

# Housing Plan and Housing Monitoring and Follow-up Program

Site C Clean Energy Project Revision 2: December 12, 2016

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# **Revision History**

Version	Date	Comments
Draft	04-07-2015	Draft
Rev 0	05-19-2015	Final Plan
Rev 1	06-05-2015	Final Plan, Revision 1
Rev 2	12-12-2016	Updated reporting cycle from semi-annual to annual due to CMHC change in reporting, updated request for information from First Nations for section 7.2 and completion of measures under section 5.0

# 1.0 Background

# 1.1 The Site C Clean Energy Project

The Site C Clean Energy Project (the Project) will be the third dam and generating station on the Peace River in northeast B.C. The Project will provide 1,100 megawatts of capacity and about 5,100 gigawatt hours of energy each year to the province's integrated electricity system. The Project will be a source of clean, reliable and cost-effective electricity for BC Hydro's customers for more than 100 years.

The key components of the Project are:

- an earthfill dam, approximately 1,050 metres long and 60 metres high above the riverbed;
- an 83 kilometre long reservoir that will be, on average, two to three times the width of the current river;
- a generating station with six 183 MW generating units;
- two new 500 kilovolt AC transmission lines that will connect the Project facilities to the Peace Canyon Substation, along an existing right-of-way;
- realignment of six segments of Highway 29 over a total distance of approximately 30 kilometers; and
- construction of a berm at Hudson's Hope.

The Project will also include the construction of temporary access roads, a temporary bridge across the Peace River, and worker accommodation at the dam site.

# 1.2 Project Benefits

The Project will provide important benefits to British Columbia and Canada. It will serve the public interest by delivering long term, reliable electricity to meet growing demand; contribute to employment, economic development, ratepayer, taxpayer and community benefits; meet the need for electricity with lower GHG impact than other resource options; contribute to sustainability by optimizing the use of existing hydroelectric facilities, delivering approximately 35 per cent of the energy produced at the W.A.C. Bennett Dam, with only five per cent of the reservoir area; and include an honourable process of engagement with First Nations and the potential for accommodation of their interests.

#### 1.3 Environmental Assessment Process

The environmental assessment of the Project has been carried out in accordance with the Canadian Environmental Assessment Act, 2012 (CEAA 2012), the BC Environmental Assessment Act (BCEAA), and the Federal-Provincial Agreement to Conduct a Cooperative Environmental Assessment, Including the Establishment of a Joint Review Panel of the Site C Clean Energy Project. The assessment considered the environmental, economic, social, heritage and health effects and benefits of the Project, and included the engagement of Aboriginal groups, the public, all levels of government, and other stakeholders in the assessment process.

Detailed findings of the environmental assessment are documented in the Site C Clean Energy Project Environmental Impact Statement (EIS), which was completed in accordance with the Environmental Impact Statement Guidelines (EIS Guidelines) issued by the Minister of Environment of Canada and the Executive Director of the Environmental Assessment Office of British Columbia. The EIS was submitted to regulatory agencies in January 2013, and amended

in August 2013 following a 60 day public comment period on the assessment, including open house sessions in Fort St. John, Hudson's Hope, Dawson Creek, Chetwynd, town of Peace River (Alberta) and Prince George.

In August 2013, an independent Joint Review Panel (JRP) commenced its evaluation of the EIS, and in December 2013 and January 2014 undertook five weeks of public hearings on the Project in 11 communities in the Peace region, including six Aboriginal communities. In May 2014, the JRP provided the provincial and federal governments with a report summarizing the Panel's rationale, conclusions and recommendations relating to the environmental assessment of the Project. On completion of the JRP stage of the environmental assessment, the CEA Agency and BCEAO consulted with Aboriginal groups on the JRP report, and finalized key documents of the environmental assessment for inclusion in a Referral Package for the Provincial Ministers of Environment and Forests, Lands and Natural Resource Operations.

Construction of the Project is also subject to regulatory permits and authorizations, and other approvals. In addition, the Crown has a duty to consult and, where appropriate, accommodate Aboriginal groups.

# 1.4 Environmental Assessment Findings

The environmental assessment of the Project focused on 22 valued components (VCs), or aspects of the biophysical and human setting that are considered important by Aboriginal groups, the public, the scientific community, and government agencies. In the EIS, valued components were categorized under five pillars: environmental, economic, social, heritage and health. For each VC, the assessment of the potential effects of the Project components and activities during construction and operations was based on a comparison of the biophysical and human environments between the predicted future conditions with the Project, and the predicted future conditions without the Project.

Potential adverse effects on each VC are described in the EIS along with technically and economically feasible mitigation measures, their potential effectiveness, as well as specific follow-up and related commitments for implementation. If a residual effect was found on a VC, the effect was evaluated for significance. Residual effects were categorized using criteria related to direction, magnitude, geographic extent, context, level of confidence and probability, in accordance with the EIS Guidelines.

The assessment found that the effects of the Project will largely be mitigated through careful, comprehensive mitigation programs and ongoing monitoring during construction and operations. The EIS indicates that the Project is unlikely to result in a significant adverse effect for most of the valued components. However, a determination of a significant effect of the Project was found on four VCs: Fish and Fish Habitat, Wildlife Resources, Vegetation and Ecological Communities, and Current Use of Lands and Resources for Traditional Purposes.

#### 1.5 Environmental Assessment Conclusion

On October 14, 2014, the Provincial Ministers of Environment and of Forests, Lands and Natural Resource Operation decided that the Project is in the public interest and that the benefits provided by the Project outweigh the risks of significant adverse environmental, social and heritage effects (http://www.newsroom.gov.bc.ca/2014/10/site-c-project-granted-environmental-assessment-approval.html). The Ministers have issued an Environmental Assessment Certificate setting conditions under which the Project can proceed.

