports the Asians, not us, we all can see that. We don't support the LNG plant when it only poisons our waters and other food sources. There is nothing that can clean frack water, nothing that is safe and we have many frack ponds causing issues. Let me tell you a story that is affecting some lives, one of them is my uncle, he has cows and guess what, that damn gas rig has been causing cancers in his cows, that is adding more stress on him and the gas company has ignored his concerns, that is very topical of the ignorance of gas companies, tar and oil companies has the same ignorance towards or future food sources also. Supporting Site C will only cause more damage than good, we all can see that. If you talk about building to create jobs with this, that's only half the truth when clean energies Does create jobs and should be heavily supported by all companies, to help lessen the demand for all these poisons that is creating great harm to my young generation. If we keep continuing supporting oil, gas and tar sands, we won't have a hundred years, it's only going to cause more suffering. So, I hope I explained it well enough for you to think twice, give you a bit of logic for the non logic thinkers like you (the corporation who wants the dam to cause more harm than good)	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 12 (Fish and Fish Habitat) - Section 18 (Regional Economic Development) - Section 20 (Agriculture) - Section 25 (Outdoor Recreation and Tourism) - Section 33 (Human Health) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements Please also see the following Technical Memos: • Aboriginal Consultation • Consideration of Historical Context in Assessment of Potential Effects and Impacts on Aboriginal Groups • Methylmercury • Methodology for the Assessment of the Potential Impacts of the Potential Impacts on the Project on the Exercise of Asserted or Established Aboriginal Rights and Treaty Rights • Alternatives to Project • Reservoir Impact Lines
pub_0862-001	Bennett, Mara	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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		River. I ask that you please consider the serious risks involved regarding the Site-C dam proposal in the Peace River Valley, BC. With a passionate outcry from environmentalists, scientists, and the public, I feel it is an issue which the Canadian government must take seriously in considering the costs and benefits for all Canadian citizens, and the natural environment of our province. The project will have disastrous effects for the wildlife of this already imposed-upon ecosystem. The dam will alter the Yellowstone to Yukon Wildlife Corridor, rendering it dangerous for the mammals who rely on it to travel through. Furthermore, the dam will destroy important wetlands that migratory birds depend on. BC Hydro's environmental impact assessment stated that bird habitats will be lost for species such as Bay-breasted Warblers, Yellow Rail, and Nelson's Sparrow Owl. The assessment further claimed that local fish species will be at risk, such as the Arctic Grayling, Migratory Bull Trout and the Mountain Whitefish. The project will also be detrimental for humans connected to this area. Many families will be required to move for its construction. The Peace River Valley is already damaged in certain areas owed to oil and gas extraction, as well as two other dams already in place. First Nations communities of northeastern BC are particularly opposed to increased industrial development as their traditional heritage sights Bear Flats, Farrell Creek, and Attachie will be lost. This last point also indicates an ethnocentric aspect of the proposal. I urge you to consider that these interests are being ignored. If the rationality of the project is legitimized by an anticipated increased energy demand in the future, we should not simply accept that the increase is inevitable. Canada must strive to be a leader in a global effort to mitigate rising energy consumption. It is unwise to legitimize projects by a deference to unabated resource demands. I believe a better response is to fund educational programs in schools and communities regarding efficient energy usage, having positive effects in suppressing the rising demand. We must educate, not simply advertise for lifestyle changes. Otherwise, energy consumption will continue to rise. By legitimizing the project based on a potential increasing 'need', we are admitting, as a nation, that we are not willing to curb our consumptive habits, yet will knowingly continue to destroy nature and	The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 9 (Information Distribution and Consultation) - Section 11.1 (Environmental Background - Previous Development) - Section 12 (Fish and Fish Habitat) - Section 14 (Wildlife Resources) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: • Aboriginal Consultation • Consideration of Historical Context in Assessment of Potential Effects and Impacts on Aboriginal Groups • Demand-side Management • Methodology for the Assessment of the Potential Impacts of the Potential Impacts on the Project on the Exercise of Asserted or Established Aboriginal Rights and Treaty Rights • Alternatives to the Project • Project Need

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		impose upon people's lives in order to satiate anthropocentric and ethnocentric 'needs' for an indefinite time. In conclusion, implementing projects which will result in an increase of resource consumption is not an effective solution. Thank you for your consideration.	
pub_0863-001	Wilkinson, Loren	I appreciate the opportunity to have a voice in the important decision concerning whether or not to construct a third dam ("Site C") on the Peace River. I oppose this project for two sets of reasons. The first have to do with the immediate impact on the area. The problems here have been often enumerated. 1. Perhaps the most serious is that the dam will flood some of the best farmland remaining in Northern B.C.. Whereas there are many potential sources of energy (and ways of reducing our need for energy), there is no way of replacing this land. Thus the lost will be irreparable, both of the food-production potential, and of the human communities which that agricultural land sustains. 2. The area which would be flooded includes not only agricultural land but significant wildlife habitat. Since there has already been extensive development in the valley, the habitat for species which require a wide range (caribou, wolverine, etc.) is already seriously compromised. The land covered by the reservoir would lead to continuing diminishing of the range, and hence the populations, of these species. The argument in favour of the project is that, serious as these agricultural and habitat concerns are, greater concerns over-ride them, particularly the need for "clean" "green" and "renewable" energy, which hydro power purportedly provides. It is against this argument that my second set of objections is directed. 1. The BC government has acknowledged that most or all of the energy produced by the project will go to support the further development of fossil fuels in the region, particularly Liquified Natural Gas. Thus the idea that this is required "green" energy is deceptive: the energy produced will ultimately be used to support a world-wide economy which is determined to continue as long as possible to use cheap fossil fuels instead of wiser but more costly alternatives. 2. The impact of fossil fuel use on the planetary atmosphere and the global climate is already great, and will only increase. It is imperative for the long-term environmental health of the planet that we stop immediately developing fossil fuel alternatives. To	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 12 (Fish and Fish Habitat) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Caribou • Demand-side Management • Alternatives to the Project

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		fail to do so is only to encourage a longer addiction. Many years ago a similar proposal: the raising of Ross Dam on the Skagit river by Seattle City Light. Raising the dam was necessary, it was argued, because Seattle needs the power in order to grow. But raising the dam would have destroy irreplaceable natural habitat in both Washington and Canada. Opponents of the dam argued that electrical conservation measures would save easily the amount of energy which the raised dam would produce. Those measures were put in place, and the dam was never raised (a decision influenced by objections from the BC and Canadian governments.) The situation regarding the Site C dam proposal is similar. Neither the BC government, nor BC hydro, nor the people of BC should be pressured into destroying what is irreplaceable when other alternatives--namely changes in our individual and global way of life--would accomplish the same effect without the ensuing damage. So I urge you to reject the proposal to build the Site C dam.	
pub_0865-001	Chemerys, Mike	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* One last item that I have yet to hear any response on is the trans boundary issues! Water and water routes do not have boundaries! Any kind of development on the Peace River will have effects felt as far away as the Arctic Ocean. It seems that once the river crosses the border into Alberta, things that happen with the river are no longer of any concern to BC Hydro!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. The matter raised is described in Section 11 (Environmental Background) of the EIS. Please also see the following Technical Memos: • Peace Athabasca Delta • Spatial Boundary Selection
pub_0881-001	Wells, Jonathan	I'm not going to cut and paste a letter which you've probably received thousands of times. My message is summarized in the subject line. I'm writing to let you know I am in the company of thousands who agree that the Site C mega-dam is bad for BC. Please take us seriously. Thanks for the opportunity to be a part of this process. Do the right thing, Ms. Jones.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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pub_0882-001	Anderson, Diane	This project must not go ahead. It is time to put serious efforts into developing alternate, sustainable energy sources that do not impact so severely on the environment of this great country. My husband visited this region last summer and was awe struck by its richness and beauty and appalled that anyone would consider it's ruin for the benefit of developing more hydro power, much of which will be used for questionable practices. I believe that the present Environmental Impact Statement (EIS) has not thoroughly addressed the potential impacts on wildlife in the region, some of which are already threatened species. The Site C project has been rejected previously for good reason and should be rejected once again. Thank you for the opportunity to comment on the Environmental Impact Statement (EIS).	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.
pub_0883-001	Lewis, Dan	As a BC resident and kayaker, I am opposed to the Site C dam proposal. I voiced my objections repeatedly more than 20 years ago. Rita Johnson was practically laughed at when she tried to revive the proposal during her run for Premier in 1991. I believe we can find other, and better ways to generate power for British Columbians. Please refuse the Site C application.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in Section 5 of the EIS, the Need for, Purpose of and Alternatives to the Project. Please also see the following Technical Memos: • Alternatives to the Project • Project Need
pub_0886-001	Kolb, Deb	I wish to add my comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. For the sake of the environment, wildlife, and future generations , please do the right thing by opposing the site C mega dam. Thank you.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11 (Environmental Background) - Section 14 (Wildlife Resources) Please also see the following Technical Memos: • Alternatives to the Project • Project Need

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pub_0889-001	Tulett, Marguerite	I wish to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. The Peace River and valley are of far too great importance to the people of British Columbia to allow for their destruction, which this project will definitely cause. The upper parts of the river have already been developed for hydro power by the WAC Bennett and Peace Canyon hydro-electric dams. The third dam now proposed, called Site C, would destroy all of the great Peace River that remains in BC. along with prime agricultural land and pristine forests habited by our vanishing wild life. While there would eventually be economic benefit, the environmental cost would be far too great and the damage irreparable. The EIS does not adequately consider the cumulative impacts of all this development. The additional electricity is not needed for domestic use and we know that much of it will be used for fracking (another disastrous practice) which will further destroy our now -fragile environment. The only appropriate response is to deny approval to the Site C dam and implement a comprehensive management approach that will protect and ensure the recovery of at risk species	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11.1 (Environmental Background - Previous Development) - Section 14 (Wildlife Resources) Please also see the following Technical Memos: • Cumulative Effects Assessment • Alternatives to the Project • Project Need

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pub_0890-001	Herbert, Shane	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. There should be many more messages that are more well written than mine but here goes... Our province is getting the ass end of every one of these mega deals like northern gateway and the LNG pipeline. It is to my understanding that the Site C Dam would be used to help power fracking of shale gasses. The dangers of fracking aside and off topic completely, the dam itself removes thousands of acres of habitat from wildlife, covers over numerous aboriginal burial grounds, and would undoubtedly hurt the fish stocks in the river.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 12 (Fish and Fish Habitat) - Section 14 (Wildlife Resources) - Section 32 (Heritage Resources) Please also see the following Technical Memos: • Alternatives to the Project • Project Need • Archaeology

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pub_0892-001	Kidder, John	This letter is a comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. It is absurd, as we all know, in these days of global warming, to bank our provincial economic strategy on increasing exports of carbon fuels. And to dam the Peace at Site C to provide power to liquefy the gas so that it can be loaded on tankers to take to China takes absurdity to new level. A fundamental error in strategy once again leads to all kinds of avoidable losses.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11 (Environmental Background) Please also see the following Technical Memos: • Greenhouse Gas Emission Merits of the Project • Alternatives to the Project • Project Need
pub_0893-001	Raitt, Jon	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River. I have lived in the Peace Country and know what a marvelous resource the land along the banks of the Peace River is. I have also farmed and know that once the damn is built there will be no bringing back the acres that will be flooded. BC cannot afford to loose this land. Please do not allow the damn to proceed.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in Section 20 of the EIS, Agriculture. Please also see the Technical Memo on Agriculture. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.
pub_0894-001	Kelgard, Daphne	Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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		River. My opposition to this proposed project is based primarily on the following: a) unless and until any alterations to the environment are recommended by and supported by First Nations there should be nothing done to their ancestral lands and they should not be made to fight in the courts for their legal/.treaty rights. b) there is noting green or clean about creating the dams necessary to create hydro electrical power . c) the historically and culturally significant Peace River Valley is productive agricultural land also – an increasingly scarce resource in this world, as is the water in the river. I am writing this aware of the fact that BC Government licensed fracking for natural gas is already having a devastating impact on much of the region and its wildlife - we have to stop the kind of economic exploitation that destroys rather than enhances the environment. I do not know the ages of the members of the Assessment Agency but I ask you all to think about the kind of world you want to leave to your children and grandchildren before you make your decisions on these irreversible proposals.	The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 9 (Information Distribution and Consultation) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) - Section 32 (Heritage Resources) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: • Aboriginal Consultation • Consideration of Historical Context in Assessment of Potential Effects and Impacts on Aboriginal Groups • Methodology for the Assessment of the Potential Impacts of the Potential Impacts on the Project on the Exercise of Asserted or Established Aboriginal Rights and Treaty Rights • Alternatives to the Project • Project Need
pub_0895-001	Beck, Christine	I urge you to refuse the Site C mega-dam project for the following reasons: - The dam will ruin a fragile ecosystem and destroy prime agricultural land, First Nations heritage sites and boreal forest. - The dam is not needed to produce electricity for domestic consumption in B.C. - Now is the time to focus on real clean energy solutions instead of spending billions	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and

