

COMMUNITY MEASURES AGREEMENT

THIS AGREEMENT is dated as of the 22nd day of April, 2016 (the "Effective Date")

BETWEEN:

CITY OF FORT ST. JOHN, a municipal corporation continued
under the *Local Government Act*, R.S.B.C. 1996, c. 323

("City")

AND:

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY, a
corporation constituted under the authority of the *Hydro and
Power Authority Act*, R.S.B.C. 1996, c. 212, as amended

("BC Hydro")

WHEREAS:

- A. BC Hydro has proposed to construct and operate the Site C Clean Energy Project, consisting of a dam and hydroelectric generating station on the Peace River, approximately seven kilometres southwest of the community of Fort St John, a reservoir, and other components (the "Project");
- B. In a process agreed to by the Parties, BC Hydro and the City have engaged in extensive consultations in respect of the potential impacts of the Project on the community of Fort St. John and certain issues, interests and concerns with the Project raised by the City;
- C. BC Hydro and the City have agreed that by constructing and operating the Project and implementing the measures set out in Schedule 1, such issues, interests and concerns will be addressed;
- D. BC Hydro and the City wish to enter into this Agreement to define the legally binding obligations that BC Hydro and the City owe to each other with respect to the Project and the measures set out in Schedule 1;
- E. There are two types of measures set out in Schedule 1: measures based on those proposed in the Environmental Impact Statement (defined below), and additional measures that BC Hydro proposes in response to particular interests raised by the City; and

- F. The Parties agree that it is beneficial to both Parties to specify in the body of this Agreement some of those measures, in particular: i) the additional measures proposed in response particular interests of the City and ii) certain of the measures that, although proposed by BC Hydro in the EIS, primarily or solely relate to the City.

NOW THEREFORE in consideration of the premises and the mutual covenants and agreements of the Parties contained in this, the Parties agree as follows:

ARTICLE 1 INTERPRETATION

1.1 Definitions. Capitalized words or phrases not defined elsewhere in this Agreement have the following meanings:

- (a) "85th Avenue Industrial Lands" means those parcels of land owned by BC Hydro located in the PRRD adjacent to Fort St. John as described in Schedule 2;
- (b) "Agreement" means this Community Measures Agreement, including its recitals and attached Schedule(s);
- (c) "Authorization" means any right, tenure, permit, certificate, approval, licence, investigative use permit, temporary use permit, order or exemption or any other decision or action granted, issued, made or taken or to be granted, issued, made or taken by any governmental authorities in connection with the Project and any amendments or supplements to or replacements of the same, including the Environmental Assessment Certificate and the Decision Statement;
- (d) "BC Housing" means the BC Housing Management Commission;
- (e) "Construction Period" means the period from the Construction Start Date to the Construction Stop Date;
- (f) "Construction Period Payments" has the meaning set out in Section 3.3(b);
- (g) "Construction Start Date" means July 27, 2015;
- (h) "Construction Stop Date" means the date on which all generating units installed as part of the Project are commissioned to commence continuously generating electricity in a manner that meets BC Hydro's system interconnection requirements, as those requirements are described in the BC Hydro document entitled "60kv to 500kv Technical Interconnection Requirements for Power Generators" and as that document may be updated, amended or replaced from time to time, as determined by BC Hydro in its sole discretion, provided that:

- (i) if the installation or energization of one or more (but not all) of the generating units is delayed as a result of a manufacturer's defect, design issue or by force majeure, then the Construction Stop Date will occur on the date that all generating units other than the affected generating unit(s) are energized in the manner set out above; and
- (ii) if this Agreement is terminated in accordance with Section 6.3 then the "Construction Stop Date" means the date on which BC Hydro or its contractors complete the physical activities required for substantial completion of decommissioning and restoration in accordance with all applicable regulations in effect at that time, as determined by BC Hydro in its sole discretion and communicated to the City in writing;
- (i) "Construction Year" means the 12 month period commencing on the Construction Start Date and each succeeding 12 month period commencing on an anniversary of the Construction Start Date that falls within the Construction Period;
- (j) "Contractual Measures" means the measures set out in Article 3;
- (k) "Decision Statement" means in respect of the Project a decision statement issued to BC Hydro by the federal Minister of Environment under Section 54 of the *Canadian Environmental Assessment Act, 2012*, S.C. 2012, c. 19, s. 52 (as amended);
- (l) "Environmental Assessment" means the environmental assessment of the Project conducted pursuant to the *Canadian Environmental Assessment Act, 2012* and the *B.C. Environmental Assessment Act*, and carried out in accordance with the "Agreement to Conduct a Cooperative Environmental Assessment, including the Establishment of a Joint Review Panel, of the Site C Clean Energy Project" dated February 8, 2012, as amended in August 2012;
- (m) "Environmental Assessment Certificate" means in relation to the Project an environmental assessment certificate issued to BC Hydro by the provincial Minister of the Environment under Section 17(3) of the *B.C. Environmental Assessment Act*, S.B.C. 2002, c. 43 (as amended);
- (n) "Environmental Impact Statement" or "EIS" means the environmental impact statement prepared in respect of the Project and submitted for purposes of the Environmental Assessment;
- (o) "Fort St. John Water Supply Monitoring and Mitigation Plan" means the plan for water supply monitoring and mitigation described in Section 3.11 and attached as Schedule 4, as amended from time to time;

- (p) “In-Community Housing” means the 50 units of purpose-built rental accommodation to be constructed in the community of Fort St. John by BC Housing, of which 40 units will be occupied by BC Hydro’s workforce during the Construction Period and transitioned to permanent affordable housing after the Construction Period, and 10 units will be developed for use by the community as affordable housing;
- (q) “MOTI” means the Ministry of Transportation and Infrastructure;
- (r) “North Bank Area Roads” means those portions of the following routes that are located within an area that is bounded to the south by the Peace River, to the north by Highway 97, to the west by 269 Road (and including 269 Road) and to the east by 100th Street: (i) 269 Road; (ii) 240 Road; (iii) Old Fort Road; (iv) 85th Avenue and (v) 271 Road;
- (s) “Northern Health” means the Northern Health Authority, a regional health board continued pursuant to Section 4(1) of the *Health Authorities Act*, R.S.B.C. 1996, c. 180;
- (t) “Party” means BC Hydro or the City;
- (u) “PRRD” means the Peace River Regional District;
- (v) “Project” has the meaning set out in paragraph A of the Recitals;
- (w) “Proposed Measures” means all of the measures described in Part 1 and Part 2 of the document attached hereto as Schedule 1 except (i) the measures set out in that document at paragraphs 1(a)-(f), 2(g), 3(a), 4(d) and (e), 5(a) and (b), 7(c), 8(e), 9(a), 11(a)(vi), 12(d) and (i), 13(c) and (d), 15(b)(i) and (ii), 16(a)(i) and (ii), 17(b) and (c), 20(a)(i) - (iv), 21(a) and (b), 22(b), (c) and (d), 23(b), 24(a) and (b), 25(a) and (b), 26(b) and (c), 27(c) and (d) and 29(a)-(d); and (ii) that portion or aspect of any Required Measure that is substantially achieved by BC Hydro as a result of measures that are implemented by BC Hydro in order to comply with the Environmental Assessment Certificate, the Decision Statement or other Authorization, or any conditions imposed pursuant to any of the foregoing, or to comply with any applicable law;
- (x) “Required Measures” means any of the measures described in Part 1 and Part 2 of the document attached hereto as Schedule 1 which are similar to or are intended to achieve a similar result to measures that are implemented by BC Hydro in order to comply with the Environmental Assessment Certificate, the Decision Statement or other Authorization, or any conditions imposed pursuant to any of the foregoing, or to comply with any applicable law;

- (y) “Section 35(1) Rights” means in respect of any First Nation or aboriginal group, the asserted Aboriginal or treaty rights of that First Nation or aboriginal group under Section 35(1) of the *Constitution Act, 1982*;
- (z) “Site Master Plan” has the meaning set out in Section 3.1(g);
- (aa) “Traffic Monitoring and Mitigation Plan – Fort St. John and North Bank Area Roads” means the plan for traffic monitoring and mitigation described in Section 3.8 and attached as Schedule 3, as amended from time to time; and
- (bb) “Workforce Camp” means the temporary workforce accommodation to be constructed and operated at the Dam site as contemplated in Section 4.3.6.2 of the EIS.

1.2 Interpretation. In this Agreement:

- (a) if a word or phrase is defined, then its other grammatical forms will have a corresponding meaning, the singular may include the plural and conversely, and a reference to any gender includes all genders;
- (b) the words “include”, “includes” and “including” are to be read as if followed by the words “without limitation”;
- (c) headings are for convenience only and do not form part of this Agreement nor affect its interpretation;
- (d) if the time for doing an act required to be done under this Agreement falls or expires on a day that is not a business day, the time is extended to the end of the next business day;
- (e) the language in this Agreement expresses the mutual intent of the Parties and no rule of strict construction will be applied against either Party;
- (f) except as expressly stated herein, where a reference is made to the Parties consulting with one other, discussing, working together collaboratively on, or jointly developing any document, plan or thing, or any other similar phrase, the Parties will work diligently and in good faith to attempt to reach agreement without undue delay, provided that, for greater certainty, the Parties are not required to reach final agreement in respect of such document, plan or thing provided that the Parties have acted reasonably, in good faith and without undue delay in seeking such agreement;

- (g) where BC Hydro is required to make a payment under this Agreement, the amount specified is inclusive of all taxes that may also be payable in respect of such payment;
- (h) where BC Hydro is required under this Agreement to implement a measure, BC Hydro will implement that measure or will ensure that its contractors do so; and
- (i) where a reference is made to a statute, then the reference includes any regulations related to the statute and references to statutes or regulations include all amendments thereto and any statutes or regulations that replace, amend, or supersede the same.

1.3 The following Schedules are attached to this Agreement:

Schedule 1 – Site C Clean Energy Project – BC Hydro’s Proposed Measures to Provide a Lasting Benefit to the Community of Fort St. John.

Schedule 2 – 85th Avenue Industrial Lands: Legal Description of Parcels.

Schedule 3 - Traffic Monitoring and Mitigation Plan, Fort St. John and North Bank Area Roads

Schedule 4 - Fort St. John Water Supply Monitoring and Mitigation Plan

1.4 Unless otherwise expressly stated herein, if there is any inconsistency between the terms contained in the body of this Agreement and the terms contained in its Schedules, then the terms contained in the body shall govern the interpretation of this Agreement (but only to the extent required to remove the inconsistency).

1.5 Notwithstanding any other provision in this Agreement, BC Hydro is under no obligation to perform any action or implement any Contractual Measure or Proposed Measure to the extent it would preclude compliance with:

- (a) the Environmental Assessment Certificate, the Decision Statement, or other Authorization, or any conditions imposed pursuant to any of the foregoing;
- (b) BC Hydro’s obligations:
 - (i) to consult any First Nation or other aboriginal group potentially affected by the Project in respect of its Section 35(1) Rights; or
 - (ii) under any accommodation measures proposed or agreed between BC Hydro or the Crown and any affected First Nation or aboriginal group in respect of its Section 35(1) Rights; and

- (c) any other applicable law.

ARTICLE 2

PROPOSED MEASURES

- 2.1 Subject only to Section 1.5 of this Agreement, BC Hydro will implement the Proposed Measures, including that portion or aspect of any Required Measure that has not been substantially achieved by BC Hydro as a result of measures that are implemented by BC Hydro in order to comply with the Environmental Assessment Certificate, the Decision Statement or other Authorization, or any conditions imposed pursuant to any of the foregoing, or to comply with any applicable law.