Further, on November 25, 2014, The Minister of Environment of Canada issued a Decision Statement confirming that, while the Project has the potential to result in some significant adverse effects, the Federal Cabinet has concluded that those effects are justified in the

circumstances. The Decision Statement sets out the conditions under which the Project can proceed.

# 1.6 Development of Mitigation, Management and Monitoring Plans

Mitigation, management and monitoring plans for the Project have been developed taking into account the measures proposed in the EIS, information received during the Joint Review Panel hearing process, and the Report of the Joint Review Panel on the Project. Those plans are consistent with, and meet requirements set out in, the conditions of the Environmental Assessment Certificate and of the Decision Statement issued on October 14, 2014 and November 25, 2014 respectively.

In addition, in accordance with environmental best practices (Condition 3.1), these plans were informed by the best available information and knowledge, based on validated methods and models, undertaken by qualified individuals and apply the best available economically and technologically feasible mitigation strategies. These plans contain provisions for review and update as new information on the effects of the Project and on the efficacy of the mitigation measures become available.

# 2.0 Housing Plan

# 2.1 Objective

The objective of the Housing Plan and Housing Monitoring and Follow-up Program is to describe the measures that will be used to mitigate the adverse effects of the Project on changes in the demand for housing, as well as the monitoring of market changes that may require additional mitigation. This plan has been prepared in accordance with Conditions 48 and 49 of the Environmental Assessment Certificate (EAC), provided below.

EAC Condition Number	EAC Condition	Plan Reference
48	The EAC Holder must manage the increased demands for housing in the City of Fort St. John, resulting from the influx of the Project workforce by implementing mitigation measures detailed in a Housing Plan.	
	The Housing Plan must include at least the following:	
	Establish a community camp co-coordinator.	Section 5.1 Measure 1: Establish a community camp coordinator
	Establish a process for adjusting camp capacity throughout the construction phase to accommodate direct Project workers.	Section 5.2 Measure 2: Camp Capacity
	Expand affordable rental housing supply in the City of Fort St. John by building 50 rental units to be owned and operated by BC Housing or an approved non-profit operator. Immediately on completion of the housing development, 40 of the rental units will be available for BC Hydro worker housing and 10 will be available	Section 5.3 Measure 3: Fort St. John Housing Project

EAC Condition Number	EAC Condition	Plan Reference
	to low to moderate income households. Upon completion of the Site C construction phase, the 40 worker housing units will be made available to low to moderate income households.	
	<ul> <li>Expand RV accommodation by building 20 new temporary long-stay RV accommodations.</li> </ul>	Section 5.4 Measure 4: New RV Sites
	<ul> <li>Provide approximately \$250,000 to emergency or transitional housing providers in the City of Fort St. John.</li> </ul>	Section 5.5 Measure 5: Emergency or Transitional Housing Provider Contribution
	<ul> <li>Monitor net migration to reserves as a result of the Project.</li> </ul>	Section 7.2 Net Migration to Reserve Monitoring
	The EAC Holder must provide this draft Housing Plan to the City of Fort St. John, and Aboriginal Groups for review a minimum of 90 days prior to the construction of housing.	Section 2.2 Consultation
	The EAC Holder must file the final Housing Plan with the EAO, the City of Fort St. John and Aboriginal Groups a minimum of 30 days prior to the construction of housing.	
	The EAC Holder must develop, implement and adhere to the final Housing Plan, and any amendments, to the satisfaction of EAO.	Section 2.2 Consultation  Section 8.0 Process for Revision and Updating of the Plan
49	The EAC Holder must ensure that measures implemented under the Housing Plan are effective in mitigating increased demands for housing in the City of Fort St. John by developing and implementing a Housing Monitoring and Follow-up Program for the construction phase.	
	The Housing Monitoring and Follow-up Program must include at least the following to ensure measures to mitigate Project effects are effective or need to be adjusted to adequately mitigate the effects:	
	The EAC Holder must develop an approach for monitoring the apartment rental vacancy rate and price as published by the CMHC semi-annually, for the Fort St. John area and must define the nature and duration of market changes that may require additional mitigation. The EAC Holder will review the monitoring results with the City of Fort St. John and discuss if additional mitigation is required and mitigation options.	Section 7.1 Apartment Rental Vacancy Rate Monitoring

EAC Condition Number	EAC Condition	Plan Reference
	<ul> <li>Reports must be provided semi-annually during construction to BC Housing and City of Fort St. John, beginning 180 days following the commencement of construction.</li> </ul>	Section 7.1 Apartment Rental Vacancy Rate Monitoring
	<ul> <li>The EAC Holder must work with Aboriginal communities in the LAA (as defined in EIS) to track net migration to reserves attributable to Project effects, on rental market conditions in the City of Fort St. John and to identify if additional mitigation is needed.</li> </ul>	Section 7.2 Net Migration to Reserve Monitoring
	The EAC Holder must provide this draft Housing Monitoring and Follow-up Program to the City of Fort St. John and Aboriginal Groups for review within 90 days after the commencement of construction.	Section 2.2 Consultation
	The EAC Holder must file the final Housing Monitoring and Follow-up Program with EAO, City of Fort St. John and Aboriginal Groups within 150 days following the commencement of construction.	
	The EAC Holder must develop, implement and adhere to the final Housing Monitoring and Follow-up Program, any amendments, to the satisfaction of EAO.	