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		of dollars to support dirty energy industries.	industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 13 (Vegetation and Ecological Communities) - Section 20 (Agriculture) - Section 21 (Forestry) - Section 32 (Heritage Resources) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: • Consideration of Historical Context in Assessment of Potential Effects and Impacts on Aboriginal Groups • Methodology for the Assessment of the Potential Impacts of the Potential Impacts on the Project on the Exercise of Asserted or Established Aboriginal Rights and Treaty Rights • Alternatives to the Project • Project Need

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pub_0897-001	Fast, Sue Ellen	Please accept my comment re the Environmental Impact Statement (EIS) re the proposed Site C dam on the Peace River. I oppose the Site C dam. I am very concerned for the future of this precious heritage area, and for the rights of aboriginal people in the area to maintain their way of life. I am also very concerned for BC's food security in the future as climate change impacts accumulate. The impact to wildlife populations is particularly concerning, as at-risk species with large ranges like woodland caribou and grizzly bear don't appear to be captured by the limited area of this EIS. We are losing these species and others in BC - can you please ensure that the impact to wildlife populations from the Site C Dam proposal are assessed accurately? Another environmental impact that does not appear to be assessed is the impact of this proposal on climate change, and therefor to the province and the planet, again a larger scope and scale than the narrow scope of the EIS. Given that energy from this project appears to be destined for fossil fuel extraction and transport, I think that the proposal should be assessed in terms of the greenhouse gas emissions to be produced as a result of this proposed dam. I urge you to either conduct a comprehensive and accurate EIS, or to deny approval to the Site C dam and implement a comprehensive management approach that will ensure the recovery of at risk species. Thank you for the opportunity to comment.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 8 (Assessment Process) - Section 9 (Information Distribution and Consultation) - Section 11 (Environmental Background) - Section 14 (Wildlife Resources) - Section 15 (Greenhouse Gases) - Section 20 (Agriculture) - Section 32 (Heritage Resources) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: • Agriculture • Caribou • Consideration of Historical Context in Assessment of Potential Effects and Impacts on Aboriginal Groups • Greenhouse Gas Emission Merits of the Project • Methodology for the Assessment of the Potential Impacts of the Potential Impacts on the Project on the Exercise of Asserted or Established Aboriginal Rights and Treaty Rights • Spatial Boundary Selection
pub_0901-001	Diewert, Teresa	Do not go through with this project. It is a death sentence for us all. We must shift our energies to sustainable resource/energy development. Do the right thing!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Please also see the Technical Memo on Alternatives to the Project.

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pub_0903-001	Snow Rosen, Jasper	This makes absolutely no sense to me why projects like this are being put through instead of alternative energy projects that could contribute to a sustainable future, such as Bio mass, and solar power. Oil Is a dying industry and it is ruining ecosystems and the places that surround them. I grew up In B.C exploring the wilderness, and in the short 20 years of my life I have seen these these places change because of projects like the site C dam. It is too scary to think about what my kids will not be able to see if projects like this keep happening. The bears and the whales and the salmon, and so many other species will never come back to these parts of the world if the rivers, oceans and land that they thrive on are taken away by human consumption. I hope that you read this and realize that there is no amount of money that is worth as much as the wild wilderness and the untouched land that it needs to carry on.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11.1 (Environmental Background - Previous Development) - Section 12 (Fish and Fish Habitat) - Section 18 (Wildlife Resources) Please also see the following Technical Memos: • Alternatives to the Project • Project Need BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.
pub_0910-001	Keller, Lannie	Thank you for your careful review and your commitment to protecting important environmental values. I am commenting on the Environmental Impact Statement (EIS) submitted by B.C. Hydro regarding the proposal for Site C, third dam on the Peace River. The Peace River is an incredible natural feature in BC, with recognized values and Heritage River designation. The river is already impacted upstream, which makes the lower river especially precious for many reasons. First Nations cultural values and other historic values are embedded in the Peace River Valley. It provides habitat and range for many species, including rare species such as lynx, woodland caribou, grizzly bears and wolverines. The valley is prime agricultural land and the whole area is prized by residents and tourists for its spiritual and recreation values. If the EIS is to fulfill its mandate, it must assess all the project impacts, including cumulative and potential impacts, and determine if "mitigation" is possible. The EIS presented is deficient and fails its mandate for a number of reasons: 1. The boundaries of the assessment area unrealistic; real measure of impacts must include a much larger area.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for the Project is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project" (February 8, 2012). In addition to the public comment periods for the EIS Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11.1 (Environmental Background - Previous Development) - Section 13 (Vegetation and Ecological Communities)

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		2. The assessment must include significant study and analysis of all affected species; and occasional (wide-ranging) species must also be fully addressed. 3. Cumulative effects assessment needs to include all past developments and all other impacts, as well as all potential new projects, all other developments and natural impacts. 4. Existing dams and reservoirs must be included as part of cumulative assessment. Sensitive ecosystems should also be mapped and and quantified in the mitigation analysis. That's just basic, but it got forgot? This project would create huge and forever damaging impacts. Rivers are precious, farmland is precious, habitat is precious. And all are irreplaceable. It is ominous and disturbing that project review fails in so many ways. This massive project cannot avoid it's mega impacts. It should be denied and replaced with a comprehensive ecosystem management plan to ensure that really important life-sustaining values are preserved and enhanced. We can live with less power.	- Section 14 (Wildlife Resources) - Section 20 (Agriculture) - Section 25 (Outdoor Recreation and Tourism) - Section 32 (Heritage Resources) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) - Section 35 (Summary of Environmental Management Plans) - Section 39 (Complete List of Mitigation Measures and Follow-up Measures) Please also see the following Technical Memos: • Agriculture • Caribou • Consideration of Historical Context in Assessment of Potential Effects and Impacts on Aboriginal Groups • Cumulative Effects Assessment • Movement of Grizzly Bears and Large Carnivores • Alternatives to the Project • Project Need • Archaeology • Spatial Boundary Selection
pub_0912-001	Muirhead, John	This Dam is a bad idea for too many reasons I have time to write down. Proposed projects like this make me think twice about making a future for myself, and family in BC. We need to realize that the natural world, especially fertile valleys are far more important and crucial to us than any amount of money.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in Section 20 of the EIS, Agriculture. Please also see the Technical Memo on Agriculture. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.
pub_0921-001	Fagnan, Robin	I do not support the Site C project for a good many reasons. As you know this project has been denied twice in past decades and needs to be rejected again.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The Project has not been rejected twice before. In May 1983, the BCUC recommended that the

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			Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139).
pub_0922-001	Grimble, Susan	If you can stop the Site C Dam, please do. Ruining great farm land would be a sin and mega projects are not suitable in this time of climate change. The billions of dollars used for this project to create electricity should be used to help people install solar and small community hydro systems. Other countries are decommissioning their dams why does the government think this is a good idea. Another consideration is the increasing number of earthquakes happening in the world. This is a bad idea.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0923-001	Pingle, Laura	It is with deep concern that I write this letter to you. I am, in fact, very distressed at the prospect of the loss of such beautiful land and all that grows and lives upon it. The area is far too valuable to be destroyed simply to provide power to support the fracking of natural gas, to operate LNG plants in Kitimat and to feed tar sands extraction in Alberta. Clean air, clean water and fertile soil are the resources we need to live healthy lives and indeed, to survive. You know very well, that natural gas extraction will soon be occurring almost worldwide due to advances is hydraulic fracturing. As this happens, demand for British Columbia's natural gas and Alberta's oil will decrease and therefore reduce their prices. Why is this dam, which will cause irreparable damage to the environment, even being contemplated when the predicted financial benefits are far	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the

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		from certain? I know northeastern British Columbia well. Hydraulic fracturing is already having a devastating effect on the area. I urge you to heed the concerns of all of the citizens who do not have a vested interest in the Site C dam going ahead. These people want the best for this province, this country, this world. Proponents of the Site C dam are thinking in the very narrow term - money. The responsibility that you hold in your position as Panal Manager with the Environmental Assessment Agency is tremendous. I truly hope that you take this responsibility very, very seriously. Many people are depending upon you and your panel to make the right decision. Please know that the decision you will soon make will impact the lives of our children, our grandchildren, our great-grandchildren.	need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11 (Environmental Background) - Section 32 (Heritage Resources) Please also see the following Technical Memos: • Alternatives to the Project • Project Need
pub_0924-001	Payne, Brian	Please ensure that the Site C dam is approved and allowed to be built. While exporting "dirty energy", as environmentalists call it, might not be ideal, British Columbia can't build industry and infrastructure based on optimistic clean energy dreams of the future. The reality is that right now we simply aren't in a position to kill every project out of the gate because there are negative impacts on the environment. We built a trans-continental highway and railway in the past--projects that today would almost certainly be quashed during the initial review process. Until clean energy is as financially viable for companies to invest in, we have to allow the construction of projects like this. Wind farms are nice--but regular British Columbians need jobs now, not next decade. Thank you for your time.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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pub_0931-001	Nichol, Colette	Why would the government put a project that has already been rejected by the people of the area back on the table again? It would seem a desperate measure. And as most would agree, desperation does not breed wisdom. Please consider what makes Canada great. Canada is great, not because it is an economic powerhouse, but because it has a vast and gorgeous wilderness and a people proud of maintaining it. Abroad, people admire this country because they believe that Canadians protect their wilderness. What is the right thing to do here and now? The easy way is not necessarily the true and right way. In order to move towards a greater Canada and a greater world, people such as yourself must, despite pressure from the men with the large purses, stand up for what is truly the best course of action. A course of action that is of far more benefit than harm. Can it be said that the Site C dam is of far more benefit than harm? Please choose not to be one of the Canadians scared of an uncertain future, looking for the easy way, the quick and dirty way to maintain economic stability. Instead be one of the great Canadians working towards a better future for all humans.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The Project has not been rejected before. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139). BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.
pub_0935-001	Dumoulin, Lisa	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and attached an article from Fort McMurray News, dated September 13, 2012 entitled "local MP looks to end violence against women with new project". Additional comments in the letter are outlined below.* I am attaching my own comments in advance of those comments suggested by leadnow.ca. I am doing this because I agree sincerely with leadnow's concerns regarding the failure of the EIS to adequately assess the anticipated impacts of Site C for wildlife. I also want to emphasize that impacts to wildlife are a key component to another of their second major concerns. I would like to stress that the EIS does not adequately address the cumulative impacts relative to which Site C should be assessed. These include not only the impacts of the two existing hydroelectric dams	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. The scope of the effects assessment for the valued components mentioned is in accordance with the EIS Guidelines and appropriate information is provided in the following sections of the EIS: • Section 14 Wildlife Resources • Section 19 Current Use of Lands and Resources for Traditional Purposes • Section 30 Community Infrastructure and Services • Section 29 Housing • Section 34 Asserted or Established Aboriginal and Treaty Rights, Aboriginal Interests, and

