PART 1 EIS GUIDELINES REVIEW GOVERNMENT AGENCY ISSUES TRACKING TABLE

Below is the summary of issues, concerns and interests raised by government agencies during the development and review of the EIS Guidelines from January 2012 to July 2012 (see Section 9.3.2 Consultation during the Environmental Assessment Process). Based on the nature of the comment, issues/concerns/interests raised by the commentators were assigned between one and three categories. The core issue(s) highlighted in each comment were then summarized from the verbatim comments and are presented in this table in the "Description of Issue or Concern" column, along with BC Hydro's consideration or response to the issue. Category Groupings have been used to group comments where an agency made multiple comments on any particular category of issue. Issues/concerns/interests are presented by government agency.

Consideration/Response Key:

- **IR response (&ID):** Requests for information/clarification were addressed or responded to directly in the IR response tables submitted by BC Hydro on March 30, 2012[1] and June 26, 2012[2].
- **Topic Summary (&name):** Requests for information/clarification were addressed or responded to by information in the indicated Topic Summary[3][4], issued along with the IR response tables.
- **EIS (&section):** Requests for changes to the EIS Guidelines that were considered by BC Hydro to be material to the scope of the environmental assessment were either accepted or the change was recommended by BC Hydro to the BCEAO and CEA Agency. Consideration and discussion of the topic can be found in the section of the EIS indicated.

[1] BC Hydro's document *Response to Advisory Working Group Comments on Draft Environmental Impact Statement Guidelines Version 1* (March 30, 2012; 463pp) is available for download at http://www.ceaa.gc.ca/050/documents/55111/55111E.pdf. BC Hydro's cover letter and thirteen topic summaries dated March 30, 2012 are contained in one document, available for download at http://www.ceaa.gc.ca/050/documents/55112/55112E.pdf
[2] BC Hydro's cover letter, sixteen topic summaries and responses to government agency and public comments dated June 26, 2012 are contained in one document, available for download at http://www.ceaa.gc.ca/050/documents/p63919/57624E.pdf
[3] See footnote 1.
[4] See footnote 2.

Alberta Environment

Category Grouping: Spatial or temporal boundaries of technical study or effects assessment		
General	Study areas should be expanded to AB/NT border	Topic Summary: Downstream Technical Study Area Boundaries
Water quality	Study areas should be expanded to the County of Northern Lights	EIS: 11.5 Water Quality
Sediment transport	Study areas should be expanded to Peace Point, AB	EIS: 11.8 Fluvial Geomorphology and Sediment Transport Regime
Thermal and ice regime	Study area should include Shaftesbury Ferry	EIS: 11.7 Thermal and Ice Regime
Thermal and ice regime	Study areas should be expanded to downstream of the Peace Athabasca Delta	Topic Summary: Downstream Technical Study Area Boundaries
Fish and fish habitat | Methyl mercury | Surface water regime	Study areas should be expanded to AB/NT border	Topic Summary: Downstream Technical Study Area Boundaries
Wildlife Resources | Current use of lands and resources for traditional purposes | Harvest of fish and wildlife resources	Study areas should be expanded to include the Peace Athabasca Delta	Topic Summary: Downstream Technical Study Area Boundaries
Cumulative effects *Sediment transport* | *Surface water regime*	Temporal boundaries of study should be expanded to capture pre-regulation conditions of the Peace River	Topic Summary: Cumulative Effects Assessment
Navigation	Study areas should be expanded to La Crete ice bridge and ferry at Tompkins Landing, AB	EIS: 26 Navigation

Alberta Environment

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Human health	Study areas for water quality should include the Town of Peace River; methyl mercury should include fish consumption along the full length of the Peace River	Topic Summary: Downstream Technical Study Area Boundaries
Category Grouping: Baseline information		
Fish and fish habitat	Suggested attributes/parameters to be added to baseline conditions key indicators: bed sedimentation; physical wetted habitat; side channel habitat, bed sediment habitat; potential for occurrence of sensitive fish and benthic invertebrate species	IR response AEW_tbl_021; EIS: 12 Fish and Fish Habitat
Category Grouping: Potential changes or effects due to the Project		
Current use of lands and resources for traditional purposes	EIS should discuss fisheries related effects on Aboriginal groups including mitigation and accommodation	EIS: 12 Fish and Fish Habitat; 19 Current Use of Lands and Resources for Traditional Purposes
Fish and Fish Habitat	Suggested attributes/parameters to be added to key aspects in the assessment	EIS: 12 Fish and Fish Habitat
Category Grouping: Valued component selection rationale		
Fish and fish habitat	Suggested activities, interactions (power production flow operations over the life of the project) and issues (health of the aquatic ecosystem, fish habitat and fish populations) for the VC selection rationale table	EIS: 12 Fish and Fish Habitat; Topic Summary: Valued Component Selection and Boundaries
Wildlife	Suggested activities and issues for the VC selection rationale table	EIS: 14 Wildlife Resources

Alberta Environment

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: EIS content		
Potential accidents and malfunctions	Description of emergency notification procedures in downstream communities	EIS: 35 Summary of Environmental Management Plans
Project construction activities	Management of silt and sediment entering the Peace River during construction	EIS: 35 Summary of Environmental Management Plans
Project construction; Reservoir filling and commissioning	Water quality of the Peace River during filling and commissioning	EIS: 35 Summary of Environmental Management Plans
Project operations	Request description of magnitude of potential spillway releases in the EIS	EIS: 04 Project Description
Category Grouping: General interests		
Consultation and Engagement	Request that public meetings taking place in Alberta be described in the EIS	EIS: 09 Information Distribution and Consultation
EIS Guidelines Content	Request that Alberta's interests are considered in the EIS Guidelines	IR response AEW_ltr_001; Topic Summary: Downstream Technical Study Area Boundaries
EIS Guidelines Content	Request for expression of empathy for Alberta communities in EIS Guidelines	IR response AEW_ltr_003

BC Ministry of Agriculture

Category Grouping: Potential changes or effects due to the Project		
Geology, terrain and soils	• Will residual effects include slumping land arability change, and for how many years into the future? • Reservoir impact lines should be used to delineate limitations on private agriculture land use as well.	EIS: 11.2 Geology, Terrain and Soils; EIS: 20 Agriculture
Groundwater regime	• Include impacts to the aquifer, sources, recharge points and vulnerability downstream during construction • Include impacts to the aquifer, sources, recharge points and vulnerability downstream during construction	EIS: 11.6 Groundwater Regime
Labour market	During construction, impact to labour market will increase competition for agriculture sector, increasing farm labour costs	EIS: 17 Labour Market
Surface water regime	1. Identify availability and use of water for agriculture from the reservoir and downstream. 2. Clarity is needed on the seasonal variance of water in the reservoir and downstream.	1. Topic Summary: Agriculture 2. EIS: 11.4 Surface Water Regime
Wildlife resources	Changes in wildlife damage pressures are expected in areas adjacent to reservoir for waterfowl, ungulates and predators.	EIS: 20 Agriculture
Economic	1. Cost of equipment rental, etc. will rise due to increased demand 2. Cost of land adjacent to the reservoir will rise due to development speculation.	1. IR response EISG_r2_agency_BCMoA_020 2. IR Response EISG_r2_agency_BCMoA_021

BC Ministry of Agriculture

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: Mitigation and compensation		
Agriculture	1. South river access and improved opportunities for agriculture and other uses should be analyzed for pros and cons 2. Consider fresh water access, hydrants, irrigation opportunities 3. Consider road access to arable fields that may have been affected by changed water levels. Roads need to be appropriate for farm activities. 4. Consider agricultural fund for innovation and regional agriculture economic growth 5. Improved rail access to the east 6. Maintain grazing opportunities on Crown land 7. Ensure access is appropriate for farm activities and equipment, particularly at field levels, i.e. combine, swather.	1,6,and 7. EIS: 20 Agriculture 2-5. IR response EISG_r2_agency_BCMoA_033
Category Grouping: Baseline data collection and field survey programs		
Agriculture	• Identify arable land after project completion on private and crown lands • Scope of study area should include upland benches • Baseline should reflect potential use • Agricultural Land Use Inventories and Agriculture Area Plans have not been completed in the project area and should be considered prior to project initiation	EIS: 20 Agriculture
Effects of the environment on the Project	Request to look at climate change implications and irrigation potential	EIS: 20 Agriculture
Microclimate	Information on micro-climate analysis since WAC dam construction and effectiveness of Weather Research and Forecast model?	EIS: 11.10 Microclimate

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Wildlife resources	Concern with collection of baseline info and monitoring for elk populations through aerial surveys; not considered an effective way to monitor/predict populations/damage.	EIS: 14 Wildlife Resources
Category Grouping: Cumulative effects assessment		
Agriculture	1. Request identification of land physically capable of agricultural production and what impact tenure has had for baseline agricultural land usage. 2. Request identification of variables that might limit the agriculture usability of land in consideration of past projects, pipelines, transmission lines etc. overlaid with this project. 3. How much and how long will some agricultural areas be required to stop operations? Are these critical to the farm/ranch function even if only for several days? 4. Will this include private land opportunities?	1. IR response EISG_r2_agency_BCMoA_004 2&3. EIS: 20 Agriculture 4. EIS: 11.3 Land Status, Tenure, and Project Requirements
Land status, tenure and project requirements	What would future land use look like without the project? How is the assigned monetary value taking into account speculation, regional importance?	EIS: 11.3 Land Status, Tenure, and Project Requirements