#### 2.2 Consultation

Many of the conditions require BC Hydro to consult or collaborate with certain government agencies and Aboriginal groups in respect of measures and plans required by the conditions.

BC Hydro began consultation on the Project in late 2007, before any decision to advance the Project to an environmental assessment. BC Hydro's consultation with the public, stakeholders, regional and local governments, regulatory agencies, and Aboriginal groups is described in EIS Section 9, Information Distribution and Consultation.

Additional information on the consultation process and a summary of issues and concerns raised during consultation are provided in:

- Volume 1 Appendix G, Public Information Distribution and Consulting Supporting Documentation
- Volume 1 Appendix H, Aboriginal Information Distribution and Consultation Supporting Documentation
- Volume 1 Appendix I, Government Agency Information Distribution and Consultation Supporting Documentation
- Volume 5, Appendix A01 to A29, Parts 2 and 2A, Aboriginal Consultation Summaries
- Technical Memo: Aboriginal Consultation

Draft versions of a number of the mitigation, management and monitoring plans required by the conditions were submitted to applicable government agencies and Aboriginal groups for comment on October 17, 2014.

Comments on these draft plans were received from various government agencies and Aboriginal groups during November and December 2014, and were considered in the revisions to these plans. BC Hydro's consideration of these comments is provided in the consideration tracking tables that accompany each plan.

On December 15, 2014, Treaty 8 Tribal Association (T8TA), on behalf of West Moberly, Saulteau and Prophet River First Nations, submitted to BC Hydro a letter in response to BC Hydro's request for comment on the Plans sent on October 17, 2014. The letter included several appendices, including the Joint Review Panel (JRP) Report and transcripts from the JRP hearings in December 2013 and January 2014. BC Hydro responded to the three First Nations on January 21, 2015 noting that the October 17 2014 request for comments on the plans was to provide an opportunity to the First Nations to submit to BC Hydro any information they wanted to provide in relation to the Plans. BC Hydro advised that it was aware of the information referred to in T8TA's letter when the plans were prepared, and advised that it was preparing a table setting out where any mitigation measures identified by representatives of the three First Nations during the hearings are considered in the draft plans and would provide that to the First Nations once complete. Accordingly BC Hydro's responses to those mitigation measures identified by the representatives of the three First Nations during the JRP hearings were provided to the EAO in a separate table by letter dated May 19, 2015. Aside from the December 15, 2014 letter, BC Hydro has not received further comments from these First Nations. A letter of understanding dated April 30, 2015 respecting provision of capacity funding to support review of the plans was entered into by BC Hydro and Saulteau First Nations (on behalf of Saulteau, West Moberly and Prophet River First Nations).

New draft plans (i.e., Housing Plan and Housing Monitoring and Follow-Up Program, and the quarry/pit development plans) were provided to the entities identified in the EAC conditions on April 7, 2015. The Vegetation and Wildlife Mitigation and Monitoring Plan was revised based on comments received on the October 17, 2014 version and based on discussions with Environment Canada and the BC Ministry of Environment, and was re-submitted to applicable entities on April 7, 2015.

Comments on the revised plans were requested by May 11, 2015 to allow for review, consideration of comments and finalization of the plans 30 days prior to the commencement of construction.

Comments were received by this requested date from:

- Fort Nelson First Nation
- Ministry of Forests, Lands and Natural Resource Operations (FLNRO), and
- Métis Nation British Columbia.

The Peace River Regional District submitted their comments on the plan on May 14, 2015. FLNRO submitted additional comments on May 15, 2015, including comments from the BC Ministry of Environment.

BC Hydro considered the comments provided and prepared final plans. On May 19, 2015, BC Hydro submitted the following mitigation, management and monitoring plans to the BC Environmental Assessment Office (BC EAO) for review:

- Construction Environmental Management Plan
- Construction Safety Management Plan

- Fisheries and Aquatic Habitat Management Plan
- Vegetation and Wildlife Mitigation and Monitoring Plan
- Vegetation Clearing and Debris Management Plan
- Aboriginal Plant Use Mitigation Plan
- Aboriginal Training and Inclusion Plan
- Business Participation Plan
- Emergency Services Plan
- Healthcare Services Plan
- Labour and Training Plan
- Cultural Resources Mitigation Plan
- Heritage Resources Management Plan
- Housing Plan and Housing Monitoring and Follow-Up Program
- Wuthrich Quarry Development Plan
- West Pine Quarry Development Plan; and
- Del Rio Pit Development Plan.

The CEA Agency and Environment Canada submitted comments on the revised plan on May 22, 2015. These comments were considered and the final plans were revised accordingly and submitted on June 5, 2015 to the entities identified in the EAC conditions.

# 3.0 Regulatory Context

There are no governing provincial or federal regulations related to housing supply and demand. Tenancy and housing construction are regulated by the provincial government, and local governments have some regulatory authority regarding housing development.

The Residential Tenancy Act sets out the rights and responsibilities of landlords and tenants in British Columbia (MEMNG 2014a). The British Columbia Building and Safety Standards Branch is responsible for developing and implementing a regulatory framework for safe design, construction and occupancy of buildings. The three primary regulations are the BC Building code, BC Plumbing code and the BC Fire Code (MEMNG 2014b).

The *Local Government Act* requires municipalities to enact an Official Community Plan (OCP) which includes:

- the approximate location, amount, type and density of residential development required to meet anticipated housing needs over a period of at least 5 years;
- housing policies of the local government respecting affordable housing, rental housing and special needs housing.

The housing units developed by BC Hydro and BC Housing would be constructed in accordance with provincial legislation and in accordance with permits issued by the local government authority.