ARTICLE 3

CONTRACTUAL MEASURES

3.1 85th Avenue Industrial Lands

- (a) If the City makes an application to extend the municipal boundaries of Fort St. John to include the 85th Avenue Industrial Lands in the municipal boundaries (an "Expansion Application") and either of the following conditions is met:

- (i) the Expansion Application is made in or after the final Construction Year;
or
- (ii) the Expansion Application includes terms to the effect that BC Hydro's costs related to grants-in-lieu in respect of the 85th Avenue Industrial Lands will not increase as a result of the change in jurisdiction prior to 2024,

then BC Hydro will deliver a letter to the City or Provincial government, as requested, confirming that BC Hydro is in favour of the Expansion Application as it applies to the 85th Avenue Industrial Lands.

- (b) The City agrees that the delivery of such a letter and BC Hydro's support of an Expansion Application will not be, and the City will not take the position that they are, an acknowledgment or agreement by BC Hydro that BC Hydro or anyone performing services or work on behalf of BC Hydro, including its employees, contractors, subcontractors and agents, are subject to, or have attorned to, any laws, including City bylaws, that are not otherwise applicable to BC Hydro and those performing services or work on behalf of BC Hydro, including its employees, contractors, subcontractors and agents.

- (c) BC Hydro will provide the City and the PRRD with copies of the draft Environmental Protection Plans for the development and use of the 85th Avenue Industrial Lands so that the City and the PRRD may have an opportunity to provide information and advice based on any applicable environmental and human health standards and guidelines of the City or the PRRD, including applicable bylaws relating to noise, nuisance, traffic and unsightly premises. BC Hydro will take that feedback into account when finalizing the Environmental Protection Plans.
- (d) In respect of BC Hydro's planned use of 85th Avenue Industrial Lands during the Construction Period, BC Hydro will implement the measures specifically referred to in Appendix "A" to Schedule 1.
- (e) If BC Hydro decides to sell all or any of the 85th Avenue Industrial Lands then BC Hydro will promptly notify the City and BC Hydro and the City will meet and enter into good faith negotiations to attempt to agree upon terms and conditions under which BC Hydro will sell and the City will purchase some or all of the 85th Avenue Industrial Lands.
- (f) If BC Hydro and the City have not entered into a purchase and sale agreement in respect of such Lands on terms satisfactory to each party in their sole discretion within 60 days of BC Hydro's delivery of a notice advising the City of its intention to sell (or such other period as the Parties may mutually agree in writing), then BC Hydro may at any time after such period has elapsed negotiate and enter into a purchase and sale agreement or agreements with any third party or parties in respect of the sale of the 85th Avenue Industrial Lands, free from any claim or interest whatsoever by the City, provided that for 90 days after such period has elapsed, BC Hydro may not negotiate or enter into a purchase and sale agreement in respect of the 85th Avenue Lands with any third party or parties on terms and conditions that are in aggregate more favourable than the terms and conditions offered by BC Hydro to the City.
- (g) By the end of Construction Year 2, BC Hydro will provide a forecast of the anticipated end date of construction related activity at the 85th Avenue Industrial Lands. Upon receiving a request of a local government having jurisdiction over the 85th Avenue Industrial Lands by no later than 24 months prior to BC Hydro's anticipated end date of construction related activity at the 85th Avenue Industrial Lands, BC Hydro will pay that local government \$50,000 of its costs of developing a site master plan for the 85th Avenue Industrial Lands that is consistent with light industrial zoning within and around the perimeter of the 85th Avenue Industrial Lands (the "Site Master Plan"). If the Site Master Plan is received by BC Hydro no later than 12 months before BC Hydro's anticipated end

date of construction related activity at the 85th Avenue Industrial Lands, then BC Hydro will take that Site Master Plan into account in determining final land profiles and retention of or removal of roads, berms, fencing, vegetation and drainage features in its site reclamation plan for the 85th Avenue Industrial Lands and will make its site reclamation plan consistent with the Site Master Plan for the development of the 85th Avenue Industrial Lands for light industrial use.

- (h) BC Hydro will ensure that all necessary contracts with third parties provide, or are capable of being amended to provide, that any site reclamation plan for 85th Avenue Industrial Lands may be subject to amendment or change in order for BC Hydro to meet the commitment set out at s. 3.1(g).

3.2 Collaboration, Coordination and Joint Decision-Making

- (a) Within 30 days of (i) the Effective Date and (ii) BC Hydro receiving an invoice issued by the City, BC Hydro will pay the City \$125,000 in respect of the City's collaboration and technical engagement efforts. This amount is in addition to any amount that BC Hydro has previously committed to pay to the City under the Local Government Contribution Agreement dated February 5, 2011 (as extended from time to time) and the Memorandum of Understanding between BC Hydro and the City dated March 25, 2013.

3.3 Adequate, Predictable and Sustainable Source of Funding to the City

- (a) The Parties have agreed that payment by BC Hydro to the City of the amounts set out in this section will provide funding to the City to address impacts associated with the Project.
- (b) In respect of each Construction Year during the Construction Period, BC Hydro will pay to the City the following amounts ("Construction Period Payments"):
 - (i) Construction Year 1: \$1,000,000;
 - (ii) Construction Year 2: \$1,035,000;
 - (iii) Construction Year 3: \$1,071,000;
 - (iv) Construction Year 4: \$1,109,000;
 - (v) Construction Year 5: \$1,148,000;
 - (vi) Construction Year 6: \$1,188,000;
 - (vii) Construction Year 7: \$1,229,000;

- (viii) Construction Year 8: \$1,272,000; and
- (ix) for each additional Construction Year (if any), an amount calculated in accordance with Section 3.3(c).
- (c) If the Construction Period continues for more than eight Construction Years, then for each succeeding Construction Year BC Hydro will pay to the City an amount equal to the Construction Period Payment paid in respect of the previous Construction Year multiplied by 1.035.
- (d) If the Construction Stop Date occurs before the end of Construction Year 7, then BC Hydro will make a one-time final payment to the City in the amount of the Construction Period Payment that would have been payable in the next Construction Year pursuant to Section 3.3(b) but for the early completion or abandonment of the Project; and, for greater clarity, BC Hydro will be relieved of any other payment obligations under this Section 3.3.
- (e) BC Hydro will make the payments provided for in this Section 3.3 within 60 days of the later of:
 - (i) BC Hydro's receipt of an appropriate invoice from the City; and
 - (ii) (A) in respect of the 1st Construction Period Payment, the Effective Date;
(B) in respect of all other Construction Period Payments, the starting date of the applicable Construction Year; and
(C) in respect of a one-time final payment made pursuant to Section 3.3(d), the Construction Stop Date.

3.4 Monitoring to Identify and Address Unforeseen Impacts and Issues

- (a) The Parties will establish and appoint members to a Site C Community Agreement Monitoring Committee ("Committee") for the Construction Period within 60 days of Effective Date. If this Agreement is terminated in accordance with Section 6.3, the Committee will continue for a period of 1 year after the Construction Stop Date.
- (b) Each Party will appoint 3 members to the Committee:
 - (i) BC Hydro will appoint the following members to the Committee:
 - (A) the senior executive in charge of the Site C Clean Energy Project;

- (B) a senior manager with oversight of social and economic measures for the Site C Clean Energy Project;
 - (C) a senior manager with oversight of implementation of the Fort St. John Community Measures Agreement for the Site C Clean Energy Project; and
- (ii) the City will appoint the following members to the Committee
 - (A) Mayor;
 - (B) Chief Administrative Officer; and
 - (C) Director of Strategic Services.
- (c) The Committee's responsibilities will include:
 - (i) considering and seeking to resolve issues that arise from the implementation of this Agreement; and
 - (ii) considering and seeking to resolve other matters impacting the City as they arise from the Project.
- (d) The Committee will work collaboratively, discuss and examine issues together and, in good faith, reasonably attempt to resolve potential issues.
- (e) The Committee will be co-chaired by BC Hydro's senior executive in charge of the Site C Clean Energy Project and the Mayor.
- (f) The Committee will meet at least twice a year or upon the reasonable request of the either co-chair.
- (g) BC Hydro will:
 - (i) provide the administrative support to coordinate and record meetings; and
 - (ii) fund the direct expenses associated with the meetings including meeting room rentals, meals and travel expenses.
- (h) At its first meeting or as soon as reasonably possible thereafter, the Committee the will establish its Terms of Reference and its procedures.

3.5 Housing of the Workforce

- (a) BC Hydro will work with the City to “showcase” energy efficiency, conservation and other green technologies that may be incorporated in the In-Community Housing Developments.

3.6 Camp Workforce

- (a) During the Construction Period, in order to help Northern Health and the City plan service levels, BC Hydro will provide Northern Health and the City annually with the previous year’s workforce and camp population statistics and its projected workforce and projected camp population for the following year.
- (b) Subject to Section 0, for each Construction Year set out in Column A of the table below, the City will issue to BC Hydro, in advance, a block of entry tickets for the public swimming pool and skating rink facilities in Fort St. John, in the numbers set out in the applicable row of Column C and Column D, which entry tickets will be valid for at least one year from the date of issue. As consideration for the issuance of each block of entry tickets, BC Hydro agrees to pay to the City the amount set out in the applicable row of Column E, which amount is inclusive of tax, annually on the date the Construction Period Payment is made for that year.

A	B	C	D	E
Construction Year	Camp Population (based on EIS)	Total Pool Tickets (4 per person)	Total Skating Rink Tickets (4 per person)	Annual Payment
1	145	580	580	\$10,730
2	502	2,008	2,008	\$37,148
3	683	2,732	2,732	\$50,542
4	792	3,168	3,168	\$58,608
5	1,372	5,488	5,488	\$101,528
6	1,227	4,908	4,908	\$90,798
7	768	3,072	3,072	\$56,832
8	233	932	932	\$17,242
Total				\$423,428

* Payment based on 200% of: \$6 per pool ticket, \$3.25 per skating rink ticket (and is inclusive of tax)

- (c) If the Construction Period continues for more than eight Construction Years, then for each succeeding Construction Year, BC Hydro will pay to the City an amount equal to the following:

$$A * [(4 * B) + (4 * C)]$$

Where

- A** = the projected camp population in that year as estimated by BC Hydro and provided by BC Hydro to Northern Health and the City pursuant to Section 3.6(a);
- B** = the ticket price for pre-purchased pool tickets advertised by the City for that year, multiplied by 2; and
- C** = the ticket price for pre-purchased skating rink tickets advertised by the City for that year, multiplied by 2.

On receipt of such payment, the City will issue to BC Hydro, in advance, a quantity of entry tickets sufficient to provide 4 entry tickets for the public swimming pool and 4 entry tickets for the skating rink facilities in Fort St. John for each worker in the projected camp population in that year as estimated by BC Hydro pursuant to Section 3.6(a).

- (d) If the Construction Stop Date occurs before the end of Construction Year 7, each Party is relieved of its obligations under Section 3.6(b) in respect of subsequent Construction Years.

3.7 Use of North Peace Regional Airport

- (a) BC Hydro will track contractor and employee use of charter flights for workforce travel during the Construction Period and will provide a usage summary to the North Peace Airport Society and airport management on an annual basis.
- (b) BC Hydro will pay and will cause its contractors to pay all required user fees associated with airport use at generally applicable rates.

3.8 Traffic Monitoring and Mitigation

- (a) BC Hydro and the City have developed the Traffic Monitoring and Mitigation Plan – Fort St. John and North Bank Area Roads for Project-related traffic in the vicinity of the community of Fort St. John and the North Bank Area Roads.