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		and their reservoirs on the Peace River, but also the extensive industrial activity taking place in the northeast of the province of British Columbia. The impacts of Site C - both ecological and social - should be assessed with careful study of how these impacts interact with those from mining, oil development, logging, and hydrological tracking for natural gas (for which substantial quantities of water are being drawn from Williston Reservoir). It is clear that these cumulative impacts have not been adequately assessed as this is something that Treaty 8 has consistently brought to the attention of Government and the public. There are many outstanding impacts from the previous hydroelectric development of the Peace River, as well as the other industrial activities referred to above, that violate treaty rights and which remain unresolved. These need to be considered as part of the EIS for Site C as this project will interact with - and very likely stress and amplify - these ongoing impacts from other projects. (For academic citations please see, for example, 1) Booth, A. and Skelton, N.W. 2011. "WE ARE FIGHTING FOR OURSELVES" — FIRST NATIONS' EVALUATION OF BRITISH COLUMBIA AND CANADIAN ENVIRONMENTAL ASSESSMENT PROCESSES.Journal of Environmental Assessment Policy and Management 13(3): 367-404.; 2) Booth, A. and Skelton, N.W. 2011. ''You spoil everything!'' Indigenous peoples and the consequences of industrial development in British Columbia. Environ. Dev. Sustain. DOI 10.1007/s10668-011-9284-x) I also want to address some additional issues that require much greater attention than has been given in the EIS. Most pressing, the EIS fails to sufficiently address the differential social impacts for different social demographics. While BC Hydro will work with BC Housing, FSJ Mayor and Council and the Friendship Centre to provide some social housing, much more serious and careful study is needed to understand and address impacts to social demographics unrepresented in the EIS. I am shocked that impacts for women were not studied as an independent category in the assessment. There is clear evidence that mega-project developments such as the proposed Site C project increase violence borne by women, and especially indigenous women. (see just one example - http://fortmc.ca/fort-mcmurray-news/local-looks-end-violence-	Information Requirements Please also see the following Technical Memos: • Movement of Grizzly Bears and Large Carnivores • Cumulative Effects Assessment

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		against-women-with-new-projectt6615. html, but there is also a wealth of information both scholarly and popular available). There should also be consideration given to survival sex work that may increase as a result of the project and the necessary social services needed to support survival sex workers , and related services for the communities of the region. (See for example, 1) Braun, Y. 2010. Gender, development, and sex work in Lesotho. Equality, Diversity and Inclusion: An International Journal 29(1): 78-96.) There also needs to be greater consideration given to the potential impacts of this project to increase poverty and social marginalization for low income people and families. Also, considering that FSJ already has a growing population of people who are part of the foreign temporary worker program, and given the possibility that the Site C project could increase this population substantially, it is necessary that the EIS give consideration to the potential for the project to create or exacerbate exploitation and abuse of foreign temporary workers, and to consider what the needs of this potentially diverse population are, how these might be affected by the Site C project, and how these effects can be addressed. District 60 of expected increases in student populations, children and youth will not only feel the impacts of this project in their classrooms. There should be consideration given to the potential impacts of this project for children's experiences within their communities, with regards to their opportunities, health, safety. In their community assessment, Treaty 8 does consult with youth and youth experiences and perspectives offer important insights and present issues which may otherwise be overlooked (http://www.acee-ceaa.gc.ca/050/documents_staticpost/63919/85328/Vol3_Appendix_B-Treaty_8.pdf) The Site C proposal should not only consider what it sees as the benefits for 'future generations' but also effects of this potential project for children during the project's construction, over its lifetime and following its removal. As my master's research is on this topic, I invite you to contact me regarding these concerns.	

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pub_0936-001	Cunnington, Mark	I do not support the Site C dam proposal. As a mechanical engineer working in mining and energy, I realize that the current trajectory of economic growth that our provincial and federal governments are leading us down is guaranteed to fail, catastrophically. Flooding valley after valley in order to provide electricity to power what essentially boils down to fossil fuel extraction is not a road to prosperity. Despite the fact that we are developing more supposedly renewable power via hydro, our economies are growing and consuming more fossil fuels, so overall, we are in no better shape now than decades ago, energy wise. The problem is now just bigger than it was before, because there is more energy demand, and less energy available. BC's gas reserves and Alberta's oil reserves are being vastly overstated in the media and by our government's (i.e. industry's) propaganda. Our federal government has been systematically dismantling both our environmental protection laws and our democratic processes for the purposes of serving Canada's resource extraction and export industries. This madness must stop. Economic growth must stop. It will stop whether we want it to or not. We either do so voluntarily now, or we submit to it out of necessity in the future, which will be much less pleasant. The world has been at Peak Oil for 7 years now and it will only go down from here on out. We need to be powering down our economies, not growing them.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in Section 5 of the EIS, the Need for, Purpose of and Alternatives to the Project. Please also see the following Technical Memos: • Alternatives to the Project • Project Need
pub_0940-001	Pedersen, Esther	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* Most of the British Columbians who will have to pay for this venture have not been a part of the planning or EIS review displays put on by BC Hydro, as they have never conducted a public forum south of Prince George BC. This is to be considered sneaky and underhanded as most British Columbians are un aware of this project, its costs and implications, and have been unable to publicly view and speak to BC Hyrdo and their consultants, regarding the spending of public $$ for this venture. British Columbian taxpayers, will have to fund the building of this archaic method of producing power, and the decommissioning of this dam in the future, for generations to come. Also the impact statement booklet is full of false and misleading information regarding how many families will be significantly impacted by this proposed man made disaster. By that I mean it is printed in the agricultural section impacted number	Thank you for providing your input during the public comment period for the Environmental Impact statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project.

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		of families at only 35 families impacted with one family being significantly impacted. Well let me tell you our family When I asked, BC Hydro HR personnel, "WHO" that family that was significantly affected was she said it was Which is true , should this man made, environmental, disaster be approved, as will many other landowners, both in the valley and above the proposed 80 km reservoir! This is a blatant printed lie in an attempt to downplay the significant impacts, of this proposed project and the affected British Columbians and our lifestyles!! BC Hydro has continued with this, "Theme" of conducting themselves, the entire 7 years of their sneaky planning. So "WHY" are whom BC Hydros own environmentalists and personnel have both told and shown us, public printed record of these losses will occur, NOT counted as a significantly affected family? Because as another "Downplay" and "Hush Hush" regarding the horrid impacts of this project, BC Hydro ONLY counts the land they will flood with their project, not land and properties that will slough into the reservoir as a result of the higher water levels of the Peace River, the Dam will create. BC Hydro has sent their persons to our home , but do NOT include us nor the further thousands of acres of prime river and mountain view building sites, and food producing desirable farmlands that run the entire 80 km length of the North side of this proposed reservoir. NOT one single family or acre of this sloughed land has been accounted for anywhere or anytime, as destroyed in their land loss figures, except the drawing of the lines on their maps. These lands and families affected by sloughing from this project that live in close proximity to the City of Fort St John, and all the way to Hudson"s Hope must be accounted for and taken care of BEFORE this, EIS and project are accepted and approved as valid reports and proposals, not after the fact, as BC Hydro has shown to be misleading, untrustworthy and has a VERY poor track record of mitigation settlements. This, BC Hydro EIS is full of holes, missing significant and important impact studies, and should be tossed out as an incompetent, and incomplete report.	
pub_0941-001	French, Diana	The Peace River Valley is far too valuable to suffer further hydro development. Site C would destroy valuable farmland, wildlife habitat,and recreational areas, all of which become more precious every day. The area is also significant in terms of both First Nations and pioneer history as is recognized by the Peace River 's Heritage designation. Given that the only excuse for the dam is to produce power we may not even need,	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The environmental assessment process for is being conducted in a thorough and independent manner and in accordance with the terms and conditions set out in the BC/Canada “Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel of the Site C Clean Energy Project” (February 8, 2012). In addition to the public comment periods for the EIS

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		and that too needs to be taken into consideration. In my opinion the long term negative impacts of the proposed Site C dam outweigh any benefits, and I don't see how BC Hydro's EIS adequately addresses all the issues. .	Guidelines and for the EIS, a public hearing will be conducted by an independent Joint Review Panel. The process provides opportunities for timely and meaningful participation by the public, Aboriginal groups, all levels of government, and other interested stakeholders and will result in an environmental assessment that meets the requirements and statutory objectives of the Canadian Environmental Assessment Act 2012 and the British Columbia Environmental Assessment Act. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 8 (Assessment Process) - Section 9 (Information Distribution and Consultation) - Section 11.1 (Environmental Background - Previous Development) - Section 13 (Vegetation and Ecological Communities) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) - Section 25 (Outdoor Recreation and Tourism) - Section 32 (Heritage Resources) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: • Agriculture • Consideration of Historical Context in Assessment of Potential Effects and Impacts on Aboriginal Groups • Methodology for the Assessment of the Potential Impacts of the Potential Impacts on the Project on the Exercise of Asserted or Established Aboriginal Rights and Treaty Rights • Alternatives to the Project • Project Need • Archaeology
pub_0943-001	McKean, Aaron	Although I am temporarily living away from my home in BC, I feel very strongly about this issue. I very much hope this dam will not be built. It would be a valuable loss of farmland and I do not wish us to lose it to powering dirty fuel operations or for any other reason.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the Section 20 of the EIS, Agriculture. Please also see the Technical Memo on Agriculture.

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pub_0947-001	Brown, Dwight	I am a simple man. I don't fund to any political parties nor activist organizations. You no doubt have heard a lot about this project on both sides. Unfortunately, it is a one way street. Once we begin this project, we can NEVER reverse the decision. I implore you to do everything in your power to see that this project does not continue. We need the farm land to feed ourselves never mind all the other issues around environmental destruction.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_0952-001	Lees, Bob	The Environmental Impact Statement submitted by BC Hydro regarding the proposed Site C dam on the Peace River fails to adequately assess the impacts of the existing dams and reservoirs on the Peace River, and animals are virtually excluded from the assessment.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 8 (Assessment Process) - Section 11.1 (Environmental Background - Previous Development) - Section 14 (Wildlife Resources) Please also see the following Technical Memos: • Caribou • Movement of Grizzly Bears and Large Carnivores • Cumulative Effects Assessment
pub_0961-001	Hamir, Arzeena	I am and I am horrified that the government is even contemplating flooding such valuable farmland. We don't make farmland anymore! Our province cannot even feed half its population and we are contemplating losing even more farmland? For what? A power source that will be used to feed dirty LNG extraction? The tar sands in Alberta? I am embarrassed that we are even still contemplating this project. Please refuse this application.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. While the Project has the potential to result in significant adverse effects, they are justified by the need for, and benefits of, the Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Project Need

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pub_0963-001	Jones, Elaine	I am writing to express my dismay that the Site C dam is being considered again. I remember t when this project was halted by public opposition in the 1980's. I don't understand what has changed between now and then and why it this proposal is back on the table. The reasons for rejecting it 20 + years ago have not changed. Another dam on this river will have widespread negative impact on people, including First Nations, wildlife and the environment. I urge you to stop this process now.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The Project has not been rejected twice before. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the Project until BC Hydro provided: (1) a load forecast demonstrating that construction of the project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139). The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 9 (Information Distribution and Consultation) - Section 11 (Environmental Background) - Section 14 (Wildlife Resources) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Please also see the following Technical Memos: • Agriculture • Consideration of Historical Context in Assessment of Potential Effects and Impacts on Aboriginal Groups • Methodology for the Assessment of the Potential Impacts of the Potential Impacts on the Project on the Exercise of Asserted or Established Aboriginal Rights and Treaty Rights • Project Need

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pub_0965-001	Gildersleeve, Mike	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* I am totally opposed to providing this 10 billion dollar tax[ayer subsidy for LNG. I am very concerned about controversey surrounding fracking which is largely how I understand they will be extracting the natural gas. There is currently a moratorium in Quebec on "fracking", as theire continue to be many questions about the many environmental impacts, including contamination of acquifers. I am also very concerned about the loss of 20,000 acres of quality farmland. This in my view is totally unacceptable, particularily at a time when we in BC are only producing just over 40 percent of our own food, and the demand for locally grown food is steadily rising. I am also concerned that there is already a huge industrial footprint that impacts over 65 percent of the Peace Valley. These cumulative impacts have potentially devastating effects on the ecology and ecosystems of this valley. I urge you to reject this project once and for all. This is not power that is needed or will be used by the public in BC. Let's put in more effort on conservation of energy and alternate forms of renewable energy.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. The Project capital cost estimate is $7.9 billion, as described in Volume 1, Appendix F Part 1 (Project Cost Estimate). The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Cumulative Effects Assessment • Demand-side Management • Alternatives to the Project • Project Costs • Project Need
pub_0971-001	Lang, Maylies	I grew up on a farm and know what it means to me and how important it is to the environment. We only have so much land on this earth and too much is being ruined for the wrong reasons. Once this land is destroyed we will never be able to restore it to its natural state.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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pub_0975-001	Gillis, Gerry	When I was a child their property was forcefully taken from them with little compensation. They and my uncles lost their livelihood and we saw their property along with that of my own family and extended family, flooded by the WAC Bennett damn. That was a major loss for our family and many other families who had worked hard to make a living along the banks of the Peace River. However, I realize that the sacrifice my family made did help the province as a whole with more power than we could use. This new proposed damn will do no such thing. It will only benefit the large oil companies who want the power so they can run their LNG plants. In the meantime, much valuable farm land will be lost. I think it is much wiser to have the ability to feed the people of our province than it is to destroy more of the environment so that big companies can make more profit and the government make a pittance in royalties. There are many more sound arguments against this project, all made more adequately by others so I will just say here that I heartily oppose this project and hope that the government will come to its senses and cancel any plans to build yet another damn on this river.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. BC Hydro acknowledges in the EIS that constructing and operating a project of this size and scope has the potential to result in adverse environmental, social, economic, health and heritage effects. These potential effects have been thoroughly studied and are documented in the EIS, along with BC Hydro's proposed mitigation measures and follow up programs. The EIS also documents the need for, and benefits of, the Project. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11.1 (Environmental Background - Previous Development) - Section 20 (Agriculture) Please also see the following Technical Memos: • Agriculture • Project Need