BC Ministry of Agriculture

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: EIS content		
Project benefits	Proposed economic development benefits should include agriculture benefits i.e. access to the south side of the dam, opening lands for grazing, creating a more reliable source of water.	EIS: 20 Agriculture
Alternatives to the Project	• Will wind and biogas options be covered? • Request discussion on alternative highway realignment options and a rationale for the preferred option	EIS: 5 Need for, Purpose of, and Alternatives to the Project
Valued component selection rationale	• Interactions should include high value crops, i.e. horticulture. Where fragmentation of agricultural parcels occurs, consider loss of critical agricultural components, e.g. access to water, shelter, corrals, feeding areas, etc. Are development projections included as part of the potential impact? • Consider adding wildlife use of adjacent agricultural lands, increased wildlife pressures to Public and Stakeholder Issues column	EIS: 20 Agriculture

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response

BC Ministry of Environment

Category Grouping: Potential changes or effects due to the Project		
Cumulative effects assessment	Request Project Inclusion List account for projects and activities with large water discharges	Topic Summary: Cumulative Effects Assessment
Groundwater	Request changes to groundwater contaminant concentrations be assessed	EIS: 11.6 Groundwater Regime
Methyl mercury	• Methods and models must be explained • Request thorough terrestrial ecosystem mapping in inundation zone • Request info on other metals looked at in addition to mercury • Request baseline of mercury in tissue of highest trophic level fish as well as in lower trophic levels, regular testing in the proposed reservoir, and use of BC Approved Water Quality Guidelines (tissue for human and wildlife consumption). • Suggest biological monitoring (e.g. benthis invertebrates) should be conducted before and after dam building downstream of the dam. • Request analysis of hardness in metal samples	EIS: 11.9 Methyl Mercury
Water quality	• Request information on water quality baseline program • Request a description of water quality dynamics, dissolved gas potential, changes in nutrient balance • Request assessment of impacts to reservoir and downstream water quality	EIS: 11.5 Water Quality
Sediment transport	• Methods and models must be explained • Suggest assessment of downstream deposition of sediment and sediment bound contaminants	EIS: 11.8 Fluvial Geomorphology and Sediment Transport Regime

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Surface water regime	Request inclusion of reservoir flushing rate and areas that might be excluded from flushing due to short circuiting	EIS: 11.4 Surface Water Regime
Human health	Study areas for human health should correspond to human receptor locations as well as flooded areas that may impact water quality	EIS: 33 Human Health
Category Grouping: General interests		
EIS content	All data as well as QA/QC and a description of the baseline program should be included in the EIS	EIS: various

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response

BC Ministry of Forests, Lands and Natural Resource Operations

Category Grouping: Spatial or temporal boundaries of technical study or effects assessment		
General	Suggest aligning spatial boundaries with defined boundaries utilized by MFLNRO and other provincial agencies; e.g. Timber Supply Area, Wildlife Management Unit, etc.	IR response BCMFLNRO_tbl_021
Fish and fish habitat	Suggest expanding downstream boundaries to capture anticipated Project effects	EIS: 12 Fish and Fish Habitat
Harvest of fish and wildlife resources	Suggest aligning Local Assessment Area and Regional Assessment Area boundaries with license/tenure administrative boundaries	IR response BCMFLNRO_tbl_021; Topic Summary: Valued Component Selection and Boundaries
Outdoor recreation and tourism	Suggest local tourism transportation resources that should be included in the Regional Assessment Area.	EIS: 25 Outdoor Recreation and Tourism; 31 Transportation.
Wildlife resources	Spatial boundaries from all disturbances should be within the Local Assessment Areas	EIS: 14 Wildlife Resources
Category Grouping: Valued component, key indicator or key aspect		
Fish and fish habitat	• Request to consider invasive aquatic species in assessment • Request the BC Conservation Framework be shown as a source of identifying fish species of conservation concern. • Request that biodiversity be included as a fish and fish habitat valued component	EIS: 12 Fish and Fish Habitat

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Forestry	• Information regarding key indicator considerations • Suggest review of Fort St. John Pilot Project Sustainable Forest Management Plan for additional indicators • Suggest assessment include: short term market imbalance due to influx of wood; potential impacts to the timber supply from milling capacity being redirected from salvaging beetle killed wood, and; potential impacts to Market Pricing System or Softwood Lumber Agreement	EIS: 21 Forestry
Heritage resources	Suggest that potentially affected heritage resources are of interest to, and may have regional and national as well as potentially international value.	EIS: 32 Heritage Resources
Vegetation and ecological communities	• Loss or degradation of ecological communities • Loss of ecological function • Suggest biodiversity be considered as a Valued Component	EIS: 13 Vegetation and Ecological Communities
Wildlife resources	• Suggest including “changes to habitat capability, suitability, and effectiveness” to key aspects • Suggest adding large carnivores as a key species group or provide rationale for exclusion • Suggest “wildlife habitat resource” should include wildlife habitat and rare wildlife habitat features that supports plants, plant communities and invertebrate species. • Suggest use of biodiversity indicators • Suggest addition of habitat fragmentation to the list of interactions with the Project	EIS: 14 Wildlife Resources

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: Baseline data collection and field survey programs		
Agriculture	1. Baseline should include consideration of range tenures 2. BC Hydro's land acquisition program and impact on land use should be accounted for in baseline	1. EIS: 20 Agriculture 2. IR response BCMFLNRO_tbl_078
Fish and fish habitat	1. Fish abundance data should be collected to reference points based on meso-habitat scale detail 2. Request to add microchemistry/genetic studies to baseline information sources 3. Fish production, production of invertebrate prey trophic level, and primary production should be included in baseline conditions 4. Request to add fish species stock structure to the key indicators	1. IR response BCMFLNRO_tbl_033 2-4. EIS: 12 Fish and Fish Habitat
Vegetation and ecological communities	• Recommend using new Boreal Zone Ecosystem Classification in assessment • Suggest describing rare and sensitive plants or plant communities associated with rare features such as tufa seeps and springs	EIS: 13 Vegetation and Ecological Communities
Forestry	Suggest collecting baseline information from regional forestry licencees and BC Timber Sales	EIS: 21 Forestry
Harvest of fish and wildlife resources	• Suggest catch and release, use of fish, and effort/success be included in the assessment • Where First Nations traditional land use information will be considered in the baseline	EIS: 24 Harvest of Fish and Wildlife Resources
Heritage resources	Suggest including area and distribution in descriptions of ecosystems as well as methods for assessment of invasive species	EIS: 32 Heritage Resources
Minerals and Aggregates	Lands acquired within the project activity zone should b inventoried for potential quarry resources	EIS: 23 Mineral and Aggregate Resources

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Visual resources	• Visual impact assessment should incorporate points identified during field reconnaissance as well as 1993 and 1996 visual landscape inventory points. • Suggest characterizing baseline conditions using a photomontage with quantitative and descriptive information for visual sensitive units	EIS: 27 Visual Resources
Wildlife resources	• Suggest adding sensitive wildlife species of provincial or federal conservation concern to the baseline • Suggest including assessments of presence and location of snake hibernacula, migration/connectivity areas, and timing of mass migrations • Suggest including small mammals other than bats as a key species group or provide a rationale for exclusion • Suggest ruffed grouse be included in the assessment • Suggest changing name of VC (i.e. Butterflies and Dragonflies) to “invertebrates” and consider a greater scope of species or provide rationale for exclusion • Clarification if swifts and hummingbirds, loons and grebes, and pigeons and doves are included in the assessment • Request that all raptors sightings are recorded, reported and assessed • Request clarification as to how impacts to ungulates will be addressed if habitat mapping is limited to Local Assessment Area and Regional Assessment Area	EIS: 14 Wildlife Resources

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: Predictive models		
Geology, terrain and soils	Request modeling of landslide displacement waves and climatic conditions under which past landslides occurred	EIS: 11.2 Geology, Terrain and Soils
Greenhouse gases	Request rationale for using site-specific mass balance models as opposed to direct measurements of GHG emissions	IR response BCMFLNRO_tbl_069
Surface water	Request discussion of reliability of models used, including calibration and validation/of each model and model performance in these tests. For proprietary models in particular, such as HYSIM, Generalized Optimization Model, and H3D.	EIS: 11.4 Surface Water Regime
Thermal and ice regime	Request discussion of reliability of the CRISSP model in simulating conditions in the Peace River, including a description of model performance in the calibration and verification of the stations of interest along the Peace River.	EIS: 11.7 Thermal and Ice Regime
Sediment transport	Request discussion of reliability of models used to characterize potential changes, including performance in calibration and verification of the stations of the reach simulated in the Peace River	EIS: 11.8 Fluvial Geomorphology and Sediment Transport
Vegetation and ecological communities	• Methods used to identify rare plants • Request clarification regarding verification of field survey specimens using herbarium collections	EIS: 13 Vegetation and Ecological Communities
Category Grouping: EA process		
Technical working groups	Request that a “Terrestrial Working Group” be formed to discuss technical requirements for the management of wildlife resources as well as vegetation and plant communities.	Agency responsibility
Consultation and engagement	Request a summary of communications with affected tenure holders by project component	IR response BCMFLNRO_tbl_003

PART 1 EIS GUIDELINES REVIEW GOVERNMENT AGENCY ISSUES TRACKING TABLE

BC Ministry of Forests, Lands and Natural Resource Operations

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: EIS content		
General	Request data, analysis, and technical expert qualifications be made available with EIS for review	EIS: Various
Project benefits	Request information on potential drawbacks of project and cost/benefit analysis	IR response BCMFLNRO_tbl_019
Alternatives to the Project	• Request estimates of potential or projected power production and feasibility of acquiring power (including wind generation) from third parties • Request discussion on alternative highway realignment options and a rationale for the preferred option	EIS: 05 Need for, Purpose of, and Alternatives to the Project
Mapping	1. Request clarification on type of mapping to be used and its application (i.e. terrestrial ecosystem mapping vs. composite mapping) 2. Suggest highlighting TEM habitat suitability maping for selected VCs and species within VCs and how these were developed, field tested, and used	1. IR response BCMFLNRO_tbl_046 2. EIS: 14 Wildlife Resources
Project location	1. Request for GIS shapefiles of all project components 2. Request interpretation of Crown tenures conflicting with the Project	1. IR response BCMFLNRO_tbl_003 2. EIS: 11.3 Land Status, Tenure, and Project Requirements
Project construction activities	Construction-phase emissions should include potential GHG emissions from all activities listed in the EIS.	EIS: 15 Greenhouse Gases
Forestry	Area of Crown Forest Landbase and Timber Harvesting Landbase occupied by project components	EIS: 21 Forestry