- (b) BC Hydro will implement the Traffic Monitoring and Mitigation Plan – Fort St. John and North Bank Area Roads during the Construction Period. In accordance with section 5.0 of the Traffic Monitoring and Mitigation Plan – Fort St. John and North Bank Area Roads, if there is an increase in traffic levels that is substantially attributable to the Project and which results in a need for mitigation (as supported by appropriate analyses conducted by BC Hydro); then BC Hydro will discuss the need for mitigation with the City, MOTI, PRRD and other stakeholders. If, as a result of such discussions, measures are identified to mitigate the effects of such increased traffic levels and are agreed by BC Hydro, then BC Hydro and the City may discuss the City's involvement in undertaking the mitigation measures. If agreement is reached on mitigation measures to be undertaken by the City, the City will undertake the agreed measures and BC Hydro will compensate the City for the reasonable direct costs it incurs to undertake the agreed measures.

3.9 Camp Airport and Leisure Shuttle Bus

- (a) BC Hydro will provide members of the Project workforce resident at the Workforce Camp with a commercially reasonable airport shuttle transfer service between the Workforce Camp and the airport and a commercially reasonable leisure shuttle service between the Workforce Camp and the community of Fort St. John. The airport shuttle transfer service may include both scheduled and unscheduled transport services, and may include both commercial transport providers and transport provided directly by BC Hydro or its contractors. The scheduled airport shuttle transfer service will not include the use of taxis.
- (b) BC Hydro will consult with the City on (i) proposed routes and schedules for regularly scheduled Project shuttle services and (ii) any substantive changes to the foregoing.

3.10 Support for the Non-Profit Sector

- (a) BC Hydro will establish a community fund to provide financial support to non-profit organizations (other than government bodies) in the Peace River region during the Construction Period. BC Hydro will contribute a total of \$100,000 per year for the first eight (8) Construction Years to such community fund. If the Construction Stop Date occurs before the end of Construction Year 7, then BC Hydro will make a one-time final contribution to the community fund in the amount of \$100,000; and, for greater certainty, BC Hydro will be relieved of any other payment obligations under this Section 3.10(a).

- (b) BC Hydro will provide a total of \$75,000 to one or more non-profit organizations within the community of Fort St. John (other than government bodies), agreed to by BC Hydro and the City.
- (c) BC Hydro will provide the following funding to emergency and transition housing providers within the community of Fort St. John, solely for the purpose of providing emergency and transition housing and services to users of such housing:
 - (i) \$25,000 to Skye's Place;
 - (ii) \$25,000 to Meaope Transition House for Women; and
 - (iii) \$200,000 to the Salvation Army Northern Centre of Hope;or, if these organizations decline or fail to use the funds for that purpose, to other non-profit organizations within the community of Fort St. John to use for that purpose.
- (d) BC Hydro will offer the payments to the non-profit entities referred to in Section 3.10(b) and 3.10(c) prior to or within six months of the Effective Date. The payments to the non-profit entities referred to in Section 3.10(c) will be subject to confirmation that the funds will be used for the purpose of providing emergency or transition housing and services to users of such housing.

3.11 Water Quality and Quantity

- (a) BC Hydro and the City will each implement the actions required of it under the Fort St. John Water Supply Monitoring and Mitigation Plan during the Construction Period and for the longer of two years after the Construction Stop Date or until the seasonal ground water quality has stabilized as evidenced in a report prepared by one or more qualified persons on behalf of BC Hydro and provided to the City by BC Hydro. The Fort St. John Water Supply Monitoring and Mitigation Plan includes monitoring to determine possible changes in quality and quantity and, if required, to identify appropriate groundwater protection measures.
- (b) The City will collect and deliver to BC Hydro, in accordance with the Fort St. John Water Supply Monitoring and Mitigation Plan, a groundwater sample from each of its five water supply wells four times in each 12 month period from the Construction Start Date. BC Hydro will provide \$1,800 per year toward the incremental cost to the City of obtaining two sets of samples per year above the

City's normal sampling frequency for raw water samples from each of its five wells.

- (c) In accordance with the Fort St. John Water Supply Monitoring and Mitigation Plan, BC Hydro will transport all samples collected by both BC Hydro and the City to an accredited lab for analysis, and will provide results to the City in an electronic format. BC Hydro will prepare quarterly data reports and an annual monitoring report, and will provide these to the City.

3.12 Future Water Supply Needs

- (a) BC Hydro will not object to a clause in the conditional or final water licence issued to the City that would allow it to use the Site C reservoir as a source of domestic water supply for the community of Fort St. John, subject to the following:
 - (i) In agreeing not to object, BC Hydro will not be taken to have approved or consented to any specific application or proposal for works by the City;
 - (ii) The City is responsible for making any application for rights to use water from the Site C reservoir;
 - (iii) BC Hydro is not obligated to make any application to any governmental authority to authorize such use or pay any fees or costs associated with such application;
 - (iv) Subject to subsection 3.12(a)(v), BC Hydro's agreement not to object to an application by the City to withdraw water from the Site C reservoir is subject to BC Hydro favourably completing a due diligence review, acting at its sole discretion, in respect of a specific proposal from the City, consistent with its review of similar applications from third parties, and with respect to compliance with this Section 3.12;
 - (v) Notwithstanding subsection 3.12(a)(iv), BC Hydro agrees not to object to an application by the City on the basis of BC Hydro's agreement to forego charges to the City for the lost value of generation for water withdrawn from the reservoir pursuant to Section 3.12(b).
 - (vi) BC Hydro is under no obligation to supply water, maintain specific reservoir elevations or ensure that the water quality of any water withdrawn from the Site C reservoir is appropriate for use as a source of domestic water supply;

- (vii) BC Hydro will not be liable for any water fees or other amounts payable in respect of any water withdrawn from the Site C reservoir that is used for any purpose other than power generation by BC Hydro; and
 - (viii) The City's water use and any associated works will not impair the operation of any of BC Hydro's facilities on the Peace River or fetter BC Hydro's discretion in respect of such operations or in respect of its exercise of any rights granted to it under any water licence.
- (b) BC Hydro will not charge the City for the lost value of generation for water withdrawn from the reservoir for the purposes of domestic water supply and municipal water works (excluding the use of water for other purposes such as bulk water and industrial sales).

3.13 RCMP Service

- (a) Within 30 days of receipt of an invoice, BC Hydro will pay to the City an amount equal to the City's share, which may be 100%, of the all-inclusive cost (salary and O&M) of one RCMP officer to be posted to the Fort St. John detachment to serve the community of Fort St. John and the surrounding region as deployed by the Officer in Charge of the detachment in his or her sole discretion and in accordance with the policies of the Fort St. John post detachment (the "Additional Officer") during the Construction Period:
- (i) BC Hydro will advise the Ministry of Justice of its commitment to fund the Additional Officer so that the Additional Officer may be taken into account during analysis and any recommendations related to incremental policing resources needed as a result of the Project;
 - (ii) BC Hydro will provide the funding for the Additional Officer position while the position is staffed during the Construction Period; and
 - (iii) If this Agreement is terminated in accordance with Section 6.3 then BC Hydro will provide the funding for the Additional Officer position while the position is staffed until the later of the Construction Stop Date and the anniversary of the date of termination.

3.14 Enhancement of the City as BC's Energy Capital

- (a) If the City provides BC Hydro with a proposal to develop an Energy Innovation Centre, BC Hydro will explore and discuss with the City the potential to become a partner with the City and other companies.

3.15 Local Procurement of Goods and Services

- (a) BC Hydro will work with the Fort St. John District Chamber of Commerce, the Fort St. John Economic Development Department and the Fort St. John Construction Association to inform local contractors about Project procurement opportunities.
- (b) BC Hydro will maintain the BC Hydro Community Consultation Office located in Fort St. John during the Construction Period. The BC Hydro Community Consultation Office will provide information to the public, businesses and other stakeholders in respect of Project procurement, employment and construction activities.

ARTICLE 4

COVENANTS AND REPRESENTATIONS OF THE CITY

- 4.1** The City will on a timely basis provide such additional information and perform such further actions as BC Hydro may reasonably request to assist BC Hydro to implement the Proposed Measures, the Contractual Measures and the Required Measures.
- 4.2** The City agrees to use any amounts paid by BC Hydro to the City under this Agreement only for the purposes for which such payments were expressly intended.
- 4.3** The City will not seek any other payments or other consideration from BC Hydro with respect to:
 - (a) any potential impacts of the Project on the City and the community of Fort St. John identified in the Environmental Assessment; or
 - (b) the implementation of this Agreement or any of the Required Measures;other than as expressly provided for in this Agreement.
- 4.4** The City confirms that the issues, interests and concerns that it has identified with respect to the Project are addressed.

ARTICLE 5

REPRESENTATION AND WARRANTIES

- 5.1** BC Hydro represents and warrants to the City that:
 - (a) it has the legal power, capacity and authority to enter into this Agreement and to carry out its obligations under this Agreement;

- (b) the obligations contained in this Agreement are valid and legally binding on BC Hydro; and
- (c) it has taken all necessary actions and obtained all necessary approvals to enter into this Agreement and carry out its obligations under this Agreement.

5.2 The City represents and warrants to BC Hydro that:

- (a) it has the legal power, capacity and authority to enter into this Agreement and to carry out its obligations under this Agreement;
- (b) the obligations contained in this Agreement are valid and legally binding on the City; and
- (c) it has taken all necessary actions and obtained all necessary approvals to enter into this Agreement and carry out its obligations under this Agreement.

**ARTICLE 6
TERM AND TERMINATION**

- 6.1** This Agreement is effective from the Effective Date until the date all the obligations of the Parties hereunder, other than Sections 3.1(a), 3.1(e) and 3.12, have been performed or this Agreement is terminated in accordance with Section 6.3.
- 6.2** BC Hydro will advise the City in writing when the conditions to establish the Construction Stop Date have been met.
- 6.3** BC Hydro may terminate this Agreement on written notice to the City, with immediate effect, if at any time it determines in its sole discretion that it is necessary or desirable to abandon the Project. In the event of termination under this section, the Agreement will remain in force until the Construction Stop Date.
- 6.4** The following provisions will survive the expiry or termination of this Agreement: sections 3.1(a), 3.1(b), 3.1(e), 3.1(f), 3.11, 3.12, 3.14 and Article 7 and Article 8.

**ARTICLE 7
DISPUTE RESOLUTION**

- 7.1** If a dispute arises between the Parties in connection with the interpretation or performance of any Contractual Measures that relate to:
 - (a) the measures relating to the 85th Avenue Industrial Lands set out in Appendix A of Schedule 1;

- (b) the Traffic Monitoring and Mitigation Plan – Fort St. John and North Bank Area Roads;
- (c) Fort St John Water Supply Monitoring and Mitigation Plan;
- (d) Future Water Supply Needs; or
- (e) whether the Required Measures have been substantially achieved through measures that are implemented by BC Hydro in order to comply with the Environmental Assessment Certificate, the Decision Statement or other Authorization, or any conditions imposed pursuant to any of the foregoing, or to comply with any applicable law;

then either Party may deliver to the other Party a written notice (a “Dispute Notice”) describing in reasonable detail the issues in dispute (the “Dispute”) and the Parties agree to finally resolve the Dispute in accordance with the procedure set out in this Article 7.