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pub_0980-001	Wonders, Karen	I hope that the Environmental Impact Statement (EIS) of the proposed Site C dam on the Peace River will expose the scheme as yet another give-a-way to big foreign dominated corporate industry funded by BC taxpayers. The Dam is redundant, the energy is not needed by BC citizens. Stop the further development of this destructive project. Instead save the valuable Peace River Valley and uphold and protects its historical, cultural and natural significance.The EIS is deficient in the following ways: The boundaries of the area assessed are far too limited; As a result, the EIS omits assessment of regional impacts to many important species, especially those that range widely, occur at low densities and/or are unevenly distributed; The EIS does not consider the impacts of the existing dams and reservoirs on the Peace River; Wide-ranging animals – such as wolverine, lynx and woodland caribou – are virtually excluded from the assessment; The cumulative effects assessment appears to have omitted a number of past projects and potential new projects.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The scope of the environmental assessment is in accordance with the EIS Guidelines and appropriate information is provided in the EIS. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) - Section 32 (Heritage Resources) Please also see the following Technical Memos: • Caribou • Cumulative Effects Assessment • Movement of Grizzly Bears and Large Carnivores • Project Need • Spatial Boundary Selection

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pub_0981-001	Arsenault, Gillian	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* Further, I am also concerned by a posting reporting that the geology of the area makes the proposed dam structure unsafe, meaning that environmental assessment must also evaluate the potential effects of catastrophic dam failure. Some of the concerns reported (http://bciconcoclast.blogspot.ca/2013/01/the-site-c-dam-does-not-make-economic.html) are: ". . . all the sub-surface drilling came up with an extremely dangerous lack of compaction - or complete lack of it deep below the river bed. The finding showed no trace of hard bedrock sufficient enough to support such a DAM weight, but also found large depths of SLIP PLANE GROUPINGS that were as small as 1/8" thick! These slip planes , in the hundreds, were mainly composed of Uncompacted SILTS, of the kind that would quickly turn into muds when introduced to water. This was found to be to dangerous for any required stability of such a magnitude of wieght for any DAM DESIGN. . . . "	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. Please also see the Technical Memo on Dam Safety.

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pub_0983-001	Robinson, Terry	I'll keep this short. This project was defeated years ago and the environmental devastation it will support - via fracking - is completely unacceptable. We cannot continue to ravage the earth in this way and expect it to support future generations of anything.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the Project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139). There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed.
pub_0984-001	Marshall, Jane	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* The two existing dams on the Peace River have had enormous impact (neith mitigated nor offset) on site of the dams and continuously downstream in British Columbia, Alberta and the North West Territories. Resulting from the existing dams life (the ecology) within and around the river has seriously changed and diminished allowing fewer fish to survive, changing the normal eb and flow and accompanying rich diversity of river delta wildlife where the Peace flows into Lake Athabaska and continues as the Slave River into Great Slave Lake and contributing to drought conditions in the fragile ecosystems downstream through the North West Territories.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the standard letter from the Yellowstone to Yukon Conservation Initiative. Please also see the following Technical Memos: - Spatial Boundary Selection - Peace Athabasca Delta

IR #	Name/ Organization	Information Request/Comment	Response
pub_0985-001	Clebo, Heather	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* This project would also ignite the 'carbon bomb' represented by the natural gas and bitumen that the electricity would be used to process. The carbon dioxide released by burning of bitumen and natural gas is only part of the problem. The massive destruction of forests and farmland, the human illness caused by hydrocarbon exposure, and the pollution of water resources would be an additional 'legacy' of this project. To add insult to injury, ordinary British Columbians will face steep electrical rate hikes to fund the project. There is nothing about this project that can be construed as 'in the public interest'. It is a social, economic and biological disaster waiting to happen.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. The matters raised are described in the following sections of the EIS: - Section 11 (Environmental Background) - Section 12 (Fish and Fish Habitat) - Section 13 (Vegetation and Ecological Communities) - Section 14 (Wildlife Resources) - Section 15 (Greenhouse Gases) - Section 20 (Agriculture) - Section 21 (Forestry) - Section 33 (Human Health) Please also see the following Technical Memos: • Agriculture • Project Costs • Cumulative Effects Assessment • Greenhouse Gas Emission Merits of the Project

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pub_0988-001	Fendley, Elizabeth	I would like to comment on the proposed Site C Dam on the Peace River. I have worked in the Peace area, and know many people who live there - many of whom are farming this land. It is some of the most productive farm land in the province. It is also a heritage site for First Nations, a valuable forest ecosystem, and the home of protected species. These attributes are irreplaceable and they should not even be considered for destruction in exchange for energy production. We have many more ways of sustainably generating electricity for ourselves, and we should not be destroying our own backyard in order to sell energy to our neighbours. I urge you to think wisely and choose the ecologically sensible solution here. Say NO to the Site C dam.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 13 (Vegetation and Ecological Communities) - Section 14 (Wildlife Resources) - Section 19 (Current Use of Lands and Resources for Traditional Purposes) - Section 20 (Agriculture) - Section 32 (Heritage Resources) - Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements) Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. Please see the following Technical Memos: - Agriculture - Alternatives to the Project
pub_0989-001	Summer, Leigh	My comments (somewhat point form) I find the “statement” to be very biased in assessing the Site C project and other options possible for B.C.’s electricity needs moving forward. MAIN POINTS (in no specific order) 1 -little to no discussion of possible to imminent “land slide” impacts on both the valley and recreation (why has there been no modeling of what the valley would look like with 50% and 90+% of the potential slides occurring within the first year or two?)	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The proposed Site C reservoir will result in changes to erosion and slope stability at some locations within the reservoir shoreline technical study area. As described in EIS Section 11.2.3 the location and nature of these changes have been predicted through a detailed characterization of the reservoir shoreline geology, inventory and characterization of existing slopes and landslides, groundwater monitoring and modeling, shoreline erosion modeling, and slope stability analyses. Preliminary reservoir impact lines have been prepared to characterize the following hazards around the proposed reservoir: - Potential floods – the Flood Impact Line - Potential erosion – the Erosion Impact Line - Potential landslides – the Stability Impact Line - Potential landslide-generated waves – the Landslide Generated Wave Impact Line This work is described in detail in EIS Volume 2 Appendix B, Part 2 Preliminary Reservoir Impact Lines

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			Please see the Technical Memo on Reservoir Impact Lines. As described in the Technical Memo, the approach used is based on guidelines prepared by the International Commission on Large Dams and provide more information on the expected likelihood and nature of the hazards, and therefore facilitate more flexible land use planning.
pub_0989-002	Summer, Leigh	2 - B.C. is at present about 95% hydro which begins to show the down sides of an almost exclusive dependence on any one source of energy (in this case hydro). 1 -costly spills in years of high precipitation. 2 -shortfalls in dry periods. 3 -micro hydro starts to reduce the plus side of large dams by requiring larger draw downs in low flow seasons which of course causes more usage at low pool adding to lost potential (-instead why not supplement with natural gas which could always be there for an " as needed" requirement or used to maximize the efficiency of existing large dams?). We would gain flexibility and likely eliminate costly spills. (again no modelling done)	Please see Section 5 of the EIS for the Analysis of Alternatives to the Project. Please see the following Technical Memos: – Alternatives to the Project – Hydro-Electric Storage and Dispatchable Capacity
pub_0989-003	Summer, Leigh	4 - Will the large oil companies use natural gas generation for LNG plants in the Prince Rupert area? If so that will be a double standard since it appears the BC taxpayers are not allowed to build gas fired generation because of Gov't imposed restrictions.	The matter raised in this comment lies outside the scope of the environmental assessment.
pub_0989-004	Summer, Leigh	5 - Last but not least: Why not geo-thermal? Best of all worlds. -no pollution -diversification -efficient (would work well with large hydro) -could be used ``as needed`` LETS SAVE THE PEACE VALLEY (for all but especially for future generations)	As shown in table 5.17 of the EIS, geothermal was considered an available resource in the analysis of alternatives. In Section 5.5.2.7 of the EIS, BC Hydro describes the attributes of geothermal and concludes that the geothermal resource option should not be in the portfolio analysis in Section 5.5.4 for the reasons stated on Page 5-52 Lines 24-31 and Page 5-53 Lines 1-7.
pub_0989-005	Summer, Leigh	this is a major recreation area that will likely be lost for ten to twenty years due to safety and or liability. It will be negatively impacted forever (people won`t be allowed on the lake, nor can they FLOAT down a lake on a quiet afternoon). Plus there are no sudden wave hazards on the river for small crafts during storms. (I'm sure B.C. resident taxpayers would be outraged if the Whistler recreation area was changed to	The expected duration of restrictions to recreation use of the river and the reservoir are included in the assessment in the EIS Section 25 Outdoor Recreation and Tourism, and Section 26 Navigation. The majority of the Peace River and its shoreline would remain available for public recreation activities throughout Project construction as compared with the baseline conditions, considering the limitations described in Section 25 of the EIS. The Community Recreation Fund will be available to support

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		a park for hiking only instead of including downhill skiing)	development of additional use areas during this period. Based on Transport Canada thresholds for issue of small craft warning (winds > 20-33 knots and wave heights > 2-3 metres), wave analysis results indicate that conditions that result in issues of a small craft warning would be unlikely. Additionally, the Site C reservoir will include a number of inundated embayments that would provide refuge from rough condition in the main reservoir body. BC Hydro is providing the following supplemental information, based on an extreme wave analysis, related to expected wave heights on the reservoir. Based on Transport Canada thresholds for issue of small craft warning (winds > 20-33 knots and wave heights > 2-3 metres), wave analysis results indicate that conditions that result in issuance of small craft warnings would be unlikely. The Site C reservoir will include a number of inundated embayments that would likely provide refuge from rough condition on the main reservoir body. The SWAN wave model was run using unlimited duration extreme winds from the three major wind directions at Fort St. John. The winds on the plateau were transformed into in-valley winds using the same statistical routine as was used in Volume 2 Appendix H Reservoir Water Temp and Ice Technical Data Report. The strongest winds at FSJ, and in the valley, are from the southwest. The 100-year SW wind at FSJ is 24.2 m/s, which slows to a maximum of 16.6 m/s in the valley, or about 32 knots. The significant wave heights predicted for the 100-year wind are generally 0.5 m throughout the reservoir, and up to 0.8 m just east of the Halfway River due to a longer SW-oriented Section of the reservoir. The maximum wave height is typically twice the significant wave height resulting in modelled maximum waves of 1.0 to 1.6 m in the reservoir. Winds from the east are also common at FSJ, but weaker. The 100-year east wind at FSJ is 13.1 m/s, with an in-valley maximum of 9.5 m/s or 18.5 knots. The significant wave heights for this scenario are less than 0.5 m, for a maximum wave height of approximately 1.0 m. Winds from the NNW are also common, but do not align well with the valley fetch and produce insignificant waves.
pub_0989-006	Summer, Leigh	3 - Question: Why are the natives impacted by Williston Lake being compensated in the tens of millions while only $428,710.00 was spent buying 53 parcels of private land inundated in the 1960's? (yet about four hundred thousand was spent on the Lynx Creek boat ramp and an estimated 5 to 7 million is being spent for the same at Taylor). Seems our provincial gov't and or B.C. hydro will do anything to gain the support of natives and local residents while riding on the backs of those who "gave" up their homes for a mere pittance back in the late 1960's.	BC Hydro's approach is to compensate property owners based on fair market value. Property owners who sold properties in the 1960s were compensated based on the agreements made between BC Hydro and the property owners.