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Construction access roads	• Description of temporal nature of planned and existing road use, traffic management, and construction access road upgrades • Rationale for choosing temporary vs. permanent crossings over the Peace and Moberly Rivers	EIS: 04 Project Description; 35 Summary of Environmental Management Planss
Highway 29 realignment	• Driveways, properties and existing crown tenures that may need entirely new access routes • Recycling vs. removal of existing road bed materials	EIS: 04 Project Description
Quarried and excavated materials	Source of construction materials, mechanism of delivery and expected traffic volumes	EIS: 04 Project Description
Reservoir clearing and preparation	Other hazards within the reservoir inundation zone that may require removal	EIS: 04 Project Description; Vegetation, Clearing and Debris Management Plan.
Worker housing	Anticipated impacts and upgrades to infrastructure required for workers and equipment transportation to and from the site and worker housing	EIS: 04 Project Description;
Project decommissioning	1. Which offsite project components will be retained and maintained as part of ongoing maintenance of the Project 2. Request that heritage resources within the proposed dam site, reservoir and lands adjacent to reservoir be recognized as permanently inaccessible.	1. EIS: 04 Project Description 2. EIS: 32 Heritage Resources
Category Grouping: EA methods		
Residual effects characterization	Request discussion of criteria for determining probability of adverse impacts	EIS: Various
Greenhouse gases	Request Intergovernmental Panel on Climate Change methods for land conversion to reservoirs	EIS: 15 Greenhouse Gases
Surface water	Request for flow patterns pre- and post- construction including statistical parameters and cumulative exceedance plots	IR response AEW_tbl_008.

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Vegetation and ecological communities	Suggestions for revised temporal boundary descriptions	Topic Summary: Valued Component Selection and Boundaries
Visual resources	Suggest full visual impact assessment using computer simulation tools	EIS: 27 Visual Resources
Category Grouping: Potential changes or effects due to the Project		
Vegetation and ecological communities	• Project related microclimate changes on plant communities proximal to inundation zone • Implication of the loss of ecological communities and resultant loss of ecological function due to the loss of a specific ecological community • Potential effects on invasive plants and plant phrenology • Request to add “edge effect and “loss of ecological function” to fragmentation assessment	EIS: 13 Vegetation and Ecological Communities
Category Grouping: Mitigation and compensation		
General	Request for identification of potential mitigations excluded from consideration that were not technically or economically feasible	IR response BCMFLNRO_tbl_022
Vegetation	Request clarification on criteria used to determine potential mitigation measures	EIS: 13 Vegetation and Ecological Communities
Category Grouping: Cumulative effects assessment		
Project inclusion list	Request expansion of the list of other projects and activities to include other land tenures administered by MFLNRO.	EIS: 10 EA Methodology
Agriculture	Suggest that cumulative effects on agricultural land capability and loss of agricultural lands should include land in Peace River valley already impacted by dams and reservoirs	Topic Summary: Cumulative Effects Assessment.

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response

BC Ministry of Jobs, Tourism and Innovation

Category Grouping: Potential changes or effects due to the Project		
Economic	Suggest detailed financial information and confidential information not be included with EIS	Agreed
Local government revenue	Annual government revenue attributes for the construction and operation phases of the project: • Local/municipal – property taxes, other • Regional District – taxes, other • Provincial – income tax, sales tax, lease, license and tenure, royalties, other • Federal – income tax, Harmonized Sales Tax (HST), payroll taxes, other	EIS: 16 Local Government Revenue
Category Grouping: EIS content		
Project overview	• Request description of project and its location • Request description of capital construction phase and length or lifetime of the project in years.	EIS: 03 Project Overview; 04 Project Description
Project need and purpose	1. Estimated demand for the project over its lifecycle. 2. Estimated impact on consumer/producer prices at a local/provincial level	1. EIS: 05 Need for and Purpose of the Project 2. EIS: 07 Project Benefits

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Project benefits	Employment estimates • Direct employment, during construction and operation, distinguishing among full-time, part-time and seasonal workers. • Wage levels, by major job category, for the construction and operating periods. • The number of people that will be hired locally, provincially, nationally or internationally. • Potential for proponent to use local human resources currently under-utilized. • Indicate any relevant employment policies/practices; e.g., does the Proponent have a local hiring strategy? • Indirect employment for the construction and operation phases of the project.	EIS: 07 Project Benefits, 18 Regional Economic Development; 17 Labour Market
Project benefits	Contractor supply services estimates • List of the major types of businesses/contractors, broken down at the local, provincial, and national level that will benefit from the overall project. • Value of supply of service contracts expected for both the construction and operation phases of the project. • Information about a local purchasing strategy, if any.	EIS: 07 Project Benefits, 18 Regional Economic Development
Project costs	• Initial capital construction cost estimates • Estimated operating costs over the lifetime of the project.	EIS: 03 Project Overview

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response

British Columbia Utilities Commission

Category Grouping: EIS content		
Project Cost	• Project cost estimate including a description of the method of estimating used and identification and justification of all assumptions and exclusions. • Comparison of costs, benefits and associated risks of the Project and feasible alternatives.	EIS: 05 Need for, Purpose of, and Alternatives to the Project
Cost/benefit analysis	A schedule calculating the net present values of the incremental cost and benefit cash flows of the project and feasible alternatives	EIS: 05 Need for, Purpose of, and Alternatives to the Project
Project description	A description of the project; anticipated construction and operation schedule; description of new or expanded public works or infrastructure that will result from or be required for the Project; human capital resources required to undertake the project; risk analysis identifying all significant risks to the project; list of all required federal, provincial and municipal approvals, permits, licenses or authorizations, and; summary of material conditions that are anticipated in federal, provincial and municipal approvals and confirmation that the costs of complying with these conditions are included in the cost estimate in the application	EIS: 03 Project Overview; 04 Project Description; 05 Need for, Purpose of, and Alternatives to the Project; 08 Assessment Process
General	A schedule calculating the revenue requirements of the project and feasible alternatives.	IR response BCUC_004

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response

Fisheries and Oceans Canada

Category Grouping: Spatial or temporal boundaries of technical study or effects assessment		
General	Local and Regional Assessment Area boundaries may need to be expanded to include all potential adverse effects of the Project	Topic Summary: Valued Component Selection and Boundaries
Fish and fish habitat	• Local and Regional Assessment Area boundaries should be extended to capture all impacts • The Local Assessment Area should include riparian areas associated with each watercourse	EIS: 12 Fish and Fish Habitat;
Harvest of fish and wildlife resources	Local and Regional Assessment Boundary should align with Fish and Fish Habitat and Current Use of Lands and Resources for Traditional Purposes	IR response DFO_040
Thermal and ice regime	Rationale for downstream study area boundaries for downstream temperature and downstream ice	IR response DFO_018; EIS: 11.7 Thermal and Ice Regime
Water quality	Study area boundaries should be extended downstream to the point where changes are no longer detectable	EIS: 11.5 Water Quality

Fisheries and Oceans Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: Mitigation and compensation		
Fish and fish habitat	• EIS should identify, describe and map aquatic and riparian habitat expected to be harmfully altered, disrupted or destroyed by the Project • EIS should indicate how mitigation and compensation and Environmental Management Plans will address federal policies • EIS will outline a Fish Habitat Mitigation and Compensation Plan with feasible measures to ensure no net loss of productive capacity of fish habitat can be achieved. • Mitigation options related to fish passage should be discussed • Analysis of the effects of creating fish habitat on existing terrestrial areas	EIS: 12 Fish and Fish Habitat
Fish passage	Suggested considerations/parameters for fish passage analysis to be described in the EIS: state of best management practices for fish passage at dams; preferred design and rationale; location of structure and rationale; demonstration that design will allow upstream and downstream fish passage for relevant species; expected velocities at various river discharges; relate fish size-specific swimming capabilities to expected fishway velocities	EIS: 12 Fish and Fish Habitat; Fish Habitat Mitigation and Compensation Plan

Fisheries and Oceans Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: Baseline data collection and field survey programs		
EIS content; general	Records/information and technical studies used in the baseline assessment should be available for review	EIS: various
Fish and fish habitat	1. Data should be collected according to provincial RISC standards 2. Suggest adding the following to the baseline key indicators: species composition, distribution, relative abundance, migration and movement patterns, fish communities, and general life history parameters in the area of potential impact. 3. Suggest adding an evaluation of the quality and quantity of fish habitats in the Local Assessment Area along with the evaluative criteria 4. Critical or sensitive areas such as spawning, rearing and over-wintering habitats and migration routes should be described and/or mapped 5. Seasonal variability of habitat should be considered 6. Suggest adding habitat productivity to the description of baseline conditions 7. Suggest adding the potential for occurrences of sensitive fish, including those species at the extent of their geographic range or transitory through the affected area 8. Suggest adding parameters related to fish passage and fish migration	1-6. EIS: 12 Fish and Fish Habitat 7. IR response DFO_031 8. EIS: 12 Fish and Fish Habitat