- 7.2 The Parties will attempt in good faith to reach a reasonable resolution of the Dispute within 30 days of delivery of the Dispute Notice (or within such other time period agreed to by the parties) and, subject to applicable laws, the Parties will provide candid and timely disclosure to each other of all relevant facts, information and documents to facilitate those efforts.
- 7.3 If the Parties have not resolved the Dispute within 30 days of delivery of the Dispute Notice, then the Parties will refer the Dispute to the Executive Responsible for Site C, BC Hydro and the City Manager of Fort St. John, who will attempt in good faith to resolve the Dispute within 15 days of delivery of the reference.
- 7.4 If the Parties have not resolved the Dispute after completing the procedure in Section 7.3, then the Executive Responsible for Site C, BC Hydro and the City Manager of Fort St. John will refer the Dispute to the CEO, BC Hydro and the Mayor of Fort St. John, who will attempt in good faith to resolve the Dispute within 15 days of delivery of the reference.
- 7.5 If, at any point in the dispute resolution process, there is a disagreement on the facts of the Dispute (a “Factual Disagreement”), either or both Parties may engage a subject matter expert to clarify the facts at their own cost, subject to the following:
 - (a) If BC Hydro and the City agree that a particular subject matter expert is required to resolve the Factual Disagreement, that subject matter expert will be engaged jointly and the costs shared equally between BC Hydro and the City; and

- (b) If a subject matter expert is engaged by the City alone or jointly with BC Hydro and the Dispute is resolved in favour of the City, then BC Hydro will reimburse the City for its reasonable costs of engaging the subject matter expert and in no event will BC Hydro seek recovery from the City of its costs of engaging a subject matter expert.
- 7.6 If the Parties are unable to resolve the Dispute after completing the procedures set out in Sections 7.1 to 7.4 and, if applicable 7.5, then BC Hydro will fund the engagement of a facilitator from a mutually agreed-upon list who will attempt to resolve the Dispute within 30 days.
- 7.7 Unless the Parties otherwise agree, no documents, information or correspondence provided by either Party under the procedures set out in Sections 7.1 to 7.5 will be privileged from disclosure in any subsequent legal proceeding.
- 7.8 If the Parties mutually agree then the dispute resolution process set out in this Article 7 may be applied to a dispute arising under any other term of this Agreement.

ARTICLE 8 GENERAL PROVISIONS

- 8.1 This Agreement is not confidential.
- 8.2 BC Hydro's payment obligations under this Agreement are subject to the City issuing an invoice to BC Hydro in respect of the amounts payable and such invoice being issued within one year of the amounts becoming payable. BC Hydro will pay such amounts within 30 days of receiving such invoices, except where a different payment period is expressly stated elsewhere in this Agreement.
- 8.3 Any notice, document, payment or communication to be given under this Agreement will be in writing and delivered by hand, faxed or emailed to the Party to which it is to be given as follows, and will be deemed received on the date sent:

If to BC Hydro:

BC Hydro

333 Dunsmuir Street
Vancouver, BC V6B 5R3

Attention: [REDACTED] Aboriginal Relations and Public Affairs
Director, Site C Clean Energy Project

Telephone [REDACTED]

Fax: [REDACTED]

Email: [REDACTED]

If to the City:

City of Fort St. John

10631 - 100 Street

Fort St. John, BC V1J 3Z5

Attention: City Manager

Telephone: [REDACTED]

Fax: [REDACTED]

Email: [REDACTED]

and a Party may change from time to time its address or other applicable contacts by notice provided to the other Party in accordance with Section 8.3.

- 8.4 Any provision of this Agreement which is prohibited or unenforceable in whole or in part will be ineffective to the extent of such prohibition and unenforceability and will be severed from the balance of this Agreement, all without affecting the remaining provisions of this Agreement.
- 8.5 This Agreement may only be amended by written agreement of the Parties.
- 8.6 Each Party represents and warrants to the other that it has received independent legal advice regarding this Agreement.
- 8.7 This Agreement constitutes the entire agreement between the Parties and supersedes and cancels any prior proposals, agreements, undertakings, declarations and representations, written or oral, regarding the subject matter of this Agreement.
- 8.8 The schedules form part of this Agreement, provided that all measures set out in Schedule 1 are only binding on the Parties to the extent expressly provided for in the body of this Agreement.
- 8.9 This Agreement enures to the benefit of and is binding on the Parties and their successors and assigns.
- 8.10 No waiver will be inferred from anything done or omitted to be done by a Party and any waiver by a Party of a breach or obligation of this Agreement must be made by that Party

in writing and will extend only to the particular breach or obligation identified in such written waiver.

- 8.11** Nothing in this Agreement creates any legal partnership, co-venture, or principal and agent relationship between the Parties.
- 8.12** Each of the Parties will do all such further acts and execute and deliver all such further documents in a timely fashion as are reasonably required from time to time in order to fully perform and carry out the terms and intent of this Agreement.
- 8.13** This Agreement is governed by the laws in force in the Province of British Columbia and the laws of Canada applicable therein.
- 8.14** This Agreement may be executed in counterparts and be returned by fax or email with a PDF attachment, each of which when executed and delivered shall constitute an original, and all of which together shall constitute one and the same Agreement.


Agreed by the Parties as of the Effective Date.

CITY OF FORT ST. JOHN, by its authorized
signatories:

By:



Mayor

By:


of Legislative and
Administrative Services

BRITISH COLUMBIA HYDRO AND POWER
AUTHORITY, by its authorized signatory:

By:


President & CEO

Schedule 1
Site C Clean Energy Project
BC Hydro's Proposed Measures to Provide a Lasting Benefit
to the Community of Fort St. John

Attached.

SITE C CLEAN ENERGY PROJECT
BC HYDRO'S PROPOSED MEASURES TO PROVIDE A LASTING BENEFIT
TO THE COMMUNITY OF FORT ST. JOHN

Background

The Site C Clean Energy Project (the Project or Site C) is a proposed dam and hydroelectric generating station northeast B.C., approximately seven kilometres southwest of Fort St. John. The Project is currently undergoing provincial environmental assessment (EA), including a review by an independent Joint Review Panel.

BC Hydro views consultation as a key component of planning for the Project. Input received from consultation planning process, Project definition and plans for mitigation of potential Project impacts on communities in the area of this consultation, BC Hydro has regularly met with local governments – including the City of Fort St. John – to discuss issues, interests and concerns of each community, and to discuss the Project and potential effects.

The City of Fort St. John (the City) is recognized as a service centre for the North Peace region for both Aboriginal and non-Aboriginal communities. With its proximity to the proposed Project, businesses, social organizations and residents of Fort St. John will see both benefits and impacts. To ensure community interests were considered, the City is engaged through its Let's Talk Site C community engagement and stakeholder feedback process, and provided the results to BC Hydro as summarized in the October 2012 "Site C Clean Energy Project – Position Paper."

The purpose of this document is to summarize the measures that BC Hydro proposes to implement – should they be approved – that would resolve the issues, interests and concerns associated with the Project that have been raised by the City. These measures have been developed through six years of consultation led by BC Hydro, and informed by the City's Site C process.

BC Hydro shares with the City a desire to leave the community and the Peace Region better off in the long-term as a result of the Site C Project. The measures described in this document would mitigate the potential effects of the Project and provide a lasting benefit to the community of Fort St. John, and neighbouring communities

Proposed Measures to Provide a Lasting Benefit to the Community of Fort St. John

This document has two parts and several appendices:

- **Part 1** summarizes the “Overarching Positions of Council” provided in Section 5.0 and “Council Positions Related to Specific Aspects of Site C” provided in Section 6.0 of the City of Fort St. John’s October 2012 “Site C Clean Energy Project – Position Paper,” along with BC Hydro’s proposed measures under each heading; and
- **Part 2** lists additional interests raised by the City of Fort St. John in discussions with BC Hydro, as well as interests and issues raised in BC Hydro’s consultations with the local and regional community, public and stakeholders, along with BC Hydro’s proposed measures under each heading.

In this document, two types of measures are described: the measures based on those proposed in the EIS, and additional measures that BC Hydro proposes in response to particular interests raised by the City.

If the Project proceeds, BC Hydro will be legally required to meet any conditions imposed in the Environmental Assessment Certificate (EAC) and the Decision Statement. However, some of the measures described in this proposal may not be required to meet those conditions. Consequently, BC Hydro is prepared to enter into a legal agreement with the City to implement any of the measures described in this proposal that are not required by the Environmental Assessment Certificate or the Decision Statement, so long as those measures do not preclude compliance with the conditions in the EAC or the Decision Statement, or with other legal requirements.

Unless otherwise clearly indicated, the implementation of the proposed measures is contingent on the Project proceeding.

Part 1

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
1. <i>Inclusion of Land Within City Boundaries</i>	<p><u>Background</u></p> <ul style="list-style-type: none"> The City is considering an application to the Provincial Government to extend its boundary to incorporate additional lands to the west and southwest of its current boundary, potentially including BC Hydro owned land known as the 85th Avenue Industrial Lands. BC Hydro currently owns 32 parcels of land within the proposed boundary extension area, known as the 85th Avenue Industrial Lands. Consistent with the light industrial zoning of these lands, BC Hydro's proposed use of the lands is as a multi-use light industrial site, including storage and laydown, small temporary site offices and as a source of construction material for the proposed Project. The City has expressed an interest in potentially purchasing parcels, described to BC Hydro as Option A and Option B (Appendix B), should BC Hydro decide at its discretion to sell any or all of those parcels.
	<p><u>Measures</u></p> <p>[The measures described in 1(a)-(f) are provided for in the Agreement.]</p> <p>a) As discussed with the City, BC Hydro, as a Crown corporation, will remain neutral and will not oppose the City's efforts regarding the boundary extension process.</p>
	<p>b) In the event that the City amends its boundary extension application to contain only the 85th Avenue lands, BC Hydro will provide a further letter to the provincial government confirming that "it will not take a position that is opposed to the boundary extension."</p>
	<p>c) When the 85th Avenue Industrial Lands come into City boundaries, BC Hydro will, in accordance with Provincial government policy, pay grants-in-lieu of taxes (GILT) for each parcel of fee-owned land (and any buildings situated thereon) within the City's boundaries.</p>
	<p>d) BC Hydro will take into account the standards and guidelines of both the Peace River Regional District and the City, in the development of Environmental Management Plans for 85th Avenue Industrial Lands.</p>

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	<p>e) BC Hydro has proposed a series of mitigation measures related to the planned use of 85th Avenue Industrial Lands to address the following: minimizing visual, noise and light impacts; air quality and dust; minimizing noxious weeds; material extraction, transportation and operations; site reclamation; infrastructure and servicing; and, future land use. In accordance with measures proposed in the EIS, a notification of work program and communication plan for residents, noise monitoring, and a noise and vibration management plan will be implemented. For a complete list of mitigation measures, please see Appendix A.</p>
	<p>f) BC Hydro does not anticipate any disposal of the 85th Avenue Industrial Lands prior to the end of the Project construction period. Should BC Hydro decide at its discretion to sell any or all parcels – subject to consultation – it will notify the City and the City will thereafter have a period of 60 days to attempt to negotiate the terms of a purchase and sale agreement of such Lands with BC Hydro. Following such 60 day period, if the parties have not entered into a purchase and sale agreement in respect of such Lands on terms satisfactory to each party in their sole discretion, BC Hydro shall at any time thereafter be free to enter into discussions and negotiations and enter into a purchase and sale agreement or agreements with any third party or parties in respect of the sale of such Lands and to complete any such transaction or transactions, all free from any claim or interest whatsoever by the City.</p>
<p>2. <i>Collaboration, Coordination and Joint Decision-Making</i></p>	<p><u>Background</u></p> <ul style="list-style-type: none"> • The City has expressed a need for more effective communication, increased collaboration and joint decision-making on issues that directly affect the community of Fort St. John.
	<p><u>Measures</u></p> <p>a) BC Hydro views consultation as a key component of planning for the Project, and initiated consultation on the Project in 2007. In 2010, BC Hydro established a formal local Government Liaison Program, which provides opportunities for each local government in the region to engage directly with BC Hydro both individually and on a regional basis, with some capacity funding provided to facilitate discussions. The purpose of this program has been to ensure local governments are kept up to date on Project planning, to seek input on issues of interest and concern, and to consult on key issues, particularly those that are directly related to local</p>

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	government.
	b) BC Hydro has maintained relationships with key contacts within the City to facilitate engagement and ensure all enquiries and questions are addressed. Since 2007, BC Hydro has met with the City more than 60 times, which is in addition to the interviews and meetings for the purposes of the socio-economic effects assessment.
	c) The City and BC Hydro have collaborated on the following key items: <ul style="list-style-type: none"> i. Feasibility Assessment for Water and Sewer Servicing for Worker Accommodation ii. Development of a draft traffic monitoring and mitigation plan iii. Development of a draft water supply infrastructure monitoring and mitigation plan iv. Proposed mitigation and future use of 85th Avenue Industrial Lands
	d) To facilitate this collaboration and technical engagement, and to support the City of Fort St. John's participation in the environmental assessment process, the City and BC Hydro signed a Local Contribution Agreement in which BC Hydro provides the City with \$125,000 per annum for the period May 2010 until September 30, 2014.
	e) In addition, the City and BC Hydro signed a Memorandum of Understanding (MOU) in March 2013, which provides additional funding of \$125,000 for the period of January 1, 2013 to December 31, 2013 to enable BC Hydro and the City to work collaboratively in reaching agreements that address the impacts of Site C on the community of Fort St. John. <ul style="list-style-type: none"> i. Under the terms of the MOU, the City and BC Hydro have established an Executive Committee comprised of the City Manager, the Project's Executive Vice President and consultant support, and a Technical Committee comprised of relevant technical City and Project staff.
	f) The total value of the Fort St. John Local Contribution Agreement and the MOU is \$677,000. As of October 2013, BC Hydro has provided the City with \$520,834 in funding.