# 4.0 Housing Market Assessment

The potential effect of the Project on housing was assessed in Section 29 of the EIS. The assessment considered the potential for the Project to change demand for housing in the local assessment area. The local assessment area was the Peace River Regional District (PRRD) including municipalities within the PRRD. The communities nearest to the Project (i.e., Fort St. John, District of Taylor, and PRRD Area C) are where the majority of in-migrating new residents would be expected to live, and thus where demand for housing could change. The Aboriginal groups with Indian Reserves within 100 km of the Project, within the PRRD, are the Blueberry

River First Nations, Doig River First Nation, Halfway River First Nation, Saulteau First Nations, and West Moberly First Nations (BC Hydro 2013a).

#### 4.1 Baseline Conditions

Please see Appendix A for a summary of baseline conditions for housing.

# 4.2 Potential Effects of the Project

Please see Appendix A for a summary of the description of changes to housing as a result of the Project.

# **5.0 Mitigation Measures**

All timelines described in the sections below are contingent upon a summer 2015 start for Project construction. Any change from that start date may shift the dates at which mitigation measures would be implemented.

# 5.1 Measure 1: Establish a community camp coordinator

This section has been developed in accordance with Condition 48 of the Environmental Assessment Certificate: *Establish a community camp co-coordinator*. BC Hydro will make logistical information available to the Project workforce or potential Project workers seeking local accommodation, on the Site C website. A community camp coordinator will identify and update the Site C website with pertinent Peace Region information to support workers consideration of moving to a local community.

Information will be made available to the Project workforce on the Site C website within 90 days after the start of construction and will be updated as needed throughout the construction period.

# 5.2 Measure 2: Camp Capacity

This section has been developed in accordance with Condition 48 of the Environmental Assessment Certificate: Establish a process for adjusting camp capacity throughout the construction phase to accommodate direct Project workers. BC Hydro has constructed the Two Rivers Lodge (Lodge) at the dam site worker accommodation camp to meet anticipated demand for camp housing at the dam site location for the Project workforce. The first beds in the Lodge opened on February 29, 2016 with the last beds opening on September 1, 2016 for a total of approximately 1,600 beds. The camp is planned and contracted to allow additional phased units to be added to meet the on-site housing needs of the workforce through the course of the Project construction if needed.

The camp includes food services, recreation and leisure facilities, a health clinic, laundry facilities, and potable water and wastewater / sanitation systems. The configuration for guest rooms is a single occupancy bedroom with an attached private bathroom. Recreation and leisure facilities include a managed lounge, movie room, common gathering areas for games, cardio and weight lifting fitness areas, a gymnasium and outdoor spaces for sports and gatherings.

# 5.3 Measure 3: Fort St. John Housing Project

This section has been developed in accordance with Condition 48 of the Environmental Assessment Certificate: Expand affordable rental housing supply in the City of Fort St. John by building 50 rental units to be owned and operated by BC Housing or an approved non-profit operator. Immediately on completion of the housing development, 40 of the rental units will be

available for BC Hydro worker housing and 10 will be available to low to moderate income households. Upon completion of the Site C construction phase, the 40 worker housing units will be made available to low to moderate income households.

BC Hydro has engaged BC Housing to take the lead on the development and operation of the housing units. The housing will include energy efficient design and serve as a demonstration project for showcasing energy efficient building techniques in the community.

Of the 50 units, ten will be available during the Project construction phase for BC Housing or their designated operator to manage for low or moderate income households. The remaining 40 units will be managed for use by the Project workforce, as required, until completion of Project construction, at which time the 40 units will be transitioned to permanent non-market/affordable housing in partnership with BC Housing or their designated operator.

Access to the units for low or moderate income households will be managed in accordance with BC Housing policies and in accordance with any agreement BC Housing may have with a designated operator.

#### 5.4 Measure 4: New RV Sites

This section has been developed in accordance with Condition 48 of the Environmental Assessment Certificate: *Expand RV accommodation by building 20 new temporary long-stay RV accommodations*. In agreement with the District of Taylor, BC Hydro agreed to provide 20 new long-stay, serviced RV sites at Peace Island Park. The RV sites were substantially completed in October 2016. The RV sites include on-site sewer and potable water systems, electrical hookups for the new sites. and overflow parking for Peace Island Park. The sites will be operated as part of Peace Island Park by the District of Taylor. Commissioning and start of operations is anticipated in early summer 2017.

# 5.5 Measure 5: Emergency or Transitional Housing Provider Contribution

This section has been developed in accordance with Condition 48 of the Environmental Assessment Certificate: *Provide approximately \$250,000 to emergency or transitional housing providers in the City of Fort St. John.* BC Hydro has provided a total of \$250,000 to emergency or transitional housing providers in Fort St. John. BC Hydro provided the following amounts to these organizations for the purposes of providing emergency or transitional housing. The awards were publicly announced as follows:

- \$25,000 in February 2016 to Skye's Place, a second stage housing program for women with children who are leaving abusive relationships.
- \$25,000 in February 2016 to the Meaope Transition House for Women that provides a 24-hour safe and secure shelter for women who are victims of violence or abuse, and their children.
- \$200,000 in November 2015 to the Salvation Army Northern Centre of Hope to support shelter and transitional beds.

#### 6.0 Residual Effects

The Project would result in changes in demand for housing in the Fort St. John area during Project construction. Even after development of the worker accommodation facility and the application of the above mitigation measures, there is potential for residual adverse Project effects on rental apartment housing, due to a high probability of a period of low apartment rental

vacancy rates at some point during construction such that incremental demand by the Project would create a rental unit shortage and contribute to imbalanced market conditions.