Fisheries and Oceans Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: Potential changes or effects due to the Project		
Fish and fish habitat	• EIS should provide a risk assessment for each species of fish in the Local Assessment Area including: habitat changes, changes to fish migrations; fish mortality/ impacts on genetic diversity of fish populations above and below the dam; impacts to predator/prey interactions; impacts to food web composition and structure; likelihood of gas pressure impacts on fish due to water discharge; residual effects and their significance • Suggest adding to the list of key aspects: fish species composition, community; relative abundance, distribution, migration and movement patterns, and life history; fish habitat use, quality and quantity; changes in environmental factors in their environment; species specific and fish community habitat productivity.	EIS: 12 Fish and Fish Habitat
Thermal and ice regime	• Thermodynamic changes to water temperatures and predicted effects on fish below the dam • Changes to ice conditions downstream of dam and effect on overwintering fish and fish habitat	EIS: 11.7 Thermal and Ice Regime; 12 Fish and Fish Habitat
Mercury	Effects of changes in mercury concentrations on fish	EIS: 11.9 Methyl Mercury; 12 Fish and Fish Habitat
Current use of lands and resources for traditional purposes	Suggest adding discussion of fisheries-related effects on Aboriginal groups including mitigation and accommodation measures	EIS: 19 Current Use of Lands and Resources for Traditional Purposes; 34 Asserted or Established Aboriginal Rights and Treaty Rights
Groundwater regime	Clarification regarding whether seasonal changes in groundwater regime will be discussed	EIS: 11.6 Groundwater Regime

Fisheries and Oceans Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: EIS Content		
Alternative means of undertaking the Project	• Factors used to evaluate alternative means should be described, along with rationale for chosen site and rationale for rejecting other sites • Should discuss alternative dam designs incorporating more fish friendly passage structures and justification as to why such options are not feasible	EIS: 06 Alternative Means of Carrying Out the Project
Project description	EIS should describe any reclamation associated with temporary construction facilities	EIS: 04 Project Description
EA methods	1. Decision flow diagrams would help the reader understand the cumulative effects assessment process 2. Environmental Management Plans (e.g. sediment and erosion control plan) should be developed by qualified professionals 3. EIS should be clear with respect to temporal boundaries	1. IR response DFO_012 2. IR response DFO_008 3. IR response DFO_024
Consultation and engagement	Issues tracking table of Federal agency comments should be included in the EIS	EIS: 09 Information Distribution and Consultation
Follow-up and monitoring	Suggest adding description of follow-up and monitoring plans to determine effectiveness of mitigation measures.	EIS: 12 Fish and Fish Habitat
Fish and fish habitat	Add operation activities and permanent infrastructure to VC rationale table	IR response DFO_23

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response

Government of the Northwest Territories

Category Grouping: Spatial or temporal boundaries of technical study or effects assessment		
General	Request that development of spatial boundaries be defined by applicable guidance documents	IR response GNWT_009
Current use of lands and resources for traditional purposes	Geographic scope should include the Northwest Territories during reservoir filling to demonstrate potential effects on NT aboriginal communities	Topic Summary: Valued Component Selection and Boundaries; Downstream Technical Study Area Boundaries
Methyl mercury | Human health	1. Spatial boundaries of mercury studies and human health assessment should be justified in the EIS 2. Potential mercury contamination of water supply and health of downstream Aboriginal communities in the Northwest Territories	1. EIS: 33 Human Health 2. Topic Summary: Downstream Technical Study Area Boundaries; Cumulative Effects Assessment
Sediment transport	Recommend reconsideration of study area boundaries to determine impacts on the Northwest Territories, or provide justification	Topic Summary: Downstream Technical Study Area Boundaries; Topic Summary: Downstream Technical Study Area Boundaries

Government of the Northwest Territories

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Surface water regime | Water quality	1. Recommend reconsideration of study area boundaries to determine impacts on water quantity, quality and rate of flow in the Northwest Territories 2. Downstream effects of reservoir filling should be considered separately from Project operations 3. Suggest the Water Management Plan encompass both the Peace Athabasca Delta and the South Slave Mackenzie River Basin 4. Should include existing surface hydrological features and regime for the Peace River down to the Slave River where it meets Great Slave Lake, and the main drainage tributaries to the proposed reservoir	1. Topic Summaries: Downstream Technical Study Area Boundaries; Downstream Technical Study Area Boundaries 2. EIS: 11.4 Surface Water Regime; Topic Summary: Downstream Technical Study Area Boundaries 3. IR response AEW_ltr_001; Topic Summary: Downstream Technical Study Area Boundaries 4. IR response AEW_ltr_001; Topic Summary: Downstream Technical Study Area Boundaries
Thermal and ice regime	1. Potential changes to downstream temperature and ice formation should be measured and modeled to the Slave River opening on the Great Slave Lake and include the potential effects of the approved Dunvegan project 2. Potential changes to downstream temperature and ice formation should include the potential effects of the approved Dunvegan project 3. Clarification regarding whether the CRISSP model simulated dynamic ice break up.	1. Topic Summary: Downstream Technical Study Area Boundaries 2. EIS: 11.7 Thermal and Ice Regime 3. IR response EISG_r2_agency_GNWT_007; Topic Summary: Downstream Technical Study Area Boundaries.

Government of the Northwest Territories

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Water quality	1. Geographic extent should include Great Slave Lake 2. Clarification regarding whether dissolved and total metal concentrations are being studied 3. Water quality testing should be done prior to construction and submersion of any quarried materials to ensure no contaminants are released	1. Topic Summary: Downstream Technical Study Area Boundaries 2. EIS: 11.5 Water Quality 3. EIS: 35 Summary of Environmental Management Plans
Category Grouping: Predictive models and/or assessment findings		
Surface water regime	Request more information regarding what model was used, model inputs, and limitations and abilities of the model.	EIS: 11.4 Surface Water Regime
Category Grouping: Potential changes or effects due to the Project		
Surface water regime	Clarification regarding whether modelling includes evaporation rates of reservoir as a reduction of water available to downstream users	EIS: 11.10 Microclimate
Cumulative effects	1. Clarification regarding whether previous effects of dams will be considered in the cumulative effects assessment 2. Consideration should be given to downstream projects such as Dunvegan 3. EIS should include a concise discussion of past hydroelectric generation projects on the Peace River, the environmental effects that have occurred as a result, where overlapping environmental effects are anticipated and the measure that have been taken to mitigate or manage those overlapping environmental effects. Discussion of overlapping environmental effects should include consideration of the degree to which those mitigation measures have been successful. Any long-term monitoring or follow up programs of relevance to these overlapping environmental effects and key results should also be described.	1&2. Topic Summary: Cumulative Effects Assessment 3. EIS: 11.1 Previous Development

Government of the Northwest Territories

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
EA methods	Determination of significance will incorporate federal, provincial and territorial expert advice.	IR response GNWT_010
Category Grouping: EIS Content		
Project construction activities	Request that the following be included in the description of construction phase activities: • Quantity of water to be withheld behind coffer dams • Timeline for construction and removal of coffer dams and removal or temporary construction facilities • Methods for managing mercury accumulation	EIS: 35 Summary of Environmental Management Plans
Project description	1. EIS should state the greatest depth of the reservoir at minimum and maximum level 2. Any stratification of the water in the reservoir should be observed and recorded	1. EIS: 03 Project Overview 2. EIS: 11.7 Thermal and Ice Regime

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response

Health Canada

Category Grouping: Potential changes or effects due to the Project		
Air quality	• Ambient air quality parameters described should consider Criteria Air Contaminants (i.e. VOCs and ozone) along with key chemical substances from other project activities • Advise inclusion of air quality information from the upstream end of the reservoir where available in addition to the downstream end	EIS: 11.11 Air Quality; 33 Human Health; 35 Summary of Environmental Management Plans
Electric and magnetic fields	Advise that the EIS provide a discussion of the current state of scientific knowledge regarding possible health effects from EMF exposure and a review of current exposure guidelines and or position statements from health-related organizations	EIS: 11.13 Electric and Magnetic Fields
Human health	Human health risk assessment consumption data should represent local population, i.e. types of consumers in the project area and the types of tissues consumed, in order to assess the potential effects of methyl mercury exposure on the local population.	IR response EISG_r2_agency_HC_004
Cumulative effects	EIS should clearly identify effects of the Project separately from other reasonably foreseeable projects.	IR response EISG_r2_agency_HC_001
Harvest of fish and wildlife resources	Winter freezing of the reservoir and potential increase in fish harvesting and consumption due to increased access to fisheries resource	EIS: 24 Harvest of Fish and Wildlife Resources
Water quality	1. Locations of drinking water sources (ground and surface) and sources of information used to identify the sources should be described in the EIS 2- Potential human receptors considering drinking water and recreational waters should be identified 3- Collection and analysis of drinking water monitoring data in the Project area should be described	1. EIS: 11.5 Water Quality; 11.6 Groundwater Regime 2. EIS: 33 Human Health 3. EIS: 37 Requirements for the Federal EA

Health Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Methyl mercury	1. Suggest that fish surveys focus on fish species typically consumed by First Nations and other subsistence users. 2. Mercury studies and models should include fish muscle tissue and other consumed organs in baseline levels. 3. A mercury management/monitoring plan should be developed for the Projects's operations phase, as warranted by the results of the human health risk assessment for mercury. 4. Information on consumers of country foods (e.g. age, gender) should be collected in order to identify sub-populations that are most sensitive to mercury exposures. 5. Mercury and methyl mercury baseline data should include all types of fish and fish tissues (e.g. muscle, liver, and kidney) that are known to be consumed by First Nations and other subsistence users. 6. Current and predicted fish consumption patterns in the project area should be determined (e.g. through dietary surveys). 7. The mercury assessment should be inclusive of predators of fish and waterfowl that are consumed by local peoples.	1&2. EIS: 11.9 Methyl Mercury 3. EIS: 37 Requirements for the Federal EA 4-7. Topic Summary: Mercury; EIS: 11.9 Methyl Mercury
Noise and vibration	1. Noise and vibration study area should be established based on the identification of potential noise receptors and consideration of the length of time over which blasting activities will occur, their frequency, and whether they occur during the day or night. 2. All potentially impacted noise receptors should be considered in the assessment 3. All potential noise sources, types and durations should be identified 4. For operational noise and long-term construction noise, advise that the change in percent highly annoyed be used as an aggregate indicator of human health effects.	1. EIS: 11.12 Noise and Vibration; 33 Human Health 2. EIS: 11.12 Noise and Vibration 3&4. IR response HC_006