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	<p>[The measure described in 2(g) is provided for in the Agreement]</p> <p>g) BC Hydro will extend the MOU signed in March 2013, and provide the City with an additional \$125,000 as a final contribution to facilitate collaboration and technical engagement in 2014. This payment would be provided to the City within thirty days of BC Hydro and the City signing an agreement.</p>
<p>3. Adequate, Predictable and Sustainable Source of Funding to the City</p>	<p><u>Background</u></p> <ul style="list-style-type: none"> The City has stated its position that an adequate and predictable level of funding be provided by BC Hydro to the City to address impacts associated with the Project and provide benefits to ensure a sustainable community in the future. <p><u>Measures</u></p>
	<p>[The measure described in 3(a) is provided for in the Agreement.]</p> <p>a) In addition to the measures outlined in this document that provide community benefits and infrastructure enhancements – which include housing, recreation, social services and transportation – BC Hydro is also proposing a direct stream of financial payments to the City of Fort St. John in recognition of the City’s unique position as a regional service centre to the North Peace Aboriginal and non-Aboriginal communities, and the proximity of main construction areas to the City.</p> <p>i. BC Hydro proposes to provide the City with annual payments for the duration of the construction period through to commissioning of all turbines. BC Hydro would commence payment to the City within 90 days of final approval to proceed with construction. For example, the payment schedule below is based on the Project construction schedule presented in the EIS:</p> <ul style="list-style-type: none"> ▪ Year 1: \$1,000,000 ▪ Year 2: \$1,035,000 ▪ Year 3: \$1,071,000 ▪ Year 4: \$1,109,000

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	<ul style="list-style-type: none"> ▪ Year 5: \$1,148,000 ▪ Year 6: \$1,188,000 ▪ Year 7: \$1,229,000 ▪ Year 8: \$1,272,000
	<p>b) The City will also receive funds from BC Hydro during Project operations under the Regional Legacy Benefits agreement reached in June 2013 between BC Hydro and the Peace River Regional District (PRRD). Under this agreement, BC Hydro will provide \$2.4 million per year (indexed to inflation) beginning in year one of Site C operations and continuing for 70 years. Under the PRRD's allocation formula for these funds, the City would receive approximately \$830,000 in Year one of operations and a total of approximately \$58 million over 70 years (in real 2013 dollars, excluding inflation).</p>
	<p>c) During operations, it is anticipated that the Province will authorize BC Hydro to pay annual grants-in-lieu based on the generating capacity of the facility.</p> <ul style="list-style-type: none"> i. The total annual grants-in-lieu are estimated at \$1.4 million (in 2013 dollars) based on current rates established by the Province for a 1,100-megawatt facility. ii. It is anticipated that the Province will direct BC Hydro to pay the City a share of the grants-in-lieu.
	<p>d) For a summary of the financial value of proposed measures, please refer to Appendix C.</p>
<p>4. Monitoring to Identify and Address Unforeseen Impacts and Issues</p>	<p><u>Background</u></p> <ul style="list-style-type: none"> • The City has expressed a preference that BC Hydro implement and fund a mutually agreed upon monitoring program, including a dispute resolution mechanism. <p><u>Measures</u></p>
	<p>a) Section 35 of the EIS provides a list of BC Hydro's proposed Environmental Management Plans and monitoring programs.</p>
	<p>b) If the Project is certified by the provincial and federal government, BC Hydro would be issued</p>

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	a provincial EA certificate and a federal Decision Statement that would include legally binding conditions that must be adhered to. The conditions will include measures to mitigate adverse effects as well as the requirements of follow-up programs.
	c) BC Hydro will be legally responsible for ensuring the full implementation of required conditions by federal and provincial authorizing agencies.
	<p>[The measures described in 4(d) and (e) are provided for in the Agreement.]</p> <p>d) BC Hydro will also adhere to the measures proposed in this document, subject to the terms of a legal agreement.</p>
	e) BC Hydro will also establish a Fort St. John Area Community Liaison Committee that will meet monthly (or as agreed) throughout the Project's construction phase to review the progress of the Project, and discuss any associated community issues and interests. The committee would establish a terms of reference that would include procedures for a committee meeting schedule, committee membership, regular reporting, review of ongoing monitoring programs, identifying and addressing community interests and concerns, review of planned construction activities, and addressing unexpected events. Draft information regarding the proposed Fort St. John Community Liaison Committee is included in Appendix C
	<p>f) During the pre-construction phase of the Project, the City and BC Hydro have collaborated on the following monitoring programs:</p> <ul style="list-style-type: none"> i. Development of a draft traffic monitoring and mitigation plan ii. Development of a draft water supply infrastructure monitoring and mitigation plan iii. Proposed mitigation and future use of 85th Avenue Industrial Lands
5. Formal Agreements to Incorporate Commitments	<p><u>Background</u></p> <ul style="list-style-type: none"> • The City has expressed a preference that BC Hydro enters into legally binding agreements incorporating all commitments made by BC Hydro in addressing impacts and providing benefits. • Any conditions required to be implemented by federal and provincial authorizing agencies are

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	<p>subject to separate oversight. While these measures may have been reflected in this proposal as a result of discussions, they must necessarily be excluded from any legally binding provisions contracted between BC Hydro and the City to avoid any conflict in standards, interpretation or oversight.</p> <p><u>Measures</u></p>
	<p>[The measures described in 5(a) and (b) are provided for in the Agreement.]</p> <p>a) Upon mutual agreement that the additional measures outlined in this Proposal are acceptable to both the City of Fort St. John and BC Hydro, the measures will be formalized in an appropriate legal agreement.</p>
	<p>b) The parties agree to include a dispute resolution process that will be contained in the legal agreement, as described in section 29 of this document.</p>
	<p>c) If the Project is certified by the provincial and federal government, BC Hydro would be issued a provincial EA certificate and a federal Decision Statement that would include legally binding conditions that must be adhered to. The conditions will include measures to mitigate adverse effects as well as the requirements of follow-up programs.</p>
<p>6. Maximizing Local Hires</p>	<p><u>Background</u></p> <ul style="list-style-type: none"> The City has expressed a desire for BC Hydro to maximize the number of local hires for the Project. <p><u>Measures</u></p>
	<p>a) BC Hydro will encourage contractors to hire locally available workers with the requisite skills (EIS section 17.4.3.1), by working with its contractors and local employment agencies to locally advertise job opportunities.</p>
	<p>b) BC Hydro will create a jobs section on the Site C project website that contractors can use to advertise job opportunities.</p>
	<p>c) BC Hydro will advertise job opportunities with local employment agencies, such as the WorkBC Employment Service Centre and economic development commissions in the Peace</p>

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	region.
	d) Regional job fairs will be organized to provide a venue for local workers to meet with contractors.
	e) See also Sections 7 and 8 below.
7. Training of Local Workforce	<u>Background</u> <ul style="list-style-type: none"> The City has expressed an interest in trades and skills training, and apprenticeship opportunities for local residents and workers, as well as skilled non-trades worker training. <u>Measures</u>
	a) The duration of the Project construction period is ideal for training apprentices. BC Hydro will be working with contractors on how to identify and increase apprenticeship opportunities.
	b) BC Hydro will work with training providers to explore opportunities to enhance skilled non-trades worker training. For example, BC Hydro has worked with Northern Lights College Foundation to expand the list of eligible programs to include skilled non-trades training options for students applying for bursary funding, such as Early Childhood Education and Social Services Worker.
	<p>[The measures described in 7(c) were completed by BC Hydro prior to the date of the Agreement.]</p> <p>c) BC Hydro will implement the following measures which are intended to enhance the local labour market participation rate and skill level of the population in the local area, via training and skills development initiatives (EIS section 17.4.3), including the following investments already made:</p> <ol style="list-style-type: none"> \$1 million to Northern Lights College Foundation to support trades and skills training through the creation of student bursaries. \$184,000 in funding to Northern Opportunities for the creation of a school district career counsellor position to encourage students to stay in school and facilitate a transition into trades and career training.

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	<p>iii. \$100,000 in funding to the North East Native Advancing Society to support trades training under its North East Aboriginal Trades Training program.</p> <p>iv. A three-year funding agreement of \$105,000 with Northern Opportunities for its pre-apprenticeship program.</p>
	<p>d) During Project construction, BC Hydro will continue to participate in regional workforce training initiatives, such as the Northeast Regional Workforce Table Task Force, to support alignment of training programs with the need for skilled workers to meet the needs of northeast B.C.</p>
	<p>e) BC Hydro will also look at other measures both independently and in cooperation with other agencies to develop a regional skilled workforce.</p>
<p>8. Local Procurement of Goods and Services</p>	<p><u>Background</u></p> <ul style="list-style-type: none"> • The City has expressed interest in ensuring that local contractors are made aware of and have opportunities to bid on contracts associated with the Project. • BC Hydro is subject to the relevant obligations of inter-provincial trade agreements such as the New West Partnership and Trade Agreement between British Columbia, Alberta and Saskatchewan. <p><u>Measures</u></p>
	<p>a) One of the Project's procurement objectives is to support the Project objectives, including providing economic opportunities for Aboriginal groups, northern communities and the province.</p>
	<p>b) BC Hydro will implement a business participation strategy (EIS section 18.4.2), and will work with the North Peace Economic Development Commission, the Fort St. John & District Chamber of Commerce, the Fort St. John Economic Development Department, the Fort St. John Construction Association, Northern Development Initiative Trust and Initiatives Prince George, to ensure local contractors are informed about upcoming procurements.</p>
	<p>c) BC Hydro will also work with these stakeholder groups to leverage their existing networks to distribute procurement-related information.</p>