This would potentially occur if the market is experiencing low vacancy rates when labour requirements and population effects are peaking. It is uncertain whether the threshold vacancy rate would be exceeded, but in consideration of the anticipated short duration and low magnitude, the Project is unlikely to result in a significant adverse effect on Housing (BC Hydro 2013a and Joint Review Panel 2014).

# 7.0 Monitoring and Reporting Requirements

# 7.1 Apartment Rental Vacancy Rate Monitoring

This section has been developed in accordance with Condition 49 of the Environmental Assessment Certificate: The EAC Holder must develop an approach for monitoring the apartment rental vacancy rate and price as published by the CMHC semi-annually, for the Fort St. John area and must define the nature and duration of market changes that may require additional mitigation. The EAC Holder will review the monitoring results with the City of Fort St. John and discuss if additional mitigation is required and mitigation options.

BC Hydro will monitor the Fort St. John area private apartment rental vacancy rate and price, as published by the CMHC, annually and semi-annually, Project workers use of Fort St. John area private apartment rental units.

#### **CMHC Reports**

Private apartment rental unit vacancy and price for the Fort St. John area will be accessed after CMHC posts the annual report containing the information. CMHC eliminated the spring reporting cycle in 2016. Data is now available only for the fall survey period and is published approximately mid-winter. The data for the current reporting period will be compared to the previous period to determine if the Fort St. John private apartment rental vacancy rate was below 4% for at least one CMHC reporting cycle. The threshold identified in the EIS was for the private apartment rental vacancy rate to be below 4% for at least 6 months or two CMHC reporting cycles (BC Hydro 2013a). Due to the change to annual reporting by CMHC this threshold is reduced to one cycle to maintain the same threshold to trigger additional analysis and if warranted by the additional analysis, mitigation options.

#### Fort St. John Private Apartment Rental Unit Survey

For a comparable period of the year to when the CMHC data is gathered, BC Hydro will administer a survey to monitor how Project workers are utilizing the Fort St. John area private apartment rental housing stock. BC Hydro will continue to administer a spring survey to Project workers to provide an additional data point for analysis of the worker's use of the private apartment rental market if needed.

The results of the survey will be analyzed to identify the number of private apartment rental market units occupied by Project workers who were not existing residents of the Peace region.

#### **Reasonable Threshold**

A reasonable threshold for the number of private apartment rental units that Project workers can occupy is 4% between Year 1 and Year 4, and 6% from Year 5 on. By Year 5 the housing market will have had 4 years during Project construction phase to respond to new demand from the Project by increasing supply. The housing market in Fort St. John has previously responded quickly to changes in demand. This reasonable threshold reflects the proportion between the

estimated number of in-community direct workers and their dependents and the City of Fort St. John's population.

#### **Analysis**

If the private apartment rental market vacancy rate has been below 4% for one reporting period as described in the CMHC Reports section then BC Hydro will:

- 1. compare the proportion of the private apartment rental market units being utilized by Project workers who were not existing residents of the region to the reasonable threshold described in the Reasonable Threshold section.
- 2. identify the proportion of those units being utilized by Project workers in excess of the reasonable threshold
- confirm that the housing mitigation measures identified in this plan have been implemented

If the proportion identified in #2 is in excess of the reasonable threshold and the vacancy rate is below 4% for one reporting period and the mitigation measures have been implemented, then BC Hydro will engage with the City of Fort St. John to determine if additional housing mitigation measures are required.

#### **Consideration of Mitigation Measures**

The need for additional mitigation measures, and the type of measures, will include consideration of the following questions, or other questions relevant to the discussion:

- 1. What is the proportion of those units being utilized by Project workers in excess of the reasonable threshold?
- 2. How are other large industrial or commercial projects contributing to changes in vacancy rates in the Fort St. John area private apartment rental market?
- 3. Do Project workforce forecasts suggest that the utilization of private apartment rental units will continue at a similar or greater level?
- 4. Are potential measures proportional to the extent to which the reduction below 4% vacancy is attributable to Project occupancy of the private apartment rental stock in excess of the reasonable threshold?
- 5. Will potential measures address Project workers utilization of Fort St. John area private apartment rental units?
- 6. Are the units utilized by workers who are part of short-term Project work and not likely to remain in the rental market due to the short term, seasonal nature of their work?

### Reports

This section has been developed in accordance with Condition 49 of the Environmental Assessment Certificate: Reports must be provided semi-annually during construction to BC Housing and City of Fort St. John, beginning 180 days following the commencement of construction. This information will be presented in an annual report describing the results for the current year in relation to previous years, which includes the data gathered and the results of any analysis for that 12 month period. The annual report will be published 60 days after the CMHC information is publically posted. The reports will be provided to BC Housing and to the City of Fort St. John during the construction phase.

# 7.2 Net Migration to Reserve Monitoring

This section has been developed in accordance with Condition 48 of the Environmental Assessment Certificate: *Monitor net migration to reserves as a result of the Project* and Condition 49 of the Environmental Assessment Certificate: *The EAC Holder must work with Aboriginal communities in the LAA (as defined in EIS) to track net migration to reserves attributable to Project effects, on rental market conditions in the City of Fort St. John and to identify if additional mitigation is needed. To monitor net migration to Indian reserves, BC Hydro will annually collect reserve population data for the Indian reserves which are situated within or near the boundaries of the Project housing local assessment area. This includes Indian reserves of the following First Nations: Doig River First Nation (Doig River 206), Halfway River First Nation (Halfway River 168), Prophet River First Nation (Prophet River 4), West Moberly First Nations (West Moberly Lake 168A), Blueberry River First Nations (Blueberry River 205), and Saulteau First Nations (East Moberly Lake 169) (BC Hydro 2013a).* 

The on-reserve population data from each of these communities will be obtained from Aboriginal Affairs and Northern Development Canada annually. New census data will also be included when available.