Health Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
	5.	3.
Category Grouping: EIS Content (general)		
Harvest of fish and wildlife resources	Concern for potential methyl mercury contamination of fish should be noted as a concern in the VC rationale table	EIS: 33 Human Health
EA methods	1. Suggest scenarios for the assessment of potential effects to human health; baseline (before the project), project alone, project plus baseline, and cumulative (baseline plus project plus all other approved or reasonably foreseeable projects). 2. Methodology used to assess and quantify potential risks to human health should be clearly described.	1. IR response HC_001 2. EIS: 11.9 Methyl Mercury; 33 Human Health
Mapping	Locations of human receptors and distances relative to the project area should be shown on a map	EIS: 33 Human Health

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response

Natural Resources Canada

Category Grouping: Potential changes or effects due to the Project		
Effects of the environment on the Project	1. On-going seismic monitoring of the dam site (during operations) would help evaluate any impacts of earthquakes that occur during operation 2. Recommend a thorough discussion of seismic hazards in the area and codes/standards used in design 3. Assess the potential for earthquakes of magnitude ~7 or larger, including potential for thrust earthquakes 4. Discussion of the possible effects of seiches 5. Discussion of lessons learned of the effects/impacts of large, distant earthquakes on earthen dams	1-4, 6. Topic Summary: Seismic Considerations; Dam Safety 5. EIS: 11.2 Geology, Terrain and Soils
Geology, terrain and soils	1. Information required for an Acid Rock Drainage Management Plan includes; regional and local geology; pre-construction and construction phases of the project; sampling program of material to be excavated; management and mitigation plan for any materials found to be problematic or potentially problematic in terms of ARD 2. Concerns about slope instability and new reservoir triggered failures should be taken into consideration. 3. Discuss potential impacts of induced seismicity due to reservoir filling, injection wells, fracking, etc.	1. Topic Summary: Acid Rock Drainage and Metal Leaching; EIS: 11.2 Geology, Terrain and Soils; 35 Summary of Environmental Management Plans 2&3. EIS: 11.2 Geology, Terrain and Soils
Forestry	Describe methods for disposal of waste wood; if by burning, description should include the timing and treatments with respect to impacts on forest health, air quality, and/or wildlife hazard.	EIS: 21 Forestry; 35 Summary of Environmental Management Plans

Natural Resources Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Groundwater regime	• Describe local groundwater system in as much detail as dictated by available data, including previous hydrogeological studies and data collected on site by the proponent • Describe how proposed activities may affect the groundwater resource, including potential seepage from the reservoir to aquifers and potential for groundwater to become contaminated with mercury.	EIS: 11.6 Groundwater Regime
Methyl mercury	1. Characterize baseline conditions with respect to MeHg contamination in all pertinent terrestrial and aquatic VCs 2. Reservoir preparation and clearing plan should address mitigations (e.g. soil and vegetation preparation) for MeHg. 3. Describe expected magnitude and duration of the MeHg increase in the reservoir	1. EIS: 11.9 Methyl Mercury 2. EIS: 35 Summary of Environmental Management Plans 3. EIS: 11.9 Methyl Mercury
Cumulative effects	Provide information on documented effect of flooding the Williston Reservoir with respect to MeHg contamination and whether the effect is still continuing	EIS: 11.9 Methyl Mercury
Category Grouping: Spatial or temporal boundaries of technical study or effects assessment		
Sediment transport	Justification required for setting study area boundary at Peace Point rather than at the river mouth at Great Slave Lake	Topic Summary: Downstream Technical Study Area Boundaries
Vegetation and ecological communities	Local Assessment Area should include a buffer around the right-of-ways for all proposed roads and transmission lines	IR response NRCan_018
Category Grouping: EIS Content (general)		
Alternative means of undertaking the Project	Unique geotechnical attributes of each alternate site should be fully documented, including how extensively each site area has been explored through drilling and geotechnical characterization	EIS: 11.2 Geology, Terrain and Soils

Natural Resources Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Regulatory considerationa	Natural Resources Canada may be required to issue a licence under section 7(1)a of the *Explosives Act*.	EIS: 01 Introduction
EA Methods	1. Describe methods used to determine forest inventory data in areas where data may be missing or inaccurate 2. Locations of, and proposed mitigation strategies for rare and previously undescribed plants	1. EIS: 35 Summary of Environmental Management Plans 2. EIS: 13 Vegetation and Ecological Communities
Project description	1. Describe explosives manufacturing facility and magazines including: location; distance to vulnerable features; explosives to be manufactured; maximum quantity at each facility; fuel and ammonium nitrate storage plans, and; worst case scenario (i.e. accidental explosion) 2. Description of the geotechnical, mechanical and suitability parameters of the mined construction materials due to regional variability in bedrock, till and aggregate	1. IR response NRCan_003 2. EIS: 03 Project Overview
Project overview	1. Describe design specifications for the earthfill dam 2. Require a slope stability plan for reservoir slopes. 3. Contingency plan should be in place should a massive failure trigger a destructive displacement wave that could overtop the dam and impact communities downstream	1. EIS: 03 Project overview 2. EIS: 35 Summary of Environmental Management Plans 3. Topic Summary: Dam Safety
Vegetation and ecological communities	1. Describe vegetation management plans in detail, including plans for: seeding in cleared areas along right-of-ways and around dam site; weed control along right-of-ways and around dam site; reforestation of temporary work spaces 2. Discuss Aboriginal importance associated with wood/timber (not just plans use for food and medicine)	1. EIS: 35 Summary of Environmental Management Plans 2. EIS: 13 Vegetation and Ecological Communities

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response

Northern Health

Category Grouping: Potential changes or effects due to the Project		
Agriculture	Recommend enhancing food security, increasing local food production, and sourcing food locally	EIS: 20 Agriculture
Air quality	1. Potential negative impacts on the local air shed due to dust, operation of vehicles and equipment, which has negative impacts on human health. Recommend a dust control plan, vehicles turned off when not in use, and reduction in operations that may negatively impact air quality during Air Quality Advisories. 2. Recommend a human health assessment be included in the dispersion modeling exercise to identify human health risks to nearby residents. 3. Recommend a periodic review of emission limits and potential health hazards, incorporating results of ongoing ambient monitoring data and public complaints to assess appropriateness of any emission limits. 4. Air quality concerns due to ground disturbance during construction; use of Personal Protective Equipment recommended. 5. Ensure appropriate measures are in place to protect air quality 6. Background measurements should be compared with changes during construction and post-commissioning 7. Added vehicles affect air quality and health of people. Adequate transportation is to be considered to transport work force from homes to work site. 8. Water is recommended as a dust suppressant.	1,2&7. EIS: 11.11 Air Quality; 31 Transportation; 33 Human Health; 35 Summary of Environmental Management Plans 3. IR response NH_ltr_04 and NH_ltr_05 4&5. EIS: 35 Summary of Environmental Management Plans 6. EIS: Requirements for the Federal EA 7&8. EIS: 35 Summary of Environmental Management Plans

Northern Health

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Groundwater regime	1. All necessary precautionary measures should be undertaken to prevent groundwater contamination 2. Aquifer in question is in the highest category for both development stress and for vulnerability to surface contamination under the provincial Aquifer Classification System	1. EIS: 11.6 Groundwater Regime; 33 Human Health; 35 Summary of Environmental Management Plans 2. EIS: 11.6 Groundwater Regime
Human health	1. Recommend prevention or mitigation of any potential health concerns 2. Water contamination and associated health risks 3. Occupational health and safety and adequacy of emergency procedures 4. Increased traffic as safety risk 5. Impact of the development of remote mid and large scale work camps on emergency services. 6. The need for healthy living is important for human health in northern BC.	1. EIS: 33 Human Health 2. EIS: 11.5 Water Quality; 11.6 Groundwater Regime 3. EIS: 35 Summary of Environmental Management Plans 4. EIS: 31 Transportation 5. EIS: 28 Population and Demographics; 29 Housing; 30 Community Infrastructure and Services 6. IR response NH_tbl_020 and T8TA_tbl_125
Methyl mercury	Studies to identify the current levels of mercury in fish should be undertaken.	EIS: 11.9 Methyl Mercury
Community infrastructure and services	Stress on local health care system due to addition of worker population should be considered	EIS: 28 Population and Demographics; 30 Community Infrastructure and Services

Northern Health

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Water quality	1. All necessary precautions must be taken to prevent contamination of surface water 2. Water chemistry and bacteriological data (for drinking water) baseline should be compared to post-construction data 3. If chemical dust suppressants are used, process and run-off water should be controlled and suitably disposed of. 4. Hydrocarbon spill and remediation protocols should be in place to prevent/minimize accidental discharge into nearby water bodies. 5. Minimal or no use of toxic chemicals is preferred. Chemical storage should involve minimal volumes required, secure spill containment, and in storage tanks that meet BC Fire Code. 6. Consider study reports by Fraser Basin Council on effects of fracking chemicals on water quality. 7. Identify any potential human receptors considering those who may be exposed to contaminants via drinking water sources and/or recreational waters 8. Advise auditing existing water wells in the vicinity of the Project for water quality data and test the same wells post-construction, providing results to well owners/operators. Any potential health hazards to be communicated to the users.	1,3,4&5. EIS: 11.4 Surface Water Regime; 35 Summary of Environmental Management Plans 2. EIS: 11.4 Surface Water Regime 6. IR response NH_tbl_015 and NH_ltr_02 7&8. EIS: 11.5 Water Quality; 11.6 Groundwater Regime; 25 Outdoor Recreation and Tourism.