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pub_0992-001	Maxey, Nelle	Flooding farmland is a very bad idea and not to the public benefit. BC needs to retain all of hte good quality farmland we have, not sacrifice it to the oil and gas industry. You can't make new farmland. Once it is gone, it is gone. Cumulative impacts of the development on the wildlife and human population of the area are simply not addressed in Hydro's documents. This a very, very bad idea and is not in the public interest. Especially since we will be paying for it!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The potential effects of the Project on agriculture are described in Section 20 (Agriculture) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The EIS describes the potential cumulative effects assessed for each of the 22 valued components in Volume 2 Section 12-15, Volume 3 Sections 16-27 and Volume 4 Sections 28-33). Please see the following Technical Memos: - Cumulative Effects Assessment - Agriculture - Project Need
pub_0993-001	Gahn, John	*The commentator submitted a letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, and provided additional comments as shown below:* Additionally, dams have a limited time of usefulness and eventually fill with sediment. There are dams now in the U. S. which are being removed to restore rivers such as the Elwa River in Wa. to there natural state. The oil sands frenzy has reached a fevered pitch. Stop now and take a look at the irreversible damage being done to our planet. Say NO to the Site C dam. Many, many future generations will benefit.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Please see the response to the letter in the standard form suggested by the Yellowstone to Yukon Conservation Initiative, located after this table. Please also see the response to pub_0254-001.
pub_0997-001	Higgins, Derrick	I am opposed to the construction of the Site C mega-dam. It appears to be a costly and inefficent use of public resources. Destroying a vast area to produce energy we do not need in the foreseeable future.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed.

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			Please also see the Technical Memo on Project Need.
pub_0999-001	Ainscough, Tom	In addition to the issues raised by a number of respected environmental and community groups regarding the negative impact of the project, in my opinion the project is premature and inappropriate for a number of reasons: - more sustainable and renewable sources have not been adequately assessed in the EIS - it's not clear how this project fits into the overall energy strategy for the province; previously BC Hydro had set a high priority on conservation and energy efficiency as a way of meeting increased demand. - the project has been exempted from BCUC review; this is a serious concern given that the project has been rejected by the BCUC in the past. - alternative decentralized energy production and distribution strategies have been proposed as a more sustainable approach for decades (e.g., A. Lovins, 1976); this project needs to be reviewed in the context of a comprehensive look at more sustainable alternatives to our current centralized system. - the indirect environmental impact of using the power from this project in GHG producing industry (e.g., LNG production for export, tar sands) needs to be taken into account.	Thank you for your comment. The matters raised are described in the following sections of the EIS: Section 5 of the EIS describes the need for and alternatives to the Project. The analysis of alternatives considered clean or renewable supply side options among others. Please see the Technical Memo on Alternatives to the Project. The Project's alignment with the objectives of the *Clean Energy Act* is described in Section 5.3. BC Hydro's demand-side management target is described in Section 5.2. Please see the Technical Memo on Demand-side Management. The Project has not been rejected before. In May 1983, the BCUC recommended that the Provincial Government defer issuing an Energy Project Certificate for the project until BC Hydro provided: (1) a load forecast demonstrating that construction of the project was warranted to avoid supply deficiencies; and (2) a comparison of alternatives demonstrating that the project is the best project to meet the anticipated shortfalls (BCUC, Site C Report & Recommendations to the Lieutenant Governor-in-Council, May 1983, page 23). Subsequently, the BCUC has reviewed the Project in the context of BC Hydro's long-term resource plans: • In 2006 the BCUC noted that "Site C appears to be an attractive resource under a range of scenarios for the project's capital costs" (BCUC, 2006 Integrated Electricity Plan/Long-Term Acquisition Plan Decision, 11 May 2007), page 112); • In 2008, the BCUC accepted "that Site C is a suitable resource option to be considered in BC Hydro's long-term planning process" (BCUC, 2008 Long-Term Acquisition Plan, Decision, 27 July 2009, page 139). The role of the BCUC is described in Section 1.2, page 2 of the EIS Guidelines and Section 7.2.3, page 7-4 of the EIS: • Section 1.2 of the EIS Guidelines, which sets out the purpose of the EIS, states: "The EIS is not intended to constitute a Certificate of Public Convenience and Necessity for the Site C Project. The Site C Project is exempt from the requirement for a Certificate of Public Convenience and Necessity as per section 7 of the B.C. Clean Energy Act"; • Section 7.2.3 of the EIS describes the role of the BCUC with respect to the Project, which is to review the costs associated with the Project should it proceed in the context of BC Hydro's revenue requirements: "Costs associated with generation projects are recovered from ratepayers based on the revenue requirements collected by BC Hydro, as regulated by the [BCUC] … The manner of cost

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			recovery is determined by the BCUC …". Section 5.2 of the EIS contains the need for the Project analysis. The need for the Project is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. The Project is needed whether or not any new LNG projects proceed.
pub_1001-001	Haynes, Barry	I've read all about this project and I know it's a boondoggle to provide energy for fracking in Northern BC. Citizens of BC don't need the power of this dam and don't need to spend the taxpayer money on it to subsidize the oil industry. Please do not approve this project. I am another citizen of BC and Canada who does not want this project and is very clear that if this project is approved it is being approved to put money in the pockets of oil companies not to help citizens of BC. It is also a very environmentally destructive project. Please do not approve this project!	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. Please see the Technical Memo on Project Need.
pub_1002-001	Chubb, Phil	Despite some associated environmental damage, I'm not against building the dam eventually if BC's transition to a carbon-free economy requires the power. I'm totally against building it sooner however if the power it supplies will simply subsidize LNG exports.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. Please see the Technical Memo on Project Need.
pub_1011-001	Parsons, Jane	This article should be noticed in your review. (Attachment of article by Bob Weber, the Canadian Press dated March 3, 2013 9:17 am) Please see original submission for full article or go to the following link http://www.vancouversun.com/news/world/Alberta+aboriginals+oppose+Hydros+Site+project+needs+more/8042356/story.html	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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pub_1012-001	Geselbracht, Daniel	will not be voting for the government that you are supported by in the next election. Pull your heads out of your arses and stop making decisions that are not in the best interest of BCers and Canadians, but in the interest of big business.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_1014-001	Leahy, Jean	I feel that the effects of a Site c dam has long term consequence's for downstream farmers who need dry weather to harvest Hay, Grains. Our farm, now owned by my son is on a bench similar to Taylor} some 5 to6 miles downstream. Excellent soil, class one and two. Fog plays a role at harvest time. We were accustomed to combining} when there was fog on the river by 10:30-11 Am. When Site one, Peace Canyon began operating there was a notable difference, in that there was heavier fog from time to time. This fog now did not burn off until 12 PM and at times rolled in again by 6 PM. This meant two less hours for combining. The same would hold true for Hay harvesting. On the farm time is money} must be able to use all possible hours. The Site C dam would be much} much closer and have heavier fog. All of which would be more lost time for farmers. We also have to be concerned as to the effects of more, closer heavier fog at our Airport in Fort St. John. I resent the term being used "Lake", it would not be a lake, it would be a reservoir, subject to sleuthing banks due to various levels of water. Examine the banks of Williston!. Leading people to believe that there will be a good recreation Lake is not telling the truth. It would take several years to build, several more to be able to use this reservoir, the boaters of today risk the possibility that they would not be physical able to go boating any more. They, the public should not be led down the garden path.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following sections of the EIS: Section 26.4.10, Navigation, describes potential effects of fog on aviation operations at the airport. The Project is not expected to have an adverse effect on aviation visibility due to changes in fog at the North Peace Regional Airport. Section 20.3.6 describes potential effects of the Project operations on agricultural operations, including changes in microclimate. Reservoir induced local climate effects on agriculture are anticipated to be limited to possible effects on crop drying within 1km of the reservoir. The matters raised are described in the following sections of the EIS: - Section 11.1 (Environmental Background - Previous Development) - Section 20 (Agriculture) - Section 25 (Outdoor Recreation and Tourism) Please also see the following Technical Memos: • Agriculture • Cumulative Effects Assessment
pub_1017-001	Name Withheld, Hudson's Hope	I would like to see efforts made to fairly and honestly address three aspects of the BC Hydro Site C project: The Passive Acquisition Program, The Long Term Holdings of the lands acquired through theprogram and the affects on the District of Hudson's Hope, and the effects of the Flowage Easements placed on properties that BC Hydro has acquired over time.	Thank you for providing your input during the public comment period for the Environmental Impact statement (EIS) for the Site C Clean Energy Project. With respect to the use of the lands purchased under the Voluntary Passive Land Acquisition Program, please see Section 11.3.1 of the EIS.

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		All three of these have had long lasting negative impacts on the development and growth – both physically and socio-economically - to District of Hudson's Hope and the Peace River Valley. The on-going "Passive Acquisition Program" through which BC Hydro currently purchases properties required for the Site C project has been around for a long time - it dates back into the 1970's. At that time, the lower Lynx Creek Subdivision was a very vibrant small community with dozens of homes, a fire hall and a service station. Over the years BC Hydro systematically dis-assembled this area as it was located in the "flood reserves" as it was called back then - unless you have been living in the area for some time you would not even know that it existed. Properties affected by the Site C Flowage Easement, rather than being improved upon and increasing in value with time have instead gone the other way. Because of the uncertainty and affect of the flood reserves most people are not willing to purchase them at all, let alone put time and effort to develop them. Over the years, I have observed the process of the Site C Flood Reserves being de-populated and associated infrastructure dismantled. This, of course, has a had a negative impact on the development of this fine community as well as the development of the entire Peace River Valley from Hudson's Hope to Fort St. John. When BC Hydro made public in April of 2012 the "Project Definition Consultation" booklet and all of the associated mapping of the impacted areas, highway re-alignment, etc. of the once again proposed reservoir, all the properties which will be affected by the project were de-valued and in a way stigmatized by that information being made public, even though the project is proposed and has not been officially announced as going ahead. Regardless of whether the Site C project goes ahead at this time, these properties will be very difficult to sell at their fair market value, as any potential Buyer must be made aware of the fact that the property will be affected by Site C. What this in essence does is make BC Hydro the only logical Buyer (or Taker) of these properties - not a good position for a property owner to be put in. The Peace River Valley between Hudson's Hope and Fort St. John would have developed substantially in a much different fashion than what we see now. Property in that area hasn't been available during the past 35 years due to the Site C	Please also see the following Technical Memos: - Private Property – Project Requirements and Tenure - Flood Reserve

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		Flood Reserves that BC Hydro owns - this factor has curtailed any possible growth or development of the area - be it residential, agricultural, commercial, or industrial. I think that the affect on the social and economic development of Hudson's Hope and the Peace River Valley has been great during that period of time - well over a quarter century! The Flowage Easements placed on properties acquired through the Passive Acquisition Program have also held back development along the Peace River during this long period of time, as any development on these properties had to first be approved by BC Hydro, and if and when Site C was built any infrastructure or homes on the easement would be removed or destroyed according to these easements which were registered on title. These Flowage Easements are the same type of easements that exist on the privately owned properties on Williston Lake along Twelve Mile (Dunlevy) Road. Most of this property was given as compensation to owners of property that were flooded out when Williston Lake was formed in the 1960's. The story on what has happened to those properties over the years is sad and unfair - it is a book in itself. The uncertainty of the Site C project going ahead has affected many people and many properties over the years - it has created a lack of stability, and has also affected the social and economic development of the District of Hudson's Hope, it's residents and property owners. Other factors that need to be addressed and mitigated for are the long construction period of the Site C project, and the time period it will take for the reservoir to stabilize in order to safely use the Peace River again. Hudson's Hope will undoubtedly feel the affects that go along with all of the many aspects of the heavy construction period of the project, highway relocation, berm construction, reservoir clearing, etc. In addition, the Peace River will most likely be very difficult to access during the construction period as well as the stabilization period. All in all, it will be a very disruptive period for Hudson's Hope and it's residents.	
pub_1018-001	Life, Laura Lee, Charlie Lake	I visited the Fort St. John Environmental Impact Statement Open House and have been paying attention throughout to information/concerns about the Site C dam.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