Changes in net on-reserve populations will be considered in light of the following information:

- Whether the change is greater than annual pre-Project population net migration (2005-2014) to each identified Indian reserve.
- Whether the change was due to a one-time change in housing stock on the reserve or in the Fort St. John area (e.g. housing units created or removed).

If the analysis described above indicates there is a change in net migration, the results of the analysis described in section 7.1 will be used to identify if changes in net migration to the listed Indian reserves were due to Project effects on rental market conditions. BC Hydro will also consider whether additional information regarding net migration to reserves collected by BC Hydro in the course of its consultation and engagement with the First Nations indicates the changes are due to Project worker use of the Fort St. John area private apartment rental market. BC Hydro will provide an opportunity to all identified First Nations to provide information regarding net migration to or from reserves which will be considered in the annual report.

BC Hydro will prepare an annual monitoring summary which includes the data gathered and the results of the analysis for each listed Indian reserve. The summary will be available within 120 days after the last data becomes available for the calendar year.

If the analysis described in section 7.1 results in potential mitigation measures being considered and if a Project related change in net migration to the listed Indian reserves is identified, BC Hydro will work with the City of Fort St. John and the identified First Nation community to identify if any additional mitigation is needed and if so, develop additional housing mitigation measures. Mitigation measures will be considered as described in Consideration of Mitigation Measures under section 7.1.

# 8.0 Process for Revision and Updating of the Plan

If new mitigation measures are identified based on the monitoring in section 7.0, this plan will be updated and submitted to the EAO with the new mitigation measures described in section 5.0.

## 9.0 References

Bass, J. 2009. North Peace Region Value of Tourism Study. June 2009. Prepared for North Peace Economic Development Commission. Fort St. John, B.C.

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  Appendix B Part 4 Community Baseline Report, Community Baseline Amendment
  Report and EIS Integration Summary Table: Horse Lake First Nation. Vancouver, BC.
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  Appendix B Part 5 Community Baseline Report, and EIS Integration Summary Table:
  McLeod Lake Indian Band. Vancouver, BC.
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# **Appendix A. Baseline Conditions and Potential Project Effects**

#### 1.1. Introduction

The interaction between the Project and housing market would be expected during the Project construction phase, due to:

- Changes to population associated with direct and indirect workers and their families living in local communities (primarily Fort St. John and area) and the new demand created for housing.
- Specific plans by BC Hydro to directly provide worker accommodation

#### 1.2. Baseline conditions

The following baseline conditions were reported in the EIS (BC Hydro 2013a). It is recognized that baseline conditions are dynamic and change from time to time.

### 1.2.1. Private Dwellings

Table 1 identifies the number of total dwellings in the PRRD and the communities closest to the Site C dam site in 2011. Unoccupied dwellings are an official part of the total dwellings stock if they are suitable for habitation with heat or power and drinking water (BC Hydro 2013a)

Table 1 - Total Dwellings in the PRRD and communities near the dam site

Community/ Electoral Area	Total Dwellings
City of Fort St. John	8,238
District of Hudson's Hope	495
District of Taylor	563
PRRD Area C	2,409
PRRD	25,854

Notes: Sum of communities and rural areas do not add up to total PRRD because of rounding

Source: Statistics Canada (2011)

#### 1.2.2. Temporary Accommodation

Temporary accommodation in the PRRD comprises fixed-roof facilities such as hotels, motels, bed and breakfasts, lodges, resorts, and vacation properties, as well as campground and RV sites. Although typically portrayed as part of the tourism sector, temporary accommodation plays an important role in serving the short-term housing needs of business travellers who comprise over half of all visitors to Fort St. John (Bass 2009). For some hotel and motel properties, the majority of revenues, particularly in the non-summer months, come from business travellers.

The availability of temporary accommodation varies by season and certain categories of accommodation such as campgrounds may only be available in spring and summer. Demand for temporary accommodation is highest in the summer tourist season and in the winter oil and gas activity period, and decreases during the spring thaw and fall freeze-up, when oil and gas activity slackens (BC Hydro 2013a).

#### 1.2.3. Non-Market Housing

Non-market housing is owned by government or a not-for-profit or cooperative society and is made available to those who cannot afford to pay full market rents. Rents are typically determined by the residents' ability to pay. BC Housing is the provincial Crown agency that develops, manages, and administers a wide range of subsidized housing programs and services. BC Housing often partners with private and non-profit agencies, other levels of government, health authorities, and community groups to increase affordable housing options. In 2011 there were 943 BC Housing-related non-market housing units in the PRRD, including rental assistance for seniors and families, subsidized housing, supportive housing, and emergency housing. Of those, 408 were in the North Peace with the majority in the City of Fort St. John (BC Housing 2011a). BC Housing's Extreme Weather Response program funds 25 temporary shelter mats in the City of Fort St. John during extreme weather conditions from November 1 to March 31 (BC Housing 2011).

In May 2012, the Province and the Salvation Army announced the purchase and proposed redevelopment of the Cedar Lodge Motor Inn as a shelter with transitional beds for at-risk and marginalized people in Fort St. John. Following redevelopment, the facility will include 10 minimum-barrier transitional beds, 20 shelter beds and 26 transitional beds (Salvation Army 2012).