Northern Health

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: Consultation and engagement		
Agriculture	Consider consulting with the Ministry of Agriculture for food security aspects	EIS: 09 Information Distribution and Consultation
Electric and magnetic fields	Consider consulting with appropriate agencies such as Health Canada	EIS: 09 Information Distribution and Consultation
Greenhouse gases	Consider consulting with the Peace River Regional District or City of Fort St. John for the GHG threshold levels.	EIS: 09 Information Distribution and Consultation
Noise and vibration	Please consult with appropriate agencies	EIS: 09 Information Distribution and Consultation
Methyl mercury	Consult with appropriate agencies such as Ministry of Environment, Health Canada's Fish division.	EIS: 09 Information Distribution and Consultation

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response

Parks Canada

Category Grouping: Aboriginal interests		
Current use of lands and resources for traditional purposes	Acknowledgement from Federal Government that the Peace Athabasca Delta is of great cultural importance to Aboriginal Peoples, and that there is great concern by Aboriginal Peoples about the effects of the Project on the Traditional Use (including harvesting) of the Peace Athabasca Delta.	Topic Summary: Downstream Technical Study Area Boundaries
Category Grouping: Spatial or temporal boundaries of technical study or effects assessment		
Fish and fish habitat | Harvest of fish and wildlife resources | Outdoor recreation and tourism | Surface water regime |	Regional Assessment Area needs to be more broadly defined, and must, at minimum, incorporate the Peace Athabasca Delta	Topic Summaries: Valued Component Selection and Boundaries; Downstream Technical Study Area Boundaries
Fish and fish habitat | Harvest of fish and wildlife resources | Outdoor recreation and tourism | Surface water regime | Vegetation and ecological communities | Wildlife resources	Project assessment must adopt a pre-industrial-development focus within the boundaries of Wood Buffalo National Park (and thus 80% of the Peace Athabasca Delta) at the very least	Topic Summaries: Cumulative Effects Assessment; Downstream Technical Study Area Boundaries
Environmental Management Plans	The Ice and Water Management Plans need to address any implications to the Peace Athabasca Delta.	Topic Summary: Downstream Technical Study Area Boundaries
Fish and fish habitat | Surface water regime | Thermal and ice regime |	Assessment should include the Peace Athabasca Delta	Topic Summary: Downstream Technical Study Area Boundaries

Parks Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Sediment transport	Depositional nature of the Peace Athabasca Delta is more susceptible to impacts due to changes in geomorphology and sediment transport and subsequent changes in ice formation, breakup/jamming and flood regimes. The Peace Athabasca Delta should be included in the assessment.	Topic Summary: Downstream Technical Study Area Boundaries
Surface water regime | Thermal and ice regime	Assessment should include not just the incremental and cumulative influence of the Site C Project, but also the potential to hinder/fetter efforts to restore the Ecological Integrity of the Peace Athabasca Delta, and efforts to correct man-induced changes to the natural water regime in the Peace Athabasca Delta basin.	Topic Summary: Downstream Technical Study Area Boundaries
Vegetation and ecological communities	• Limiting the Regional Assessment Area to the Peace Lowlands Ecosystem is insufficient. One of the major roles of water is its support and influence on riparian vegetation, particularly in deltaic systems such as the Peace Athabasca Delta. The Peace Athabasca Delta, at the very least, should be included in the assessment. • Deltas and associated wetlands are known to often be prime and important habitat for rare and sensitive plant species and communities. The PAC should be included in the assessment.	IR response PCA_002; Topic Summary: Downstream Technical Study Area Boundaries
Wildlife resources	• Limiting the Regional Assessment Area to the Peace Lowlands Ecosystem is insufficient. One of the major roles of water is its support and influence on habitat that in turn influences wildlife, particularly in deltaic systems such as the Peace Athabasca Delta. • A key Aboriginal Peoples traditional use is the harvesting of wildlife. The Peace Athabasca Delta, at the very least, should be included in the assessment.	IR response PCA_002; Topic Summary: Downstream Technical Study Area Boundaries

Parks Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: Potential changes or effects due to the Project		
Effects of the environment on the Project	A range of modeled climate change temperature and precipitation projections should be included in the analysis.	EIS: 37 Requirements for the Federal EA
Category Grouping: Cumulative effects assessment		
Temporal and Spatial Boundaries	1. Regional Assessment Area needs to be more broadly defined, and must, at minimum, incorporate the Peace Athabasca Delta. 2. Project assessment must adopt a pre-industrial-development focus within the boundaries of Wood Buffalo National Park (and thus 80% of the Peace Athabasca Delta) at the very least	1. Topic Summaries: Valued Component Selection and Boundaries; Downstream Technical Study Area Boundaries 2. Topic Summaries: Cumulative Effects Assessment; Downstream Technical Study Area Boundaries
Fish and fish habitat | Harvest of fish and wildlife resources | Outdoor recreation and tourism | Vegetation and plant communities | Wildlife resources	Cumulative effects assessment should include specific disciplines and geographic areas where changes and cumulative effects are known to, or potentially may, occur as a result of influences that include past and proposed hydroelectric projects.	IR response PCA_006

Parks Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: EA methods		
Fish and fish habitat | harvest of fish and wildlife resources | Outdoor recreation and tourism | Vegetation and ecological communities | Wildlife resources	Residual effects characterization criteria for all areas that lie within the boundaries of Wood Buffalo National Park must be commensurate with the special protection afforded by the *Canada National Parks Act* and international conventions.	Topic Summary: Downstream Technical Study Area Boundaries
Valued component selection	1. Peace Athabasca Delta is 80% within a National Park of Canada and a designated site under international conventions, and should be a Valued Component 2. The Peace Athabasca Delta is far more prone to adverse disturbance than the mainstem Peace River as it is far more complex hydrologically, biologically and chemically. Therefore it is conceivable that this elevated sensitivity may result in there being an adverse effect with the Peace Athabasca Delta, even if there is no measurable effect upstream of the Peace Athabasca Delta. 3. It is also known to the Federal Government that the Peace Athabasca Delta is of great cultural importance to Aboriginal Peoples, and that there is great concern by Aboriginal Peoples about the effects of the Project on the Traditional Use (including harvesting) of the Peace Athabasca Delta 4. Within the boundaries of Wood Buffalo National Park, traditional use by Aboriginal Peoples includes harvesting of species not listed by the proponent. The current list should be expanded to include those other species, or at least appropriate indicator species.	IR response PCA_002; Topic Summary: Downstream Technical Study Area Boundaries

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response

Transport Canada

Category Grouping: Potential changes or effects due to the Project		
Navigation	EIS should describe 1. navigation restrictions due to the Project and comprehensive plan to address it 2. the geo-technical conditions that may result in a further navigational interference (longer term) within the reservoir. 3. potential navigation hazards due to changes in flows upstream and downstream, using the Fluvial Geomorphology and Sediment Transport information 4. assessment of the indirect effects to navigation that would result from undertaking the project (e.g. sediment transport changes, ice regime changes)	1. EIS: 26 Navigation 2. EIS: 26 Navigation; 11.2 Geology, Terrain and Soils 3. EIS: 26 Navigation; 11.8 Fluvial Geomorphology and Sediment Transport 4. EIS: 26 Navigation
Sediment transport	Provide analysis of downstream changes to sediment erosion and deposition changes to downstream	EIS: 26 Navigation
Thermal and ice regime	Analysis of impacts to ice bridges and associated ferries at Tompkins Landing and Shaftesbury	EIS: 26 Navigation
Category Grouping: Spatial or temporal boundaries of technical study or effects assessment		
Thermal and ice regime	Spatial boundaries should include ice bridges and ferries at Shaftesbury and Tompkins Landing due to potential changes in thermal and ice regime	EIS: 11.7 Thermal and Ice Regime; 26 Navigation

Transport Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Navigation	1. Spatial boundaries of Regional Assessment Area should include the Peace Athabasca Delta 2. Scope of assessment should include the Peace Athabasca Delta so that the potential adverse environmental effects on this area of federal jurisdiction can be thoroughly considered 3. EIS should clearly describe water management for the WAC Bennett dam, the Peace Canyon dam and the Site C dam in terms of water and ice regime 4. EIS should describe the potential effect on navigation during all project phases, including construction, reservoir filling, and reservoir and dam operations on navigation will be considered.	1&2. Topic Summaries: Downstream Technical Study Area Boundaries; Downstream Technical Study Area Boundaries 3. IR response EISG_r2_agency_TC_020_a 4. EIS: 26 Navigation
Category Grouping: Mitigation and compensation		
Navigation	1. Potential mitigation measures (e.g. lock in the dam, boat lift, boat rail) should include ones to facilitate transit at location of the dam. 2. This section should include all of the potential mitigations for navigation impacts (including a lock), the preferred mitigation (with rationale), then in the table, residual effects can be assessed. 3. EIS should describe other mitigation measures considered in addition to those proposed to mitigate potentially significant adverse effects	1&2. EIS: 26 Navigation 3. IR response TC_009