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		Frankly, I have grave reservations that B.C. Hydro's Environmental Impact Statement is unavoidably biased in favour of the project, and so is quite limited in its assessment of the eventual effects of the dam on not only the Peace Region of B. C but also the entire Peace River watershed from source to mouth. One thing is absolutely sure; once the dam is built, that stretch of the Peace Valley will be lost forever, beyond reclamation, due to sloughing of the banks into the reservoir. I also strongly suspect that the extent of the sloughing and its effects on vital infrastructure has been underestimated. Williston reservoir is over 40 years old, in a less obviously unstable area and its banks are still sloughing. B. C. has so little quality arable land left - much is under water through the damming in the Columbia and Arrow Lakes region, or going under urban development at ever increasing rates in the lower mainland - it seems foolhardy beyond tolerance to squander the land upstream from Site C. Its microclimate is unique, allowing tender crops such as corn, pumpkins and even watermelons to be grown commercially. The restriction of developed farmland in the valley to crops such as hay and some grain is largely because of policies created to support Site C., not because of a lack of interest and will by local farmers or land quality. I have also heard little said about tourism value. I have driven a great deal of B. C over the years and rate the road trip from Fort St. John to Hudsons' Hope, the length of the valley Site C. will flood, some of the most beautiful, striking scenery in B. C., winter, spring, summer or fall. The frequent prescence of wildlife - for whom this is an important habitat and travel corridor - only adds to the pleasure of the trip. In short, I really do believe that the true, longrange costs of this project have been underestimated and deserve further consideration.	The matters raised are described in the following sections of the EIS: - Section 11.2 (Geology, Terrain, and Soils) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) - Section 25 (Outdoor Recreation and Tourism) - Section 27 (Visual Resources) - Section 30 (Community Infrastructure and Services Please also see the following Technical Memos: - Reservoir Impact Lines - Agriculture - Movement of Grizzly Bears and Large Carnivores - Project Costs - Spatial Boundary Selection - Peace Athabasca Delta
pub_1019-001	Pratt, Martin	The site C dam should not be allowed. It would be expensive to build and is not needed except for shale gas expansion which is not a good idea either. Instead put substantial funding towards energy efficiency in residential, office and industrial uses. Also put funding, expertise, and regulation to ensure much more recycling of materials here in BC	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The matters raised are described in the following section of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) Please also see the following Technical Memos: - Project Need - Project Costs
pub_1020-001	Name Withheld, Hudson's Hope 2	This EIS does not sufficiently address the potential impacts on wildlife due to interruption of travel routes between areas/populations. The Y2Y corridor was	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

IR #	Name/ Organization	Information Request/Comment	Response
		established by experts to preserve healthy wildlife populations in Western North America. The proposed reservoir threatens to destroy an important part of that corridor, but BC Hydro does not properly address this very significant threat to the future well being of many wildlife species on this continent.	The matters raised are described in the following section of the EIS: - Section 14 (Wildlife Resources) Please also see the Technical Memo on Movement of Grizzly Bears and Large Carnivores.
pub_1022-001	Name Withheld	I was born and raised in Fort St. John. I am in favor of the Dam. Thanks for my support in Ottawa.	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
pub_1021-001	Rhymer, Elaine	In order to try to gauge the cumulative impact of Site C,one could take a look at Williston Lake. The amount of land that has sloughed away since the creation of that lake is incredible--and it continues to slough. People who own lake frontage property deal with this every year as the dust flies and chunks of their land fall into the water. I believe that with regard to erosion we can expect a similar scenario with Site C because the composition of the soil on the banks of the Peace is similar to that of Williston. In places the riverbank is already undercut and although the fluctuation of water with Site C will not be as drastic as Williston, I still think we can look for at least 20 years and probably more of sloughing. What will this mean for people who live in the town of Hudson's Hope? Will they have to deal with flying silt like people on Williston do? What will happen to the property values of houses in the town that could unfortunately be situated where the dust is bad? I think it is not just the people who live closest to the river who will be affected. With regard to wildlife: there are no Canada geese to be found on Williston, and very few beaver. The rising and falling of the water puts an end to Canada goose nesting sites and places for beaver to build their houses. Grayling have disappeared from Williston as well, their spawning sites at the mouths of creeks drowned. The islands of the Peace River provide secure nesting places for birds, and birthing places for wildlife like deer, but there will be no such places on the new lake. I question the "need" for Site C. At first we were told that British Columbians were going to run short of power in the next 20 years unless this dam went forward. The present premier of BC, however, has stated that electricity from Site C is essential for LNG plants that the government plans to build. Huh?? Where does the truth lie? As well, BC Hydro buys and sells power, sort of playing the stock market with the province's electicity. So maybe Site C is just a ploy for making a profit. Who knows? One thing for sure, I don't trust ANY of the stories! I think we as British Columbians	Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project. The need for the Project is described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. There is a need for new energy and capacity resources within the next 10 to 15 years without any potential LNG demand. The Project is needed whether or not new LNG projects proceed. The matters raised regarding the Project are described in the following sections of the EIS: - Section 5 (Need for, Purpose of and Alternatives to the Project) - Section 11.2 (Geology, Terrain, and Soils) - Section 11.3 (Land Status, Tenure and Project Requirements) - Section 12 (Fish and Fish Habitat) - Section 14 (Wildlife Resources) - Section 20 (Agriculture) Please also see the following Technical Memos: - Reservoir Impact Lines - Project Need - Project Costs - Private Property - Project Requirements and Tenure

IR #	Name/ Organization	Information Request/Comment	Response
		are being sold a bill of goods when it comes to Site C. Are we going to allow Hydro to drown prime farmland, destroy wildlife, and put people out of their homes when we can't even get a straight answer about WHY they need to do this?	

(1) Peace Valley Environmental Association

Peace Valley Environmental Association standard letter submission

Please accept my comments regarding the adequacy of BC Hydro's Environmental Impact Statement for the Site C Clean Energy Project (the EIS).

Site C will have significant and irreversible environmental, health, social, economic and heritage effects that will unjustifiably add to the industrial burden that northeastern BC already bears. Impacts of this dam will include:

- Harm to food security, crop diversity and farming communities

The Peace is a region of exceedingly good productivity, capable of growing a broad diversity of crops and home to a rich farming community. Site C will result in the permanent loss of 6,469 hectares (15,985.25 acres) of agricultural land, 2,601 ha (6427.21) of which are Class 1 and 2 lands.

In addition to the loss above, an additional 6,290 ha, of which 343 ha are Class 1 and 2 lands, would be seriously at risk from flooding, slope instability and high waves.

Global warming is destroying and threatening traditional food producing lands in BC and around the world. As the value of potential agricultural lands that could be used for food production increases, the unique agricultural potential of the Peace must be prioritized. Also, preserving this land and the agricultural sector in the Peace would help protect the health of our communities, our economies and our families.

- Unjustifiable cost to ratepayers

BC Hydro claims that the Site C Dam would cost $7.9 billion to construct, but it is widely agreed that the dam's construction costs would increase to more than $10 billion due to the unstable ground around the dam and reservoir site. The cost of this project would inevitably fall on the shoulders of ratepayers in the form of higher rates.

BC Hydro has not adequately assessed the environmental, economic, social, health and heritage effects of Site C. The following deficiencies in the EIS must be addressed:

- The potential value of agriculture is not recognized

The Peace River Valley contains its own micro-climate that provides ideal growing conditions for a diverse array of crops. The EIS does not specifically identify the areas where this unique micro-climate occurs, and so underestimates both the growing and economic potential of those areas as agricultural lands. The EIS must map the climate characteristics of the Peace River Valley to accurately account for the potential productivity of the valley and contribute to a more accurate assessment of the economic and social effects caused by flooding the Valley.

- No description of the pre-industrial environment and effects of past projects

Both federal and provincial law require that the EIS include an assessment of the cumulative
environmental effects of Site C in combination with the effects of past projects and activities in the area. Thus, the EIS must describe both the state of the environment prior to any industrial activities in the Valley as well as the effects of previously-existing projects or activities.

- 'Future Case Without the Project' ignores removal of land use restrictions

If there were no Site C, there would be no flood reserve and other project-related land-use restrictions interfering with farming those lands. In order to assess the agricultural and economic potential of the Valley, the "Future Case Without the Project" must describe a future in which all land use restrictions related to Site C have been removed.

- Assessment of downstream effects stops short of potential actual effects

Many concerns have been raised by the public, First Nations, provincial and territorial governments, Environment Canada and Fisheries and Oceans Canada regarding the need to assess the downstream effects as far as the Peace-Athabasca Delta. Currently, the EIS only describes downstream effects as far as Vermilion Chutes, Alberta – midway down the Peace River. To ensure that all potential downstream effects are considered, the EIS must describe the current conditions and potential effects of the surface water regime, climate, fish and fish habitat, wildlife and vegetation all the way to the Peace-Athabasca Delta.

- Decommissioning and associated effects ignored

Decommissioning dams is expensive, requires considerable planning and can have significant
environmental effects. For example, sediment that has become trapped behind dams can cause turbid waters, harming fish and fish habitat when released. Changing water levels can further endanger already at-risk species. Despite this, Hydro refuses to address decommissioning and associated effects of the dam and generating facilities. As decommissioning is an inevitable component of the project, it must be addressed in the EIS.

Proponent response to Peace Valley Environmental Association standard letter submission

Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

The substantial work undertaken to date indicates that the effects of the Project can largely be mitigated through carefully planning, comprehensive mitigation programs and ongoing monitoring during construction and operations. As a result, the Project is unlikely to result in a significant adverse effect on most of the valued components. A significant potential effects has been determined on the following valued components:
- Fish and Fish Habitat - due to the potential loss of distinct sub-groups of fish (migratory Arctic grayling in the Moberly River, migratory bull trout in the Halfway River, and mountain whitefish that rely on the Peace River habitat)
- Wildlife Resources - loss of habitat due to the creation of the reservoir for certain migratory birds considered to be species at risk (Canada, Cape May and Bay-breasted Warblers, Yellow Rail and Nelson's Sparrow)
- Vegetation and Ecological Communities - alteration and fragmentation of some unique terrestrial ecosystems (tufa seeps, Marl fen, and old and mature riparian and floodplain forests)
- Current Use of Lands and Resources for Traditional Purposes - loss of some important multi-use, cultural areas and valued landscapes, including Attachie, Bear Flats and Farrell Creek by some members of the Treaty 8 Tribal Association, Saulteau First Nations and the Blueberry River First Nations.

BC Hydro concludes that while the Project has the potential to result in some significant residual effects, they are justified by (1) the public interest served by delivering long term, reliable electricity to meet growing demand, (2) the employment , economic development, ratepayer, taxpayer, and community benefits that would result in (3) the ability of the Project to meet this need for electricity with lower GHG impact than other resource options, and (4) because the Project would take advantage of water already stored in the upstream reservoirs to generate over 35 per cent of the energy generated by BC Hydro's largest facility with only 5 per cent of the reservoir area. Further, BC Hydro is continuing to consult with Aboriginal groups and to seek accommodations where appropriate.

Potential effects of the Project on food production, crops and farming are described in Section 20 (Agriculture) in the EIS. Table 20.16 of the EIS presents the permanent loss of agricultural land. The total land area of 6,469 ha includes 0 ha of Class 1, 2,601 ha of Class 2, and a sub-total of 3,816 Class 1 – 5 land. Class 1 – 5 land is considered cultivatable for a variety of crops. These totals include all areas within the Project activity zone, including areas subject to erosion. Section 20.3.2.1 describes the consideration of other land areas. Due to the lower probability of land or effects within the other impact lines caused by the creation and operation of the reservoir, areas within these lines were not added to the total estimates of permanently lost land.

Section 20.3.11 of the EIS addresses the potential project effects on regional food production and consumption. The EIS concludes that the Project would not affect the future ability of the region to be food self-reliant in commodities that can be produced in the region, as there would be sufficient land remaining for the region to be self-sufficient in these commodities. This assessment considered potential climate changes.

The assessment of climatic capability for agriculture is described in Volume 3, Appendix D, Section 3.1 Climatic Capability for Agriculture. The results of the climate assessment were subsequently used in estimating land capability for agriculture as described in Section 20.2.2.1 Land Capability Method of the EIS and shown on Figure 20.2 Maps 1 through 25.

The improved capability ratings shown on Figure 20.2 Maps 1 through 25 reflect the favourable climatic capability of the Peace River Valley. Areas shown as having an improved land capability rating of Class 1 and 2 are, for the most part, areas with a climatic capability of Class 1 and 2 respectively. These highly capable areas are suited for a wide variety of crops, as described in Section 20.2.3 Agricultural Suitability of Lands of the EIS.

As stated in Volume 1 Appendix F Part 1, the Project cost estimate includes "... an appropriate level of contingency to reflect uncertainty in future conditions." As a result, BC Hydro expects project costs "… to be within the bounds of the current capital cost estimate in ordinary market conditions."