## 1.2.4. Residential Construction Activity and Multiple Listing Service Activity

Housing starts in Fort St. John during this period ranged from 80 (2002) to a peak of 382 (2007), while the average number annually was 168. Dawson Creek annual housing starts ranged from a low of 16 in 2002 and a high of 149 in 2010 (BC Stats and CMHC 2011).

The Multiple Listing Service (MLS) is the primary source of real estate listings in Canada and the standard benchmark for residential housing sales and price trends.

The relationship between units sold and units listed is a key market metric; the higher the ratio, the greater the demand (i.e., sales) for the available supply (i.e., listings). In B.C., ratios above 25% are typical of a sellers' market, while those below 15% indicate a buyers' market (Yu 2012, pers. comm.). In 2006, the housing market was buoyant across northern B.C. but particularly in the PRRD. Since 2006, the ratios for all three areas have declined and the 2010 sales-to-listing ratios of between 11% and 15% are an indication of a buyers' market.

Despite the drop-off in sales activity between 2006 and 2010, average prices continued to rise, with a peak in 2008 in the Fort St. John area and a peak in 2009 in the Northern Lights Real Estate Board area. Prices moderated in 2010 to about \$260,000 for the average property in the Fort St. John area.

The MLS data for the Fort St. John area indicate an active market that responds quickly to both increases and declines in demand, so that buyers' and balanced markets become the norm. Even when demand spikes, as happened in 2006, the market was able to quickly respond with more supply that restored balanced conditions (BC Hydro 2013a).

## 1.2.5. Occupancy Costs and Vacancy Rates

The average dwelling value in the PRRD increased 84% between 2001 and 2006, and although the greatest increases were seen in the District of Tumbler Ridge and City of Dawson Creek, all communities experienced increased dwelling values. 'Value of dwelling' refers to the dollar amount expected by the owner if the dwelling were to be sold. Census data estimate dwelling value for the entire housing stock; thus, values will differ from previously presented MLS sales values, which only account for homes sold during the period shown (Statistics Canada 2006).

As part of its Census household survey, Statistics Canada estimates affordability thresholds based on the proportion of total household income that goes towards meeting housing needs. The percentage of resident households who spend more than 30% of their income on housing is lower in the City of Fort St. John, District of Taylor, and the PRRD than it is in the province as a whole. Tenants in the PRRD are less likely than homeowners to be paying more than 30% of their incomes on housing (Statistics Canada 2006).

Canada Mortgage and Housing Corporation tracks and publishes rental affordability criteria for selected B.C. communities, including Fort St. John and Dawson Creek. In 2011, rents in the bachelor and one-bedroom categories were within the affordability threshold in Dawson Creek and for Fort St. John. However, rents were above the threshold for two- and three-bedroom units in Fort St. John (CMHC 2011).

There is no formal source of temporary accommodation occupancy data in the LAA. Current annual occupancy in the hotel and motel sector in the City of Fort St. John is in the range of 70%, but there are seasonal and even weekly variations to this rate (Pomeroy Hotel, General Manager 2009 and 2011, pers. comm.; Quality Inn, General Manager 2009, pers. comm.).

Occupancy levels for non-market housing vary but are generally considered to be low, especially for emergency and shelter housing in the City of Fort St. John (Salvation Army, Manager 2011, pers. comm.; North Peace Community Resources Society, Executive Director 2011, pers. comm.).

#### 1.2.6. First Nations Housing Baseline

The housing baseline conditions apply in general to the Aboriginal population not living on a reserve in the local assessment area. The specific housing characteristics for the Aboriginal population not living on reserve are not known, as housing data are not typically collected by Aboriginal identification for non-Aboriginal communities such as Fort St. John and Dawson Creek (BC Hydro 2013a).

Work orders for minor repairs and maintenance are common to address on reserve housing. Funding received from Aboriginal Affairs and Northern Development Canada (AANDC) for housing maintenance and repairs is perceived by some First Nations as being insufficient, given the high cost of construction labour and, subsequently, housing repairs.

Funding sources are deemed insufficient, given the relative cost of constructing houses, and so new builds are not common. Housing for seniors is also in high demand, and in short supply. This lack of housing has resulted in crowding on some reserves, and associated health and wellness issues (BC Hydro 2013a).

A report from T8FNs Community Assessment Team and The Firelight Group Research Cooperative reported that the costs for purchasing a house and paying rent in nearby off-reserve communities are considered high, and high costs (particularly the high rental costs) in Fort St. John have negative social effects. Aboriginal persons living in the non-Aboriginal communities in the local assessment area often pay a disproportional amount of rent to food and other expenses, and that high rents act as a deterrent to pursuing post-secondary educations for many, and act as a barrier to elders living in Fort St. John in an effort to be closer to medical services (T8FNs Community Assessment Team and The Firelight Group Research Cooperative 2012).

In 2006, there were 45 occupied private dwellings on the Doig River First Nation reserves. Forty-four per cent were in good condition while 56% required minor repair (Statistics Canada 2007; Statistics Canada 2009). Plans have been developed by Doig River First Nation to increase the number of houses to over 80 (Interraplan Inc. 2004). There are 49 houses on the

Prophet River First Nation reserve, and 25 on the West Moberly First Nations reserve. While housing is in good condition on the Prophet River First Nation reserve, approximately 40% of West Moberly First Nations' houses are in need of minor repairs (BC Hydro 2013a).