Transport Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: EIS content		
Consultation and engagement with Aboriginal groups	• Provide an issues tracking table organized by aspect of the project and by Aboriginal group. Narrative summary of issues would be useful as well. Specific information includes: specific issues and concerns raised; consideration and response to concerns raised; whether issue or concern has been resolved, and any outstanding issues. • The Proponent shall fully consider the interests, needs and ambitions of local and Aboriginal communities in all aspect of the work proposed as part of the Project. The EIS will include details describing how community and Aboriginal interests and benefit intentions, practices and programs have been and will continue to be carried out. The Proponent shall consult with local and Aboriginal communities to determine how best to incorporate this information into the EA. • Details related to benefits that may be accrued to Aboriginal communities as the result of the Project will only be made public with the agreement of the affected communities.	EIS: 09 Information Distribution and Consultation
EA methods	Include consideration of other projects, past, present and future in the cumulative effects assessment	Topic Summary: Cumulative Effects Assessment
Valued component selection	1. Clarification regarding candidate valued components and assessment under more appropriate or relevant VCs 2. Clarification regarding linkage diagrams in appendix to draft EIS Guidelines 3. Suggest water quality, hydrology and groundwater, terrain and soil, should be Valued Components.	1. IR Response EISG_r2_agency_TC_033; Topic Summary: Valued Component Selection and Boundaries 2&3. IR response EISG_r2_agency_TC_003

Transport Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Navigation Baseline	Baseline information sources should include local boating groups, Aboriginal groups, and other information	EIS: 26 Navigation
Regulatory requirements	1. cable crossings and the supporting structures will need to be assessed for marking and lighting requirements in accordance with Canadian Aviation Regulation 621.19. 2. induced fog and aviation visibility effects would require Fort St. John airport input into the EA. 3. The blasting activity may or may not require a NOTAM (notice to airman) depending on the type of fusing and proximity to any aviation activity or aerodrome.	1. EIS: 26 Navigation 2. EIS: 26 Navigation; 11.10 Microclimate 3. EIS: 04 Project Description
Current use of lands and resources for traditional purposes	Request separation of information on traditional use and section 35 impacts	IR response TC_015
Harvest of fish and wildlife resources	Clarification regarding whether harvest of vegetation is included in the assessment	EIS: 19 Current Use of Lands and Resources for Traditional Purposes
Project overview	Bridge and causeway designs will be included	EIS: 03 Project Overview
Project construction; reservoir clearing and preparation	1. Request to review the clearing plan before inclusion in the EIS 2. Please ensure to include information on re-use of asphalt for boat launch upgrades (parking lots) 3. Please add "… wood debris and vessel traffic during construction…"	1&2. IR response EISG_r2_agency_TC_003 3. EIS: 26 Navigation; Vegetation, Clearing and Debris Management Plan.
Project operations	EIS should describe how BC Hydro will manage the three dams in terms of flow regime (water and ice), as it may potentially affect navigation.	EIS: 26 Navigation; 11.4 Surface Water Regime

Transport Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: Cumulative effects assessment		
Temporal and Spatial Boundaries	1. Regional Assessment Area needs to be more broadly defined, and must, at minimum, incorporate the Peace Athabasca Delta. 2. Project assessment must adopt a pre-industrial-development focus within the boundaries of Wood Buffalo National Park (and thus 80% of the Peace Athabasca Delta) at the very least 3. Transport Canada acknowledgement recommendations from PCA and Environment Canada to consider the effects of all existing developments on the Peace River for the purpose of the environmental assessment (including cumulative effects assessment) 4. Transport Canada recommends that a cumulative effects assessment be conducted in a manner which would assist the Crown in better understanding potential changes to the water regime of the Peace-Athabasca Delta basin and in developing appropriate mitigation measures for the Site C project. 5. recommends adopting a pre-W.A.C Bennett Dam temporal boundary for the assessment of cumulative environmental effects because: 1- CEAA requires departments to assess any cumulative effects that may result from the project in combination with the effects of past, present and future projects. It does not prescribe a temporal boundary, nor does it limit this to the residual effects of past projects. For an adequate CEA of the Site C project, it would make sense to include previous hydroelectric facilities (i.e. Bennett and Peace River Canyon Hydro Dams); 2- Crown Consultation 3- It ensures consistency within the Peace-Athabasca Delta area.	1. Topic Summaries: Valued Component Selection and Boundaries; Downstream Technical Study Area Boundaries 2-5: Topic Summaries: Cumulative Effects Assessment; Downstream Technical Study Area Boundaries; Downstream Technical Study Area Boundaries

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Environment Canada		
Category Grouping: Aboriginal Interests		
Consultation and engagement	EIS should provide information in relation to any Impact-Benefit Agreements	EIS: 09 Information Distribution and Consultation
Current use of lands and resources for traditional purposes	Spatial and temporal boundaries should line up with scope of assessment for any associated valued components	IR response EC_070
Category Grouping: General interests		
Environmental assessment process	Suggest establishment of a technical committee dedicated to establishing ecological flow needs for the Peace River system	IR response EISG_r2_agency_EC_006
Category Grouping: Spatial or temporal boundaries of technical study or effects assessment		
General	EIS should contain a precise description of the spatial boundaries of the Project as well as the spatial scope of assessment for each VC	EIS: Sections 12-33; Topic Summary: VC Selection and Boundaries
Air quality	Spatial boundaries of the atmospheric study are should be defined	IR response EC_047
Fish and fish habitat | Water quality | Surface water regime	Suggest alignment of spatial boundaries for fish and fish habitat, water quality and surface water regime	EIS various: 11.4 Surface Water Regime; 11.5 Water Quality; 11.8 Fluvial Geomorphology and Sediment Transport Regime Topic Summaries: VC Selection and Boundaries; Peace Athabasca Delta

Environment Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Water quality | Fluvial geomorphology and sediment transport regime | Thermal and ice regime	Geographic extent of projected/modeled changes should include the Peace Athabasca Delta	IR response AEW_tbl_014; Topic Summary: Peace Athabasca Delta
Vegetation and ecological communities	Recommend that the scope of assessment be expanded to ensure potential impacts to vegetation and plant communities, including wetlands, are assessed in Alberta.	IR response EC_058
Wildlife resources	1. Spatial boundaries should be ecologically based and account for the potential effects to migratory birds, species at risk, and their associated habitats as a consequence of any changes to the downstream flow regime. This includes species and habitats, including wetlands, located in Alberta, including but not limited, to the Peace-Athabasca Delta 2. EIS should refer to federal environmental assessment and wildlife guidelines 3. Recommend that the EIS assess potential effects of the project on species listed under SARA as Endangered, Threatened or of Special Concern and those assessed as provincially red or blue 4. Assessment of migratory birds and their associated habitat requirements should include breeding birds, birds in migration, and wintering birds 5. EIS should include a full assessment of landscape fragmentation, loss or degradation of wildlife habitat values, including agricultural lands	1. IR response BRFN_008; Topic Summary: Peace Athabasca Delta 2. EIS: 14 Wildlife Resources 3. EIS: 13 Vegetation and Ecological Communities; 14 Wildlife Resources. 4. As for 2. 5. As for 3.

Environment Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: Potential changes or effects due to the Project		
Greenhouse gases	EIS should: • describe and analyze potential greenhouse gas emissions from the Project, including methane • describe methods used to estimate GHG emissions, including all assumptions • include baseline ecosystem mapping of riparian and valley bottom areas so that levels of methane and CO2 can be calculated post-inundation • describe methods used to develop site-specific mass balances, including assumptions	IR response BCMFLNRO_tbl_069; EIS: 15 Greenhouse Gases
Fish and fish habitat	EIS should describe potential impacts to riparian zones as a result of changes to the groundwater regime	EIS: 11.6 Groundwater Regime; 13 Vegetation and Ecological Communities
Groundwater regime	EIS should describe: • baseline groundwater conditions for the complete project area where there may be impacts to groundwater quality and quantity • location of water wells that could be affected but also of well construction details and water quality information that may be available from these wells • groundwater movement and aquifer recharge zones as they relate to proposed changes caused by the Project • water well data (i.e., depth, location, aquifer material, etc.) • groundwater quality/chemistry information • seasonal variability of groundwater levels and quality	EIS: 11.6 Groundwater Regime

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Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Methylmercury	EIS should describe: • mercury and methylmercury concentrations, mobility and fate within the aquatic ecosystem, including in water, fish and fish-eating wildlife at representative levels of the food chain as determined in an ecological risk assessment that includes fish and fish-eating wildlife • mercury and methylmercury concentrations, mobility and fate within the riparian and terrestrial ecosystem, with an emphasis on representative species at various levels of the food chain as determined in an ecological risk assessment	EIS: 11.9 Methylmercury
Microclimate	1. Known impacts of the WAC Bennett or Peace Canyon dams on the local micro-climate would provide a useful bounding example of the impact of a large reservoir on the local micro-climate 2. EIS should include a summary of the results of any knmown investigations of the impact of the WAC Bennett dam and Williston reservoir on the local micro-climate 3. EIS should describe past performance, and testing and verification results of the Weather Research and Forecast model as an indication of reliability, especially for test cases focused on the impacts of major water bodies. 4. EIS should describe climate parameters to be measured along with the temporal extent of the monitoring program (i.e., post-commissioning of the dam)	1. IR response EC_051 and EISG_r2_agency_EC_020 2. EIS: 11.1 Previous Developments; Topic Summary : Cumulative Effects Assessment 3. EIS: 11.10 Microclimate 4. EIS: 04 Project Description; 11.10 Microclimate