Section 8.5.3 of the EIS Guidelines sets out the approach to be used to assess potential cumulative effects of the Project in combination with other projects or activities that have been or will be carried out. The approach was applied and is described in more detail in Section 10 of the EIS.

As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is provided in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project.

Potential future agricultural land use without the Project was estimated using a number of assumptions, none of which were constrained by current tenure or land ownership.

The EIS Guidelines require that the "EIS should state the Proponent's commitment, should a proposal be made in the future to decommission the Site C dam and generating station, to address a plan for decommissioning and restoration in accordance with applicable regulations at that time".

BC Hydro has no plans to decommission the dam. However, EIS Section 4.6 provides the commitment required by the EIS Guidelines and also "An Environmental Protection and Monitoring Plan would be developed for decommissioning to implement applicable measures for environmental protection, and to restore the area to conditions deemed acceptable at the time of decommissioning. Further details on decommissioning would depend on regulations and practice at the time of a decision to decommission."

Please also see the following Technical Memos:
- Agriculture
- Cumulative Effects Assessment
- Flood Reserve
- Peace Athabasca Delta
- Project Costs

Peace Valley Environmental Association standard letter submitters

Josette Wier, Name withheld (Chetwynd) , Name withheld (Location undisclosed) , Margaret Keith, Name withheld (Chetwynd) , Christine Comrie, Steve Laing, Mary Macdonald, Name withheld (Victoria), Julie Vander, Linden, Name withheld (Tofino) , Heather Hannaford, Caroline Woodward, Andrea Morison, Don Hoffmann

(2) Sierra Club and Yellowstone to Yukon Conservation Initiative (Y2Y)

Sierra Club and Yellowstone to Yukon Conservation Initiative (Y2Y) standard letter submission

Impact Statement (EIS) submitted by B.C. Hydro with regard to the proposed Site C dam on the Peace River.

The Peace River valley is a significant historical, cultural and natural feature in northern B.C. This significance is recognized by the B.C. Government’s designation of the Peace as a Heritage River. The river is heavily used by local residents for boating, swimming, rafting and fishing.

The Peace River has significant cultural and historic values associated with First Nations settlement. In addition, exploration and the fur trade associated with the travels of people such as Alexander Mackenzie, Simon Fraser, David Thompson, John Finlay, and John Stuart are part of the river's history.

The upper reaches of river have been developed for hydro power. The WAC Bennett and Peace Canyon hydro-electric dams produce 31% of British Columbia's hydro-electric power. A third dam, called Site C, is now proposed for the Peace River downstream from the confluence with the Moberly River, near the city of Fort St. John.

B.C. Hydro is seeking federal and provincial approval to construct Site C and create a third reservoir on the river. This would destroy virtually all of the historical Peace River that remains with B.C.

The purpose of the EIS is to assess the significance of the impacts of the Site C dam and determine whether or not they can be mitigated or offset. I am writing to let you know my opinion that the EIS for the Site C dam fails to adequately assess the significance of potential and cumulative impacts of Site C. The EIS is deficient in the following ways:

1- The boundaries of the area assessed are far too limited.
2- As a result, the EIS omits assessment of regional impacts to many important species, especially those that range widely, occur at low densities and/or are unevenly distributed.
3- The EIS does not consider the impacts of the existing dams and reservoirs on the Peace River.
4- Wide-ranging animals – such as wolverine, lynx and woodland caribou – are virtually excluded from the assessment.
5- The cumulative effects assessment appears to have omitted a number of past and potential future projects.

Peace River region wildlife populations already are unacceptably impacted due to the intensity of human activity and development. The only appropriate response is to deny approval to the Site C dam and implement a comprehensive management approach that will ensure the recovery of sensitive species like grizzly bears and caribou.

Proponent response to Sierra Club and Yellowstone to Yukon Conservation Initiative (Y2Y) standard letter submission

Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

Response to Comments on the Site C Clean Energy Project Environmental Impact Statement, January 25, 2013
Submitted by BC Hydro on June 4, 2013

Concerns raised are addressed in the following sections of the EIS:
-Section 5 (Need for, Purpose of, and Alternatives to the Project)
- Section 11.4 (Surface Water Quality)
- Section 11.5 (Water Quality)
- Section 19 ((Current Use of Land and Resources for Traditional Purposes)
- Section 20 (Agriculture)
- Section 24 (Harvest of Fish and Wildlife)
- Section 25 (Outdoor Recreation and Tourism)
- Section 26 (Navigation)
-Section 34 (Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements)
- Section 32 (Heritage)

The potential effects of the Project on the environment is assessed under the following valued components:
- Fish and Fish Habitat (EIS Section 12)
- Vegetation and Ecological Communities (EIS Section 13)
- Wildlife Resources (EIS Section 14)
- Greenhouse Gases (EIS Section 15)

The purpose of the EIS, as stated in Section 1.2 of the EIS, is to provide the information that the Minister of Environment of Canada and the Executive Director have identified in the EIS Guidelines. The EIS Guidelines was finalized by the Executive Director of the EAO and the Minister of Environment issued on September 7, 2012. The EIS Guidelines identify the information that must be provided in the EIS.

The EIS Guidelines required the inclusion of a Table of Concordance in the EIS, which is found in Volume 1 of the EIS. This table identified, through cross-referencing, where information identified in the EIS Guidelines is found in the EIS. The Table of Concordance shows that the EIS satisfies all the requirements of the EIS Guidelines.

The following information provides additional responses to items 1-5 listed in the Y2Y form letter:
1 - Please see the Technical Memo on Spatial Boundary Selection
2- Please see the Technical Memo on Movement of Grizzly Bears and Large Carnivores
3- As required in Section 9.1 of the EIS Guidelines, a description of previous developments in the Peace River watershed is provided in Section 11.1 (Previous Development) of the EIS. This information provides context for the environmental assessment of the Project.
4 - Please see the Technical Memo on Caribou
5 - Please see the Technical Memo on Cumulative Effects Assessment

BC Hydro concludes that while the Project has the potential to result in some significant residual effects, they are justified by (1) the public interest served by delivering long term, reliable electricity to meet growing demand, (2) the employment , economic development, ratepayer, taxpayer, and community benefits that would result (3) the ability of the Project to meet this need for electricity with lower GHG impact than other resource options, and (4)

because the Project would take advantage of water already stored in the upstream reservoirs to generate over 35 per cent of the energy generated by BC Hydro's largest facility with only 5 per cent of the reservoir area. Further, BC Hydro is continuing to consult with Aboriginal groups and to seek accommodations where appropriate.

In addition, Section 7.4 of the EIS describes the environmental, social and sustainability benefits including the ability of the Project to:
• Integrate clean or renewable generation resources such as wind and run of river hydro
• Generate electricity with a low amount of greenhouse gas emissions per unit of energy delivered • Increase fish habitat and aquatic productivity in certain areas
• Provide increased fishing opportunities and water based access for a variety of boats
• Improve the safety of public roads and the reliability of the local transmission system

Sierra Club standard letter submitters

2893 Individuals (names are not disclosed on the CEA Agency Website), Desmond Berghofer

Yellowstone to Yukon Conservation Initiative (Y2Y) standard letter submitters

Carol Collins, Nicole Weber, Sherie Angevine, Elizabeth Abrantes, Bruce Low, Brad Jones, Irina Ivanova, George Payerle, Line Gillespie, Matt Johnson, Gerry Polman, Pamela Speight, Kathe Garbrick, Pamela Geiger, Anthony Montapert, Riley Pollom, Sean Neid, C Richards, Mike Pacey, Nancy Milos, Colleen MacDonald, Laurel Brant, Jennifer Bustin, Tom Saare, Lynn Martel , Peter Shaw, John Smith, Mark Nicholas, Noreen Reist, Sean Mcevoy, Mark Robertson, Anne Riley, Nichole Lesperance, Rob Sykes, Edward Ralfe, Candy Bowman, Timothy Lawnicki, V Sheppard, Louis Bongiovanni, Lindsay Bellamy, Owen Coulter, Shirley Hennessy, Heather Huck, Charles Gar , Murlin Goeken, Lesley Currie, Karen Naiman, Bob Szakacs, Heather Mariash, Diane Kastel, Emlia Hernando, Nésida Loyer, Leigh Ann Betts, Ryan Harvey, Tanya Matys, Kyle Collins, Michael Petford, Norma Mclean, Michele Hardy, Leon Tichonow, Debra Herst, Deanne Pala, Lyndon Cousins, J. Borisenko, Holger Eidam, Gordon Gosse, Eliot Kaplan, Eugene Burles, Kathleen Walker, George Grainger, Margaret Silver, Craig Hannah, Miriam Langley, Sarah Gustafson, Joanna Behrens, Michael Klaczek, Judi Charlton, Ben Murray, Jared Cornelia, Andrew Balazs, Meredith Rodger, Marv Amos, Peter White-Hoppe, M. DellaVedova, Judith May, Ron Silver, Sinead Sanders, Annette Kennedy, John Day, Judy Weisgarber, Elliot Borisenko, Erika Gisel, Georgia Braithwaite, Kenneth Lapointe, Shawn Walters, Sara Golling, Eric Burr, Donna J., Barry Faires, Lisa Walters, Eleanor Klaczek, Zia Hoda, Mervi Rantala, Candy LeBlanc, Marina McToal, Trish Dundass, Lindsay Rawluk, Adam Phillips, Clay Baumung, Wendy Krahn, Mark McCormack, Maureen Hamilton, Gary Torlone, Tom Gray, James Friesen, Patricia Chang, Steven Carpenter, Susan Eaton, Karel Beijer, Ricki Newman, Brian Ferguson, Jon Levin, Richard Carriere, William McKee, Esther Nieuwenhuis, Ame Kiso, Brian Foster, Peter Wantuch, Dianna Funnell, Wendy Ryan, George Logan, Doreen Dewes, John Hubler, Kate Lawes, Mark Hodie, Elena Pollarolo, Steven Cape, Robert Reeves, Kenneth Wispinski, Ken Friesen, Debbie Graham, Christine Nelson, Melissa Danylchuk, Wanda Prescott, Yvonne Schmitz, Kelly Pickerill, Geraldine Young, Tyrone Kuronen, Joan Jones, Martha Spencer, Ann Rycroft, Laurel, E Tate, Holly Rintoul, Marlene Scott, Marianne Flory, Mike Peterson, Cliff Wallis, Michelle MacKenzie, Joel Hagen, Dulcy Wilson, Susann Easson, Danielle Duncan, Sylvain Rioux, Ann Filbert, Dave Meadows, Barbara Boettcher, Kate Houghton, Rob Arnstein, Michael Moore, Anke van Leeuwen, Kawina Robichaud, Carly O'Rourke, Clint Smith, Emma Pullman, Dana Riester, Albert Barnes, Tom Gilligan, Nicholl Heloise, Alice Kidd, Norm Hoessmann, Heather Morrison, Dawn Haylett, Juri Peepre, Nelly Young, Ron van der Eerden, Chris Wex, Jenny Mcdonell, Tom Mitchell, Nori Sinclair, Marilyn Hansen, James Kerr, Oren Fisher, Alan James, Stacey McCausland, Robyn Hume, Andrew Burke , Christopher Peters, Sylvain Lieutaghi, Angela Kelly, Wilson Fowlie, Adrian Valerie, Linda Kennedy, Fran Kwiecien, Dave Taylor, Robin Yeh, Emily Menzies, Bettina Martens, Loraine Brooks, Jonalyn Green, Brandon Chang, Kerry Davis, Lynn Maxted, Pierce Sharelove, Cory Pahl, Shirley Warne, Brian Smallshaw, Lynn Erin, Robert Hunter, Brenda May, Frances Fry, Warren Kinsey, Sandra Nash, Samantha Statton, Jocelyn Willis, Lorraine Sharpsteen, Jean Herron, Cheri Buchanan, Kayden Sim, Barbara Resendes, Jennifer Brownlow, S.B. Edward, Sharon Antoniak, Patricia Goerndt, Orville Carter, Joanne Parker Robertson, Jason Steele, Belina Bisia, Rick Gee, Stephen Ullstrom, Holley Rubinsky, T Vandertuin, Marion Knapp, Lilly Wong, Sharon Cross, Grahame Edwards, Paul Kamill, Marilyn Raymond, Jo Fox, Karen Jettmar, Joyce Jackson, Barbara Zimmer, Jeannette Lucas, Dave McMurray, Jennifer Day, Christina Young, Beverly Hall, Stephen Webb, Eldon Whalen, Faune Johnson, Rachelle Stein-Wotten, Rob Knight , Graham Stonebridge, Joanna Streetly, Elisa Meakin, Linda Harder, Janice Whitehead, Al Cowan, Donna Young, Tom Landine, Chessi Miltner, Aaron Gildener, Sheila Wallace, Barbara Westerman, Joanne Moore, Danielle Arcand, John Taylor, Lorraine Leonard, Regan McEachnie, Indira Greenhough, Regan Gillies, Robert Forbes, Tom Martin, Margaret Gaviller, Jessie Hall, Patricia Grand, Jeff Sararas, James Graham, Andrea Glickman, Marie Lapwood, Denise DuFault, Michael Rosser, Angela Smailes, Lisa Barret, Amy McConnell, Todd Stockner, Sage Birley, Victoria