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	<p>[The measure described in 8(e) is provided for in the Agreement.]</p> <p>d) BC Hydro will share information about the Project and procurement opportunities through additional Business Information Sessions.</p>
	<p>e) The BC Hydro Community Consultation Office located in Fort St. John will be maintained and will include resources to support providing procurement, employment and construction information to the public, businesses and other stakeholders throughout the Project construction phase.</p>
	<p>f) BC Hydro has developed a regional contractor engagement approach to assess the capacity of regional contractors including staff, equipment and other resources; build relationships and communicate with businesses about opportunities; and, identify potential matches between contractor capacity and Project work.</p> <p>i. To date, more than 50 site visits and meetings have been held with regional contractors and First Nations companies in the following communities: Fort St. John, Hudson's Hope, Chetwynd, Taylor, Dawson Creek, Pouce Coupe. This effort will continue.</p>
<p>9. Enhancement of the City as B.C.'s Energy Capital</p>	<p><u>Background</u></p> <ul style="list-style-type: none"> The City has expressed a desire to enhance Fort St. John as B.C.'s Energy Capital. <p><u>Measures</u></p>
	<p>[The measure described in 9(a) is provided for in the Agreement.]</p> <p>a) BC Hydro welcomes the opportunity to participate in regional initiatives that promote the identity of Fort St. John as B.C.'s Energy Capital.</p>
	<p>b) BC Hydro will construct dam site viewpoints on both the north and south bank that will be publicly accessible to the community during construction and operations. The north bank viewpoint will present educational information about the Project, and clean and renewable hydroelectricity.</p>
	<p>c) BC Hydro will continue to look for other opportunities to enhance Fort St. John as B.C.'s</p>

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	Energy Capital. In particular, if the City advances a proposal to develop an Energy Innovation Centre, BC Hydro will explore the potential to become a partner with the City and other companies.
10. Establishment of a Regional Benefit Agreement	<u>Background</u> <ul style="list-style-type: none"> The City expressed an interest in establishing a Regional Benefit Agreement to recognize and address Project effects. <u>Measures</u>
	a) In June 2013, BC Hydro and the Peace River Regional District concluded a Regional Legacy Benefits Agreement.
	b) Under this agreement, BC Hydro will provide the PRRD with \$2.4 million per year (indexed to inflation) beginning in year one of Site C operations and continuing for 70 years.
	c) BC Hydro understands that under the PRRD's allocation formula for these funds, the City will receive approximately \$830,000 in year one of operations and a total of approximately \$58 million over 70 years (in real 2013 dollars, excluding inflation).
11. Housing of the Workforce	<u>Background</u> <ul style="list-style-type: none"> The City has expressed an interest in construction workers living locally to the greatest extent possible, but also a concern about potential disruptions to the local housing market. The City has expressed a preference that in-community housing should "showcase" energy efficiency and conservation as well as other green technologies and sustainable design principles. BC Hydro and BC Housing have agreed that BC Housing is the lead for construction of the 50 unit in-community housing project. During the Project construction phase BC Hydro's workforce will occupy 40 of these units and 10 units will be operated as affordable housing for the community. At a point that is feasible for both BC Hydro and BC Housing (after Site C Project completion but before the lease term with BC Hydro has concluded) BC Housing will seek a non-profit operator who will either:

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	<ul style="list-style-type: none"> ○ A) Enter into an Operator's Agreement while the Provincial Rental Housing Corporation (PRHC) retains ownership, or ○ B) Purchase the building at appraised value and enter into an Operating Agreement. ● BC Housing is bound by their procurement guidelines under either scenario to conduct a fair and open process to select and award the non-profit housing provider. Under the program funding for the affordable housing project, there are certain qualifications and obligations that a non-profit housing provider must meet and this will form part of the evaluation. Should a suitable non-profit housing provider not be found through the selection process, PRHC will retain ownership of the affordable housing project. <p><u>Measures</u></p>
	a) In EIS section 29.4.2.1, BC Hydro proposes the following measures to assist the Project workforce with in-community living:
	i. Provide logistical assistance to the Project workforce seeking local accommodation, through a community camp coordinator.
	ii. Build at least 40 rental units, in partnership with BC Housing, to expand the supply of rental housing for use by Project workforce during construction. Transition the units to permanent affordable housing use after Project construction is complete (in partnership with BC Housing).
	<p>[The measure described in 11(a)(vi) is provided for in the Agreement.]</p> <p>iii. Working through its partner BC Housing, BC Hydro will explore options for leasing City-owned land, or purchasing City-owned or other land, for the housing units. BC Hydro will make the decision based on the most cost-effective option to reflect the principle that the units will be available as affordable housing.</p>
	iv. BC Hydro will also facilitate a discussion with BC Housing to explore the potential future role of the City or other non-profit organizations in Fort St. John as the long-term operator of these affordable housing units.
	v. Build up to 10 new affordable housing units to be used by the community in the Fort St.

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	John area, in partnership with BC Housing, to expand the supply of affordable housing.
	vi. BC Hydro will work the City to “showcase” energy efficiency and conservation as well as other green technologies in the proposed in-community developments.
	vii. Expand the supply of temporary accommodation by constructing long-stay RV sites in partnership with the private sector or local governments. <ul style="list-style-type: none"> At Peace Island Park, BC Hydro will fund the development of, or will develop directly, at least 20 new long-stay RV spaces including electrical hook-ups, and on-site services for waste and potable water that may include hauling. Development of these new sites and overflow parking would be completed by the end of Year 2 of Project construction.
	b) Provide additional daycare spaces in the Fort St. John area to increase spousal participation in the labour market. Subject to licensing requirements and agreement by the future daycare operator, the estimated number of new spaces would be approximately 37.
	c) Pre-book hotel and motel space when substantial temporary hotel accommodations are required.
	d) Provide workforce camps that can be scaled up or down as required, to mitigate potential disruptions to the local rental housing market.
	e) During construction, BC Hydro will monitor shortages in the apartment rental market in Fort St. John and adapt mitigation as necessary to keep vacancy rates above the threshold of four per cent.
12. Management of the Camp	<u>Background</u> <ul style="list-style-type: none"> The City has stated that an important objective of Council is that the camp is well managed and provided with a range of recreation and other services to reduce the potential impact on City services and the community in general. <u>Measures</u>
	a) BC Hydro agrees to take reasonable steps to house non-local resident workers on site at the camp to minimize the impact on City services. BC Hydro will work with contractors on shift

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	arrangements and will not provide a living out allowance in order to create a strong financial inducement for workers to use camp accommodations.
	b) In addition, BC Hydro will equip the camp with recreation and leisure facilities and other amenities to encourage camp residents to remain on site during time-off.
	c) In EIS section 30.4.2, BC Hydro has proposed a number of measures related to the management of workforce camps to minimize the need for community-based services. This will include: <ul style="list-style-type: none"> i. Camps will be self-sufficient; on-site water and sewer services will be developed, site electricity will be provided by BC Hydro, and site telecommunications services will be procured by or provided by BC Hydro.
	<ul style="list-style-type: none"> ii. Provide on-site emergency services to minimize the need for community-based services: <ul style="list-style-type: none"> ▪ Security services that support compliance and enforcement of all camp and construction policies relating to the terms of employment ▪ Firefighting services for all Project construction activities and work sites ▪ First aid and medical transport for medical emergencies at the on-site accommodations and work sites
	iii. Establish an agreement with Northern Health to confirm emergency room access for work camp ambulances
	<ul style="list-style-type: none"> iv. Work with Northern Health to plan for appropriate health care services for Project workforce, including camp residents; on-site health care for all workers residing in camps would include a combination of: <ul style="list-style-type: none"> ▪ Physician care ▪ On-site nurse or nurse practitioner care ▪ Coordination on program delivery (i.e., Employee Assistance Program, men's health programs)
	[The measure described in 12(d) is provided for in the Agreement.]

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	d) Provide Northern Health and the City with actual workforce and camp population statistics to help plan for service levels
	e) Support Northern Health and partner agencies in planning for anticipated changes in resident population by communicating workforce schedules, in-community population forecasts, housing plans, and on-site medical and social services
	f) Support Northern Health initiatives as they develop approaches for delivery of health services for camp workers
	g) Provide recreation facilities and programming at the camps for workforce.
	h) Work with the City to plan for and adjust to anticipated changes in resident population by communicating workforce schedules, in-community population forecasts, and housing plans. BC Hydro will work with the City to understand any concerns that are anticipated or that arise during construction associated with: a) camp residents on leisure time, b) camp residents on days off, c) commuters by air and road into the camp on shift rotations; and will work toward solutions that will address impacts.
	<p>[The measures described in 12(i) is provided for in the Agreement.]</p> <p>i) Work with the City to resolve local concerns about potential use of community recreation or leisure facilities by Project workforce. BC Hydro proposes to annually pre-purchase a block of tickets representing four pool and four skating rink recreation tickets per camp resident (based on EIS Figure 28.5) for use by the Project workforce for the duration of the construction period. BC Hydro recognizes that Fort St. John and area residents pay a subsidized rate for recreation services; therefore, BC Hydro will purchase tickets at a rate of 200% of 2013 ticket prices. The total value of this purchase over the Project construction period is approximately \$424,000. BC Hydro would pay either annually (based on EIS Figure 28.5) or in two equal payments during Year 1 and Year 4 of construction, at the preference of the City.</p>
13. Development and Ultimate Use of Proposed Staging	<u>Background</u> <ul style="list-style-type: none"> The City has expressed an interest that the 85th Avenue Industrial Lands be developed and serviced to City standards with the potential for such sites to be ultimately developed as light

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
Areas	industrial for future use. <u>Measures</u>
	a) BC Hydro recognizes the intent of both the City of Fort St. John and the Peace River Regional District that the future use of 85 th Avenue Industrial Lands be serviced light industrial.
	b) Consistent with the intended future land use, BC Hydro's reclamation plans for the 85 th Avenue Industrial Lands would leave the site with more stable slopes and more level grades, ready for other uses consistent with light industrial zoning.
	[The measures described in 13(c) and (d) are provided for in the Agreement.] c) To facilitate planning for future use of the site, BC Hydro is proposing to provide local government with up to \$50,000 for the purpose of developing a site Master Plan for future land use post Project construction. This plan would identify the future land use plan for the site, and would be taken into account by BC Hydro and its contractors during use of the land in consideration of final land profiles, retention of or removal of roads, retention of or removal of berms, fencing and vegetation during site reclamation.
	d) The development of the reclamation plan will be consistent with the Master Plan. The site reclamation plan which will be provided to the City as soon as practical once a contractor is specified.
	e) For a comprehensive list of mitigation measures proposed by BC Hydro relating to the 85 th Avenue Industrial lands, please refer to Appendix A.
14. Improvements to Transportation in the Region – Jackfish Lake Road	<u>Background</u> <ul style="list-style-type: none"> The City has expressed a preference that upgrades to Jackfish Lake Road, and the proposed Project access road, be constructed to a rural provincial highway standard and that the road is maintained as a provincial public road after construction of the Project is complete. <u>Measures</u>
	a) BC Hydro will continue to work with the BC Ministry of Transportation and Infrastructure (MoTI) to implement the following measures to support leaving the local highways and roads in as good or better state of repair as a result of Project-related construction use:

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	i. BC Hydro will establish the baseline surface conditions of the area highways (Highways 97 & 29) and side roads (Jackfish Lake Road) prior to construction activities.
	ii. BC Hydro will confirm the expected use of Jackfish Lake Road by contractors once contracts have been awarded, based on their decision to use rail or road to haul riprap to the south bank.
	b) The transportation assessment in the EIS section 31.4 assumed that riprap would be transported by road via Jackfish Lake Road, and proposed mitigation measures based on forecast road use.
	c) If riprap is hauled by road, the following mitigation measures related to the standard and condition of Jackfish Lake Road will be implemented (EIS Table 31.26): <ul style="list-style-type: none"> i. BC Hydro will improve the standard and condition of Jackfish Lake Road in the early stages of the construction phase of the Project by 1) strengthening the road base and hard surfacing 31 km, and 2) examining the feasibility and need for widening shoulders along the first 30 km. Upgrades will be completed by Year 3 of construction. ii. BC Hydro will work with MoTI to increase the monitoring and maintenance of the condition of Jackfish Lake Road during the construction phase of the Site C Project by 1) enhancing pavement condition monitoring; and 2) enhancing the level of summer and winter maintenance on Jackfish Lake Road.
	d) If riprap is hauled by rail, BC Hydro will update the road transportation forecast and will work with MoTI to determine if any improvements are warranted to the standard and condition of the road, or if any changes are warranted to the existing monitoring of road conditions and the normal maintenance of Jackfish Lake Road. If any changes are warranted BC Hydro would work with MoTI to implement these measures.
15. Improvements to Transportation in the Region – North Bank Roads	<u>Background</u> <ul style="list-style-type: none"> • The City has raised concerns regarding the general increase of Project-related traffic on the local road networks (i.e. north bank roads). <u>Measures</u>