The majority of family residences on the Horse Lake First Nation reserve are single homes; however there are two four-plexes that have been recently added to the housing stock. As with most reserves, titles for the land that homes are situated on are vested with the Crown. Approximately 500 of the total 600 band members reside on reserve in 120 of the homes on the reserve. 25 houses were built prior to 1986 and 45 units were constructed between 1986 and 2006 (BC Hydro 2013b).

In terms of housing needs, HLFN's housing stock is need of ongoing maintenance and repair with 35 units in need of minor repair and 30 in need of major repair. HLFN housing has approximately 6 rooms per housing unit, which is relatively average with when compared to the region and Alberta. However, where HLFN differs with provincial average is with the number of residents per room which is approximately four times the provincial average (BC Hydro 2013b).

Like many other First Nations, the HLFN faces significant challenges in respect to building and maintaining its housing stock to meet a growing population. Income levels also make housing affordability and issue for the community as a whole (BC Hydro 2013b).

McLeod Lake Indian Band has 51 houses on reserve lands and also owns some additional housing in communities such as Prince George and Chetwynd which are rented to Band members (BC Hydro 2013c).

Saulteau First Nations has a dwelling count on-reserve, as defined by Statistics Canada, was 110 in 2011. Almost all were occupied by permanent SFNs residents. In comparison, the SFNs Band list indicates 128 households on-reserve, suggesting either an incomplete enumeration by Statistics Canada, or more than one household occupying a single dwelling. The Saulteau First Nations community survey identified that significant number of respondents who do not already live on-reserve indicated that they would be interested in relocating to the community if suitable housing were available (BC Hydro 2013d).

#### 1.2.7. Housing Outlook

Based on the latest population trends, future anticipated economic growth, planned developments, and future land availability, the PRRD communities most likely to receive new population and to experience increased demand for housing are the cities of Fort St. John and Dawson Creek (BC Hydro 2013a).

Demand for non-market housing is expected to continue to increase in the LAA due to population growth, but particularly in the City of Fort St. John and City of Dawson Creek where social services are concentrated. The trend toward a greater proportion of older residents staying in the PRRD in their retirement years will increase demand for seniors-oriented housing, including those that provide supportive or assisted living services (CitySpaces 2006).

Future residential land and housing is planned in all current Official Community Plans in the PRRD.

The City of Fort St. John expects a population increase of 8,000 to 10,000 in the next 10 years, and 20,000 to 30,000 in the next 25 years. The City of Fort St. John's Official Community Plan indicates that their community "has adequate land resources to support this growth for the foreseeable future. As population continues to grow, the City will focus on infill opportunities and densification within our existing service boundary" (City of Fort St. John 2012: 46).

The PRRD's Official Community Plan for the North Peace Fringe Area (i.e., the rural areas of PRRD Area C surrounding the City of Fort St. John and the District of Taylor) proposes to target

residential development to infill areas with access to existing community sewer systems while maintaining the area's medium- and low-density rural residential character. Proposed settlement areas are to be complemented with high-density residential zoning north and east of the existing City of Fort St. John boundaries.

The District of Taylor also expects an additional 125 homes in the community over the next 10 years, including 32 existing lots and 93 lots that the District plans to sell for residential housing development (District of Taylor, Administrator 2011, pers. comm.).

There are approximately 65 full-serviced and zoned vacant residential infill lots in the town centre. A further 60.4 ha of large lots would be suitable for subdivision to accommodate multifamily development (Urban Systems 2012).

# 1.3. Project related change in demand for Housing

Direct Project workers will live either in Project provided new accommodation or in nearby communities. Based on experience with other construction sites in B.C. and Alberta, and based on the estimated number of long-term project jobs, it is estimated that 85% of the direct trades and construction supervisors would live in on-site temporary camp accommodation, and the remaining 15% would live in nearby communities. For BC Hydro management, the reverse is expected, 15% would live on-site and the other 85% would live in the community. The number of in-migrating workers expected to live in communities would range from a high of 492 persons in Year 5 to a low of 93 in Year 0.

Indirect and induced workers would also change demand for accommodation in local communities. The total increase in households is estimated to be about 133 in Year 0, peaking at a total of 713 by Year 5, and declining back to 226 in the final year of construction before returning to non-Project conditions.

It is estimated that 90% of in-migrating workers would choose to reside in the North Peace, mainly the City of Fort St. John, District of Taylor, and Area C of the PRRD. Owned private residences would be the preferred housing choice if the length of employment was more than one year (Nichols Applied Management 2007; Casey 2012, pers. comm.). BC Hydro management, some contractor supervisors, and some trades workers would fall into this category. The close proximity of the Site C dam site to the City of Fort St. John, and short commute times, is another factor that would encourage management and supervisory personnel, and their families, to reside in the community (Kowalik 2012, pers. comm.)

#### 1.3.1. Owned Housing Demand

In the City of Fort St. John area, the increased demand for owned housing is estimated to average 155 residences, with a peak demand of 233 units in 2019 (Year 5). The number of houses available in the market, while maintaining balanced market conditions, would average 288 properties during the construction period, and an estimated 292 properties in 2019. The Project effect, therefore, is expected to be positive, as it would create more balance conditions, especially if a buyers' market were underway when peak effects occur (BC Hydro 2013a)

#### 1.3.2. Rental Housing Demand

Estimated demand for rental housing will range from 42 units in Year 0 to a high of 226 units in Year 5. A vacancy rate of 9% (average vacancy rate between 2007 and 2011), or higher, would allow the market to absorb all project demand. If the vacancy rate should go lower, the likelihood of a market imbalance increases. Given the variability in the vacancy rate over the last five years, a low-vacancy period, and therefore a market imbalance, during the course of project construction is reasonably likely to occur (BC Hydro 2013a).