Environment Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Fluvial geomorphology and sediment transport regime | Thermal and Ice regime | Water quality	EIS should: • describe the combined impacts of the Project and a range of modeled climate change, temperature and precipitation projections on future fluvial geomorphology and sediment transport indicators, future thermal and ice regime, and future water quality parameters • describe mitigation measures to address impacts duiring all project phases including alteration in flow regimes and increased sediment loads. • identify any potential erosion problems in watercourses due to the project • provide details on how monitoring data will be used to determine if the projuect has caused statistically significant differences to any water quality parameters • identify project components that may influence surface water quality • describe proposed mitigation measures to maintain surface water quality during all project phases • describe water and sediment quality conditions and suitability for aquatic biota in the reservoir. • describe the residual effects of the project on surface water quality and plans to manage those effects • describe the monitoring programs proposed to assess water quality impacts and measure the effectiveness of mitigation plans • discuss the location of monitoring sites, frequency of monitoring, parameters to be monitored, implementation of quality assurance programs and methodology • describe how continuous monitoring will be used to evaluate project efects and how such monitoring will be used to identify the need for mitigation.	EIS: 10 EA Methodology; 11.4 Surface Water Regime; 11.5 Water Quality; 11.7 Thermal and Ice Regime; 11.8 Fluvial Geomorphology and Sediment Transport Regime; 33 Human Health; 35 Summary of Environmental Management Plans IR response EC_029 Topic Summary: VC Selection and Boundaries

Environment Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Water quality	EIS should: 1. cite appropriate CCME or BCMoE standards or guidelines as part of the design of baseline monitoring programs. 2. present an appropriate level of detail in describing water quality monitoring parameters, method detection limits, sampling sites, frequency and timing, samplign methods, and data summary statistics. 3. address acid rock drainage considerations, and should provide an assessment of the geochemical stability of the excavated rock prepared by qualified professionals, and should conform to accepted guidelines and policy. 4. describe water quality models used to predict changes due to the Project, including model inputs, parameters, assumptions, ouptuts and methodology. 5. Water quality modelling should include sediment and nutrient trapping effects of the dam on downstream aquatic environments	1. EIS: 35 Summary of Environmental Management Plans 2. EIS: 11.5 Water Quality; Volume 2 Appendix E. 3. EIS: 11.2 Geology, Terrain and Soils 4. EIS: 11.5 Water Quality; Volume 2 Appendix E 5. EIS: Volume 2 Appendix E; Volume 2 Appendix I; Volume 2 Appendix P Part 2
Surface water regime	EIS should: 1. indicate if the project has the potential to affect Environment Canada's ability to operate existing hydrometric stations. 2. describe historical trends in Peace River flows and modeled changes to the Peace Athabasca Delta	1. EIS: 11.4 Surface Water Regime 2. Topic Summary: Peace Athabasca Delta
Thermal and ice regime | Fish and fish habitat	Dam operational changes to the initiation and duration of ice formation should be assessed for potential impacts on over-wintering fish habitat.	IR response DFO_017

Environment Canada

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Vegetation and ecological communities	1. Vegetation and plant communities section should also present mercury and methylmercury data and analyses 2. EIS should include: a wetlands functional assesment; discussion of mitigation hierarchy; a wetland compensation plan. 3. EIS should include discussion on the effectiveness of wetland compensation 4. Recommended elements for inclusion in the Wetland Compensation Plan, including: mitigation goals and objectives, baseline information for Impact and Proposed Mitigation Sites; mitigation site selection and justification; mitigation site work plan; ecological performance standards; site protection and maintenance; monitoring plan; adaptive managementplan, and financial assurances.	1. EIS: 11.9 Methylmercury 2. EIS: 13 Vegetation and Ecological Communities 3. IR response EC_056 4. EIS: 13 Vegetation and Ecological Communities
Category Grouping: Cumulative effects assessment		
Temporal and spatial boundaries	• Pre-development baseline conditions are required for residual effects of the WAC Bennett and Peace Canyon dams to be understood and considered in the cumulative effects assessment • EIS should include a discussion of past hydroelectric generation projects on the Peace River, the resultant environmental effects, where overlapping environmental effects are anticipated, and measures taken to manage/mitigate these overlapping effects	Topic Summary: Cumulative Effects Assessment; IR response EC_020
Wildlife resources	EIS should describe specific cumulative effects of the Project on all legally listed wildlife species and candidate species recommended for listing by COSEWIC occurring in the project area	EIS: 14 Wildlife Resources
Project Inclusion List	Dunvegan Dam should be on the list.	EIS: 10 EA Methodology

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Methylmercury	A pre-development baseline should be used.	Topic Summaries: Cumulative Effects Assessment; Methylmercury
Category Grouping: EA methods		
Predictive models and/or assessment findings	The EIS should include a description of, and justification for, all methods, hypotheses and assumptions, models and studies, knowledge gaps and conclusions	EIS: Sections 11-33
Follow up and monitoring	An adaptive management strategy should be coupled with the follow-up and monitoring plan	EIS: 10 EA Methodology; 39 Complete Lists of Mitigation and Follow-up Measures
Valued component, key indicator, or key aspect	1. Any exclusion of a potential Valued Component based on "no predicted interaction" needs to explicitly outline the assumptions in the prediction, type of predictive model or tool used, and the time and spatial scale of any data used in the model 2. Project activities should be considered and incorporated into more than one VC where it makes sense to do so 3. suggested factors to be considered in the selection of VCs: aboriginal or public concerns; protected status; regulatory requirements; transboundary issues; rarity or special status; preservation of biodiversity; sensitivity to disturbance or pollution; human health; importance of the ecological role. 4. VCs proposed are too broad and general. Suggest inclusion of all SARA Schedule 1 species, and/or those listed by COSEWIC that potentially migrate through, breed, or reside within the area affected by the Project	1. IR response EC_015 2. Topic Summary: VC Selection and Boundaries 3. As for 2 4. IR responses EC_058 and 061

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Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Category Grouping: EIS content		
Project operations and component/facility maintenance	1. EIS should describe maintenance and associated mitigation measures for the transmission facilities, road and rail along with estimated types and loadings of any chemicals/pesticides/herbicides to be used. 2. EIS should describe reservoir management strategies, including scheduling/timing of filling, rate of flow release and proposed mitigation measures. 3. EIS should describe information relating to reservoir characterization (expected residence time and range, stratification). 4. EIS should describe waste management plans for all temporary, permanent and in-community worker accommodation 5. EIS should describe the presence of and any likely project interaction with contaminated sites 6. Operations phase activities should be described as part of the broader system of generating stations along the Peace River, including information on how potential extreme flow events as well as low-flow would affect the operation of the Project. 7. Draft Water Management plan should be made available to the Mackenzie River Basin Board for review. 8. Anticipated process for the development of Peace River water management agreements should be described in the EIS and how the Project may be affected by this process.	1. EIS: 04 Project Description; 35 Summary of Environmental Management Plans 2. EIS: 04 Project Description; Volume 1 Appendix B 3. As for 2. 4. EIS: 35 Summary of Environmental Management Plans 5. EIS: 11.6 Groundwater Regime 6. EIS: 04 Project Description; 11.4 Surface Water Regime 7. IR response EC_008 8. As for 7.

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Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Reservoir clearing and preparation	EIS should describe and evaluate proposed reservoir preparation strategies and mitigation measures considering the following: aesthetics, resource and recreational use of the water way and valley, recovery of wood fibre, sequestration and release of carbon dioxide, mercury uptake	EIS: Volume 1 Appendix A; 11.9 Methylmercury; 12 Fish and Fish Habitat; 15 Greenhouse Gases; Land and Resource Use Effects Assessment Sections 19-27; Section 33 Human Health
Project construction activities (general)	EIS should describe runoff and sediment control structures, associated mitigation and monitoring with respect to construction effects on the aquatic environment	EIS: 35 Summary of Environmental Management Plans; 12 Fish and Fish Habitat
Project decommissioning	EIS should include a decommissioning plan	IR response EC_009; Topic Summary: Decommissioning
Alternative means of undertaking the Project	EIS should include wildlife and vegetation inventories for each of the alternative means identified	EIS: 06 Alternative Means of Carrying Out the Project
Air quality	EIS should specify the methodology used to estimate air quality emissions during construction	EIS: 11.11 Air Quality
Mapping	1. EIS should also provide aerial images that illustrate representative habitats within each study including spatial boundaries of Local and Regional Assessment Areas 2. Recommend that 1:10,000 - 1:20,000 scale mapping be used per CDC/RISC guidance	1. IR response EC_017 2. EIS: 13 Vegetation and Ecological Communities
Effects of the environment on the Project	EIS should: • address the magnitude and frequency of extreme rainfall events • identify stages or components of the Project that are sensitive to changes or variability in climate parameters, including frequency and severity of extreme weather events and/or climate change	EIS: 37 Requirements for the Federal Environmental Assessment

Issue Category	Description of Issue or Concern	BC Hydro Consideration/Response
Need for and purpose of the Project | Alternatives to the Project	EIS should explicitly address: • the need for the Project, including implications resulting from a delay in proceeding with the Project or any phase; • implications of not going ahead with the Project; • how environmental, socio-economic and traditional use criteria influenced the selection of the proposed alternative.	EIS: 05 Need for, Purpose of, and Alternatives to the Project; 06 Alternative Means of Carrying Out the Project
Accidents and Malfunctions	EIS should: • describe potential accidents and malfunctions that could occur during construction and operations, as well as general preventive and mitigative response guidelines for storage, clean-up and disposal of chemicals • identify job sites and transportation corridors where work will be conducted near fish bearing waters and ensure that spill response equipment is either strategically located or available for use in the event of a spill.	Topic Summary: Dam Safety EIS: 35 Summary of Environmental Management Plans; 37.2 Accidents and Malfunctions
Mitigation	EIS should identify mitigation measures considered but rejected and the rationale should be explained	IR response EC_021; EIS: Sections 12-33
Climate change | Thermal and ice regime	EIS should describe combined impacts of the project and a range of modeled climate change, temperature and precipitation projections on the future thermal and ice regime. The geographic extent of these projections should be the Peace-Athabasca Delta.	Topic Summary: Peace Athabasca Delta; EIS: 11.7 Thermal & Ice Regime; Volume 2 Appendix T