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	<p>a) To support public safety on local roads, BC Hydro proposes the following measures in the EIS section 31.4.5:</p> <ul style="list-style-type: none"> i. Hard-surface 240 Road and the portion of 269 Road south of the intersection with 240 Road ii. Widen shoulders or add a path on 271 Road between the Wuthrich Quarry and Highway 97 iii. Realign a portion of Old Fort Road south of 240 Road; potentially widen shoulders or add a path on Old Fort Road between Highway 97 and the realigned segment, and between the end of the realigned segment and the gravel pit entrance at km 5.5.
	<p>b) BC Hydro has worked collaboratively with the City to identify roads and intersections of concern to the City, and proposed a monitoring program to be implemented prior to and during construction of the Project.</p> <p>[The measure described in 15(b)(i) was completed by BC Hydro prior to the date of the Agreement. The measure described in 15(b)(ii) is provided for in the Agreement.]</p> <ul style="list-style-type: none"> i. In June 2013, BC Hydro completed traffic counts at locations agreed to by the City, to establish a baseline level of service for city intersections both where they intersect the MoTI Highway 97, as well as selected municipal intersections. ii. Traffic counts will be repeated annually during the initial years of dam construction and continuing through to the peak worker population year to determine if any reduction of service levels is a result of in-community workforce and construction related traffic.
<p>16. Improvements to Transportation in the Region – Other</p>	<p><u>Background</u></p> <ul style="list-style-type: none"> • The City has expressed an interest in other transportation infrastructure improvements in the region. <p><u>Measures</u></p> <p>a) BC Hydro will provide funding to MoTI to implement the following measures:</p>

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	[The measures described in 16(a)(i) and (ii) were completed by BC Hydro prior to the date of the Agreement.]
	i. Installation of new continuous street lighting along Highway 97 through Taylor.
	ii. Installation of changeable message signs on Highway 97 on the South Taylor Hill and on the hill north of Taylor, to be operated as part of the MoTI network. Changeable message signs will provide motorists with advanced notification of weather and road conditions, including notification of fog conditions, and other regionally important information.
	iii. Monitoring of fog conditions by installation of a highway webcam in Taylor to be operated as part of the MoTI network.
	iv. Realignment of nearly 30 km of Highway 29. Drivers will benefit from time travel savings and road safety will be improved.
17. Use of North Peace Regional Airport	<u>Background</u> <ul style="list-style-type: none"> • The City has expressed a concern regarding Project related increases in air traffic and passenger volumes. • The North Peace Regional Airport has a user-pay system, which include a recently implemented increase in the airport improvement fee (AIF) to \$18 as of December 2012. <u>Measures</u>
	a) BC Hydro has met with airport management who have indicated that the airport would be able to support this incremental user demand, that added demand would be met by commercial or charter airlines adding flight capacity (e.g., increasing size or frequency of flights), and that the airport management wants increased passenger use of the airport, which generates additional revenues.
	[The measures described in 17(b) and (c) are provided for in the Agreement.] b) BC Hydro has also met with the North Peace Airport Society. The Society raised concern that charter flights bypass the payment of the Airport Improvement Fee that is required for

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	commercial flights. In recognition of the City's and the Society's interests, BC Hydro will track contractor and employee use of charter flights for workforce travel during construction, and provide a usage summary to the North Peace Airport Society and airport management on a regular basis.
	c) BC Hydro and its contractors will pay all required user fees associated with airport use.
18. Basin-Wide Assessment for the Peace River Basin	<p><u>Background</u></p> <ul style="list-style-type: none"> • The City has expressed the need for an assessment to address outstanding environmental and socio-economic issues related to the existing two dams and provide a broader context for addressing the effects of Site C. • The Environmental Impact Statement Guidelines (EISG), which was subject to public review and comment, defined the boundaries for the assessment of the Project. <p><u>Measures</u></p>
	a) The accumulated effects of all past projects and activities that have been carried out are reflected in the current baseline conditions and described in the EIS.
	b) BC Hydro will continue to deliver the ongoing commitments related to operation of its existing facilities, including implementation of the Peace Water Use Plan and the BC Hydro Fish and Wildlife Compensation programs, the Tsay Keh Dene First Nation Final Community Measures Agreement and the Kwadacha First Nation Final Community Measures Agreement.
19. Development and Implementation of a Master Plan for the Site C Reservoir	<p><u>Background</u></p> <ul style="list-style-type: none"> • The City has expressed an interest in a master plan for the development and operation of the Site C reservoir, which would address: <ul style="list-style-type: none"> ○ Potential recreational opportunities including boat launch facilities, marinas, swimming beaches and other related facilities; ○ Economic development opportunities such as recreation vehicle parks and interpretive facilities; and ○ The potential future development of a secondary water source for the City. See item 25. <p><u>Measures</u></p>

Issues, Concerns, Interests of the City of Fort St. John	Proposed Measures
	a) As per EIS section 25.4.3, BC Hydro will implement a master plan for the development and operation of the Site C reservoir, which would address the following measures:
	i. Provide \$200,000 to fund the development of a B.C. Peace River / Site C Reservoir Navigation and Recreation Opportunities Plan during the operations phase of the Project. BC Hydro anticipates that this planning process would be led by the PRRD.
	ii. Establish and operate three new permanent Site C reservoir launches and day use sites (Cache Creek and Lynx Creek trailer launches and Hudson's Hope Shoreline Protection small craft launch) to replace flooded boat launch areas.
	iii. Establish a permanent north bank Site C dam site public viewpoint with interpretive displays. The viewpoint would be publicly accessible during construction and operations.
	iv. Construct a south bank dam site public viewpoint that can be safely accessed by the public during and after construction.
	v. Provide \$200,000 for a Community Recreation Site Fund to support development of new shoreline recreation sites within the Peace River and tributaries through to the Alberta border, as well as the Site C reservoir.

Part 2

Other Community Interests Raised	Proposed Measures
20. Traffic Monitoring	<u>Background</u> <ul style="list-style-type: none"> BC Hydro and the City have worked collaboratively to identify roads and intersections of concern to the City, and have agreed to develop a traffic monitoring and mitigation plan to be implemented prior to and during construction of the Project. BC Hydro provided the City with a draft of the Traffic Monitoring and Mitigation Plan (TMMP) in the summer of 2013 and provided the City with an updated draft in early 2014. The City is

Other Community Interests Raised	Proposed Measures
	<p>reviewing the draft in order to collaborate with BC Hydro and the Ministry of Transportation and Infrastructure in completing the Plan prior to construction.</p> <p><u>Measures</u></p>
	<p>[The measures described in 20(a) are either provided for in the Agreement or were completed by BC Hydro prior to the date of the Agreement.]</p> <p>a) BC Hydro and the City will develop a Traffic Monitoring and Mitigation Plan (TMMP) for Fort St. John and North Bank Area Roads. The TMMP will include traffic volume and road safety monitoring activities that could take place leading up to construction of the dam and during construction, and mitigation measures that could be considered for implementation. The Plan will include the following:</p>
	<p>i. Baseline and background information. BC Hydro has undertaken a comprehensive study of baseline data, planning assumptions and findings related to traffic in and south of the City, and documented the work in the report "Traffic Report - Fort St. John". BC Hydro presented the results of this study with the City and the Ministry of Transportation and Infrastructure in September 2013, and has provided the report to the City and the Ministry of Transportation and Infrastructure.</p>
	<p>ii. Pavement condition monitoring. BC Hydro will fund MoTI to undertake pavement monitoring to confirm if any potential acceleration in surface deterioration is a result of Project-related traffic. This will determine if any roadway rehabilitation is required along 85th Avenue, 271 Road, 240 Road, 269 Road and Old Fort Road. BC Hydro will fund MoTI to conduct additional pavement monitoring along Highway 97 through Fort St. John and Highway 97 between West Pine Quarry and the dam site (including Highway 29 and Jackfish Lake Road). Pavement monitoring will also be undertaken on Canyon Drive, Clarke Drive, and along Highway 29 between Hudson's Hope and Cache Creek. Pavement repairs during Project construction would be completed by MoTI contracted maintenance services.</p>
	<p>iii. Traffic count baseline and monitoring. In June 2013, BC Hydro completed traffic counts at locations agreed to by the City, to establish a baseline level of service for City intersections both where they intersect the MoTI Highway 97, as well as selected</p>

Other Community Interests Raised	Proposed Measures
	municipal intersections. Traffic counts will be repeated annually during the initial years of dam construction and continuing through to the peak worker population year to determine if any reduction of service levels is a result of in-community workforce and construction related traffic.
	iv. Pre-determined mitigation in response to monitoring. Mitigation to address any potential loss in intersection or route service performance will be undertaken according to pre-determined improvement options mutually developed and agreed to by the City, MoTI and BC Hydro (and in consultation with ICBC and the local RCMP). Consultation will also occur with the City with regard to traffic impacts and mitigation measures in the surrounding rural area.
21. Camp Airport and Leisure Shuttle Bus	<u>Background</u> <ul style="list-style-type: none"> The City has expressed a concern about the transport of workers both to and from the airport to the dam site camp, and into the city for leisure activities. <u>Measures</u>
	<p>[The measures described in 21(a) and (b) are provided for in the Agreement.]</p> <p>a) As stated in the EIS section 4.3.6.2, a shuttle service would be provided as deemed necessary to transport the Project workforce from both the north bank and south bank camps to the Fort St. John area and to the North Peace Regional Airport for commuters, airport transfers, and leisure transport to town, and also between Chetwynd and the south bank dam site camp for daily commuters and for transfers to the camp.</p>
	b) BC Hydro will work with the City on the development of the Project shuttle routes and leisure shuttle schedule.
22. Support for the Non-Profit Sector	<u>Background</u> <ul style="list-style-type: none"> The City has expressed concern about potential effects on the non-profit sector in the delivery of social services. <u>Measures</u>
	a) BC Hydro has met with the Not for Profit Network of Professionals and heard directly their

Other Community Interests Raised	Proposed Measures
	concerns related to the Project.
	<p>[The measures described in 22(b), (c) and (d) are provided for in the Agreement.]</p> <p>b) BC Hydro is proposing to support the non-profit sector with a community fund of \$100,000 per year for eight years, administered by the United Way, to support non-profit organizations in the North and South Peace throughout Project construction.</p>
	<p>c) BC Hydro will also provide financial support to emergency or transitional housing providers in Fort St. John (e.g., Salvation Army), to support people who require transitional or emergency housing, or who need help to become job-ready and able to participate in market housing (EIS section 20.4.2). BC Hydro will provide funding to the following non-profit housing organizations:</p>
	<p>i. Donation of \$25,000 to Skye's Place, a second stage housing program for women with children who are leaving abusive relationships.</p>
	<p>ii. Donation of \$25,000 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.</p>
	<p>iii. Donation of \$200,000 to the Salvation Army Northern Centre of Hope to support shelter and transitional beds.</p>
	<p>d) In addition to the contributions to the non-profit organizations described above:</p> <p>i. BC Hydro will provide a one-time donation of \$75,000 to a non-profit entity (other than the City) agreed to by BC Hydro and the City, to support non-profit organizations in the City of Fort St. John.</p> <p>ii. BC Hydro would make the payment to the non-profit entity within six months of final approval to proceed with construction.</p>
<p>23. Use and Stockpile of Aggregates</p>	<p><u>Background</u></p> <ul style="list-style-type: none"> The City has expressed concern about the loss of aggregate sources within the Fort St. John area, and the Project use of local aggregate. <p><u>Measures</u></p>