Nelson, Pat O'Connor, Angelina Mann, Terri Taylor, Donald Grayston, Steven L. Jones, Lynnene Lewis, Elizabeth Jenkins, Anthony Rader, Dylan Smith, Randy Pearson, Lindsay Cassie, David Riley, S. Roburn, Judy Stoutenburg, Marlene Caruso, Lana McQueen, Bernice Ramsdin, Allan and Ladonna MacRae, George Mah, Rachel Tutte, Robi Smith, K. Philley, Greg Shea, Melissa Fuller, Bruce McCalla, Evan McKensie, Joanne Olafson, Elanor Eason, Jackie MacDonald, Alban Goulden, Hilary Jones, Michael Klassen, Luana Gillies, Crystal Boeur, Darleene Horricks, Virginia Smith, Michael Callaghan, Brad Foster, Mary Carlisle, Christine Brown, Jolan Bailey, Jeff Childs, Debra McBride, Judy Kent, Louise Taylor, Alexei Marko, Celia Brauer, Jason Hawryszczuk, Linda Sepp, Dorothy Jones, Elicia Harris, Wayne Brewer, Lorraine Fralin, Gregory Allen Loftus, Jane Kilthei, Jackie Fritz, Diane Pinch, Anna Tiller, Mary Magee, Justin Sharpe, Lori Hess, Fred Schueler, Barbara Demott, Michele Deakin, Judith Harper, Nathan Pearson, George Mortimore, Bette Chadwick, Krista Roessingh, Dorothy Drubek, Maybeth Hoagland, D.S. Fraser, Diana Dean, Helene Blake, Joan Goddard, Diana Schroeder, Elaine Smith, Kaylee Griffith, Carol Jensen, Laurie Wood, Michael Anderson, Richard Pearson, Lawrence Musser, Lawrence Mayles, Liam Park, Don Fowler, Nathan Fenwick, Daniel Pierce, Marlene Pauls, Lynda Whittaker, Jacqui Wiens, Ann Grant, Scarlette Downey, Katherine Dunster, Derek Martin, Richelle John, Chris Cook, Joy and Cam Finlay, William Lehmann, Feet Banks, Amy Gogarty, Mariella Villalobos, Wendy Grant, Melinda Price -Wiltshire, Cam Gillies, Joe Lanteigne, Amanda Girard, Helen Poncelet, Mike Garvey, James Scott, Calen Darnel, Diana Olcen, Brian Gilbey, Janet Walker, Brydie Todd, Rebecca Pavitt, Dan Bianco, Deborah Jones, Charlotte Jones, Carla Lewis, John Graham, Judith McCubbin, Jim Robertson, Sandra Hoffmann, Michael Eckford, Jade Snow Rosen, Penny Brand, Charlotte Argue, Carolyn Knight , Ian MacDonald, Theodora Carroll, Brad Herbert, Joanne MacCharles, Carol Woolsey, Richard Arnold, Linda Desormeaux, Lynn Perrin, David Stinson, Greg Dowman, Diane Butler, Farina Greta, Robert Fyfe, Larry Neufeld, Kevin Brown, Thomas Munson, Done Nicolson, Claire Fontaine, Sheila Haegedorn, Hedwig Lanaku, Ilone Harrison, Kay Marshall, Valeni Brown, Brenda Howes, Catherine Fox, Linda Smythe, John Filed, J.D. Gibbard, Lawrence Boxall, Sheila Malcolmson, Kay Stevenson, Gertrude Roither, Nicholas Poeta, Anne Spencer, Greta Farina, Farron Hughes, Katherine Dorie, Stephan Piernitzki, Shirley Samples, Michael Ritzker, Celina Dupere, Juliet Cao, Ben Singleton-Polster, Viveca Ohm, Tristan Cavers, J Capozzelli

(3) Wilderness Committee

Wilderness Committee standard letter submission

If the Site C Dam is built, at least 3,800 hectares of agricultural land would be lost to flooding.
Residents are concerned that the steep and unstable river banks of the Peace Valley will continuously slide into the reservoir, causing more and more damage each year.

BC Hydro is publicly stating that the Site C Dam would cost $7.9 billion to construct—but it is widely understood that the dam's construction costs would likely balloon to more than $10 billion due to the unstable ground around the dam and reservoir site.

BC Hydro is predicted to lose $1 billion over the next four years, partly because the province has signed so many contracts with private power producers that BC Hydro has a surplus of expensive power that they can't use and can only sell at a loss.

BC Hydro's future forecasts of power needs are based on selling electricity to the oil and gas industry, for the production of energy-intensive products like liquefied natural gas (LNG). However, unless the industry is given highly subsidized rates they may not use as much, if any, of the power provided by Site C—leaving BC with an even bigger surplus of expensive energy that we can't use or even give away.

Proponent response to Wilderness Committee standard letter submission

Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.
The matters raised are described in the following sections of the EIS:
- Section 5 (Need for, Purpose of and Alternatives to the Project)
- Section 20 (Agriculture)
- Section 11.2 (Geology, Terrain and Soil)

As stated in Volume 1 Appendix F Part 1, the Project cost estimate includes "... an appropriate level of contingency to reflect uncertainty in future conditions." As a result, BC Hydro expects Project costs "… to be within the bounds of the current capital cost estimate in ordinary market conditions."
Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers. Section 5.2.2.2, and in particular tables 5.8 and 5.9, of the EIS set out BC Hydro's energy and capacity load resource balances. Section 5.2.3, tables 5.10 and 5.11 set out the range of effect LNG demand may have on the need for new energy and capacity resources. The Project is needed whether or not new LNG projects proceed.
Statements regarding the cost of private power producer energy over the next 4 years are not relevant to an assessment of the need for the Project because the Project is not needed in the next 4 years. There is a need for new energy and capacity resources within the next 10 to 15 years.
Please also see the following Technical Memos:
- Agriculture
- Reservoir Impact Lines
- Project Need
- Project Costs

Wilderness Committee standard letter submitters:

kxbx, Hadas Levy, Eldy Birnie, Eileen Kosior, Donald McEachern, Elizabeth Psyllakis, Dinda Evans, Dorothy Nelson, Steve Coffin, Wendy Young, Natasha Salgado, Denis Moore, Joel Ornoy, Kenneth Lapointe, Robert E. Rutkowski, Katy Thompson, Steven Carpenter, Stu Lips, John Hasenack, Chantal Buslot, Josh Pelleg, Robert Andrew, Dan Thorlakson, Karen Heaps, Dave Smith, Peter Kerr, J. E. Hammill, Paul Browning, Jennifer Armstrong, Amanda Sabbe, Noah Schillo, Elizabeth Borek, Tessa Perkins, Jim Bradshaw, Alexander Briggs, S. Simonet, Michael Krisinger, Margaret Ann Johnson, Louise Taylor, Kathleen Rogers, Jennifer Dyck, Hannelore Pinder, Elizabeth Mitchell, Ronald Lemmert, Reidun Carstens, Mary Williams, Robert Linger, Marnie Gaede, Diane Douglas, Arlene Zimmer, Tami Palacky, Robin Fox, Lorenz Steininger, Don and Roberta Thurstin Timmerman, Christina Carlson, Lydia Price, Pat Bowen, Elisabeth Bechmann, Pam Wright, Victoria Pitchford, Nicole Weber, Barbara Daniels, Olivia Schlosser, Daniel Partlow, Ruhi Patel, Sheila Desmond, Carroll Harris, Tamara Hayes, Dori Cole, Misty Day, Natalie Van Leekwijck, Elizabeth O'Halloran, Betty Van Wicklen, Don Salto, Grace Neff, Raymond Zahra, Bruce Donnell, Jacques Laus, Candy LeBlanc, Heidi Tan, Christina Crosby, Marie Wakefield, Kristin Womack, Joan McAllister, Susan Allen, Bianco Diletta, Andrew Strasfogel, Debra Gakeler, Lisa Sears, Elizabeth Aden, Mary Bates, Teresa Eaker, James Brunton, Laura Manges, Vickey Baker, Terry Tedesco-Kerrick, Ewa Piasecka, Jade Newton, Tom Pitman, Wu Joong, Nicole Maschke, Vicki Ginoli, Enrico Cangini, Dana Bleckinger, Malgorzata Zmuda, Karen Quaritius, Angelika Schlager, Stephen Cardwell, Susan Mitruk, Chris Schneebeli, Anneke Andries, Monika Huber, Ben Earle, Suzanne Dunham, Christine Last name withheld, Andrew Vallender, Rucha Harde, Bordier Last name withheld, Donna Hamilton, Christophe Lefort, Pia Moller, Nathalie Yelle, Katia Last name withheld, Al Giles, Yolanda Schultes, Bernard Cronyn, Jasmina Cuk, Paula Kenny, Rebecka Saunders, Bradley Morris, Alexis Stoymenoff, Marilyn McClelland, Christopher Evans, Eva Sevinc Girit-Azzolini, Gemini Last name withheld, Lindsay Kathrens, Susan Kay-Downs, Sara Fralin, Jean Marie Naples, Emilia Boccagna, Patricia Vazquez, M Leszczynski, Joshua Ruether, Jacob Ruether, Joachim Ruether, Helga Mankhof, Mary Andrews, Jean Brooks, Roland Alcock, Erica Writesel, Patrice Garcia, Eva Gersbach, Ruth Ilnytzky, Helene Stuhlberg, Kathie Woodley, Peter Frang, William Heidrick, Steve Overton, Kerrin Spurr, Bos Last name withheld, Jack Thornburgh, Sue Stangel, Hal Trufan, Magdalena Klupp, Council of Canadians - Victoria, 182 Signatures on WC Campaign, Beth Clarke, Barbara Clement, Frida Sims, Nando A.

(4) Other

Standard letter submission regarding Greenhouse Gas Emissions

Save the Peace River Valley - Stop the Site C Dam!
Although the Site C dam would produce hydro-electric energy, it is not a "sustainable" or sensible project. Indeed to forget ahead with it would undermine BC's ability to adapt to climate change and to reduce our greenhouse gas emissions.
We must not flood precious farmland. We must not subsidize the oil and gas industry. Resources should not be squandered on cement and other energy-intensive materials required for construting the proposed dam. Instead, we must use the resources we have to transition as gently as we can to a low carbon economy.
It is our moral duty to do this now; it is not difficult to see that preventing the creation of more greenhouse gas emissions is something we must undertake as fast and as thoroughly asp ossible.
I look forward to learning that you support taking the bold steps that are required to protect our natural heritage, including the Peace River valley.

Proponent response to Greenhouse Gas Emission standard letter submission

Thank you for providing your input during the public comment period for the Environmental Impact Statement (EIS) for the Site C Clean Energy Project.

The needs for the Project are described in Section 5 (Need for, Purpose of and Alternatives to the Project) of the EIS. Section 5.2 of the EIS describes the need for the Project, which is "to address future customer demand for firm energy and dependable capacity in BC Hydro's service area." The need for the Project is established based on demand from BC Hydro's residential, commercial, and industrial customers.

The potential effects of the Project on GHGs are described in Section 15 (Greenhouse Gases) of the EIS. The environmental, social and sustainability benefits of the Project are described in Section 7.4 of the EIS.

The potential effects of the Project on agriculture are described in Section 20 (Agriculture) of the EIS.

Please also see the Technical Memo on Agriculture.

Greenhouse Gas Emission standard letter submitters

A West, Jan Slakov, Dona Mackie, L Kimber, Greg and Holly Slakov, Lin Marcotte, Linda-Claire Heager, Lisa Slakov, 7 Individuals (names were not disclosed on the CEA Agency website), 3 Individuals (names were not disclosed on the CEA Agency website)