Other Community Interests Raised	Proposed Measures
	a) The Project would be largely self-sufficient in aggregate use and therefore not disrupt the local aggregate market (EIS section 23.4.4).
	<p>[The measure described in 23(b) was completed by BC Hydro prior to the date of the Agreement.]</p> <p>b) BC Hydro will negotiate a Memorandum of Understanding with MoTI to compensate for material used by the Project and to maintain material availability for Ministry operational needs.</p>
	c) BC Hydro's use of MoTI quarries at West Pine, Portage Mountain and Wuthrich will result in an estimated 2,500,000 m ³ of surplus and quarried material that will benefit the region during and following construction by reducing MoTI construction costs.
24. Water Quality and Quantity	<p><u>Background</u></p> <ul style="list-style-type: none"> • The City has expressed concern about the potential effects of the Project on water quality and supply for Fort St. John. In EIS section 33.4.2, BC Hydro proposes monitoring groundwater quality of drinking water sources. Although adverse project effects on groundwater quality are not anticipated during construction (and were not assessed), a Groundwater Protection Plan will be implemented during construction (years 2014-2022) and during the first five years of operations (2022-2027) to monitor potential groundwater contamination and, if required, identify appropriate groundwater protection measures. This will be done through private water sampling and will include monitoring of groundwater quality of Taylor and Fort St. John's drinking water sources. • Groundwater quality monitoring at Fort St. John's drinking water source will be considered in the development of the Fort St. John Water Supply Infrastructure – Monitoring and Mitigation Plan that BC Hydro and the City are preparing. <p><u>Measures</u></p> <p>[The measures described in 24(a) and (b) are provided for in the Agreement.]</p>
	a) BC Hydro and the City have worked collaboratively to establish baseline water quality and quantity levels and will continue to monitor during and beyond dam construction to determine any possible changes in quality and quantity.
	b) BC Hydro will continue to work with the City to develop an approach to determine, monitor and

Other Community Interests Raised	Proposed Measures
	<p>if required, mitigate for, any effects of the Project on the Fort St. John water supply (production and access). A mitigation plan will be jointly developed to determine an appropriate course of action should either quality or quantity be affected as a result of Project construction or operation. If Project-related adverse effects are identified, BC Hydro will fund appropriate mitigation measures.</p>
25. Future Water Supply Needs	<p><u>Background</u></p> <ul style="list-style-type: none"> The City has expressed an interest in accessing the Site C reservoir in the event that future population growth in the City requires additional water supply. <p><u>Measures</u></p> <p>[The measures described in Section 25(a) and (b) are provided for in the Agreement.]</p>
	<p>a) BC Hydro would not object to a clause in the Project Conditional Water License that would allow use of the Site C reservoir as a source of domestic water supply for the City of Fort St. John.</p>
	<p>b) BC Hydro would not charge the City for the lost value of generation for water removed from the reservoir for the purposes of domestic water supply and municipal water works (excluding the repurposing of water for other uses, such as bulk water and industrial sales).</p>
26. RCMP Service Agreement	<p><u>Background</u></p> <ul style="list-style-type: none"> The City has expressed concern about the adequacy of policing services during the construction period. In EIS section 30.4.2, BC Hydro proposed to provide direct funding to the RCMP during construction to increase policing in the region. BC Hydro's intent is to reach an agreement with the Ministry of Justice regarding funding to support incremental policing resources during Project construction. BC Hydro, the City, the RCMP and the Ministry of Justice have discussed policing resource requirements related to Project construction activities and are proposing to establish a Police Liaison Officer (PLO). Through the PLO, the Ministry of Justice and the RCMP will liaise with local communities and BC Hydro to identify potential incremental policing resources required during Project construction.

Other Community Interests Raised	Proposed Measures
	<u>Measure</u> [The measures described in 26(b) were completed by BC Hydro prior to the date of the Agreement. The measure described in 26(c) is provided for in the Agreement.]
	a) BC Hydro will continue to work collaboratively with the Ministry of Justice and the RCMP to plan for Project security and safety, and to support the identification of incremental demands on policing services in the region.
	b) BC Hydro will fund the PLO as soon as practicable for a period of 12 months. The liaison officer will identify potential Project related policing needs during Project construction and will provide recommendations to the Ministry of Justice regarding any incremental policing resources, due to Project construction activities, in Fort St. John and the surrounding region (i.e. Chetwynd, Hudson's Hope, Dawson Creek).
	c) BC Hydro will fund one municipal RCMP officer to be posted to the Fort St. John detachment to serve Fort St. John and the region during Project construction, in addition to the PLO. <ul style="list-style-type: none"> i. BC Hydro will advise the Ministry of Justice and the PLO of this measure so that the PLO can consider the additional municipal member during analysis and any recommendations related to incremental policing resources due to the Project. ii. Within 30 days of the final approval to proceed with construction, the Ministry of Justice and the City of Fort St. John would initiate the recruitment process for one additional RCMP member in accordance with the City's municipal police unit agreement. iii. BC Hydro will provide funding once the position is staffed, through to the completion of Project construction.
27. Clearing and Debris Management	<u>Background</u> <ul style="list-style-type: none"> • The City has expressed concern regarding the burning of non-merchantable debris. • The City has expressed concern regarding clearing practices and water quality. <u>Measures</u> [The measures described in 27(c) and (d) were completed by BC Hydro prior to the date of the Agreement.]
	a) BC Hydro will work with local mills, and has undertaken a competitive call for proposals

Other Community Interests Raised	Proposed Measures
	process, to seek potential cost-effective alternatives that would reduce the amount of non-merchantable fibre that requires burning or landfilling.
	b) As proposed in EIS, Volume 4, section 33.4.4, mitigation measures to reduce emissions and ensure exceedances of ambient air quality objectives do not occur include implementation of the following (as described in other sections of the EIS):
	i. Air Quality Management Plan (inclusive of a Dust Control Management Plan) and Blasting Management Plan, to minimize fugitive dust from vehicle activity and heavy equipment movement, and reduce total particulate matter emissions. The Air Quality Management Plan will include the following mitigation measures to reduce dustfall and particulate matter (including emissions at the West Pine Quarry): <ul style="list-style-type: none"> ▪ Watering of unpaved roads and other surfaces ▪ Washing of aggregate and spraying aggregate stockpiles
	ii. A Dust Control Management Plan
	iii. Vegetation Clearing and Debris Management Plan
	iv. Smoke Management Plan: In addition to meeting the requirements of the BC Open Burning Smoke Control Regulation, a Smoke Management Plan will be implemented that will identify smoke management strategies that will be used to reduce potential smoke emissions by a) decreasing the amount of burning by reducing wood debris volumes, b) reducing smoke associated with burning through the use of low-emission incineration technologies, and c) managing the timing of ignition considering defined smoke sensitivity zones and use of custom venting forecasts, daily ignition and smoke release periods
	c) Regardless of the outcome of the conditions of an environmental assessment certificate and a decision statement, BC Hydro will implement an Air Quality Management Plan (inclusive of dust control management), and will develop a Smoke Management Plan (which is a component of the vegetation clearing and debris management plan), as proposed in section 35 of the EIS.
	d) BC Hydro will consult with the City of Fort St. John on the development of these plans.
	e) The Air Quality Management Plan would be developed in accordance with BC Ministry of

Other Community Interests Raised	Proposed Measures
	Environment air quality objectives. The Smoke Management Plan would be developed by BC Hydro and consultation on the plan would be led by the BC Ministry of Environment.
	f) To manage potential effects of clearing activities on water quality, BC Hydro will minimize soil disturbance through:
	i. Predominantly winter clearing
	i. Enacting machine-free riparian zones
	i. Reclamation of exposed soils
	ii. Sediment control plans
28. Culture and Heritage Sites	<u>Background</u> <ul style="list-style-type: none"> The City has expressed concern regarding the heritage and historic values affected by the Project, specifically, Rocky Mountain Fort. <u>Measures</u>
	a) BC Hydro has invited local museums to participate in heritage mitigation, for example through development or enhancement of their heritage interpretive programs that reflect the heritage values of the Peace River valley.
	b) BC Hydro will implement heritage mitigation and monitoring for the Project, which will include recommendations for Rocky Mountain Fort (EIS section 32.3.3). Rocky Mountain Fort (HbRf-31) is protected under the <i>Heritage Conservation Act</i> , therefore the extent and nature of mitigation measures will be determined by the B.C. Archaeology Branch through their B.C. <i>Heritage Conservation Act</i> permitting responsibilities.
29. Dispute Resolution Process	<u>Background</u> <ul style="list-style-type: none"> The parties have agreed to a dispute resolution process for commitments in this proposal related to: <ul style="list-style-type: none"> Appendix A (85th Avenue) Fort St. John Traffic Monitoring and Mitigation Plan Fort St. John Water Supply Monitoring and Mitigation Plan If the parties agree that it would be helpful to apply the dispute resolution process to the

Other Community Interests Raised	Proposed Measures
	<p>implementation of any other specified term of this proposal, then by mutual agreement of BC Hydro and the City the dispute resolution process outlined below may be applied.</p> <p><u>Measures</u></p> <p>[The measures described in 29(a)-(d) are provided for in the Agreement.]</p> <p>a) Step 1: If a dispute arises in connection with the above noted items, the disputing party will provide written notice to the other, and the parties will attempt to resolve the dispute within 30 calendar days of the notice (or within such other time period agreed to by the parties) and, subject to applicable laws, provide candid and timely disclosure to each other of all relevant facts, information and documents to facilitate those efforts.</p> <p>b) Step 2: If a dispute has not been resolved in accordance with the above, then each party will escalate the matter within 15 calendar days to the Executive Responsible for Site C, BC Hydro and the City Manager of Fort St. John. If the matter cannot be resolved at this level, the matter will be escalated to the CEO, BC Hydro and the Mayor, Fort St. John for up to 15 calendar days.</p> <p>c) Step 3: If there is a disagreement on facts, either or both organizations can seek outside advice from a subject matter expert to clarify the facts.</p> <ul style="list-style-type: none"> i. Either BC Hydro or the City can engage a subject matter expert to clarify the facts at their own cost. ii. If BC Hydro and the City agree that a subject matter expert is required to clarify the facts, the cost of that subject matter expert will be shared between BC Hydro and the City. iii. If a subject matter expert is engaged to support the resolution of a dispute and the dispute is resolved in favour of the City, then BC Hydro will cover the costs of that subject matter expert. iv. BC Hydro will not seek recovery of its costs associated with a subject matter expert. <p>d) Step 4: If the issue remains unresolved, BC Hydro will fund the engagement of a facilitator from a mutually agreed-upon list who will be given 30 calendar days to resolve the issue. The parties will agree in advance on up to five facilitators at the execution of the legal agreement resulting from this proposal.</p>

Appendix A: BC Hydro's Proposed Mitigations for the 85th Avenue Industrial Lands

The City has identified an interest in the development and ultimate use of proposed staging areas – specifically, the 85th Avenue Industrial Lands. The City has provided BC Hydro with materials for consideration in the development of the site plan for 85th Avenue Industrial Lands. BC Hydro will continue to take into account the standards and guidelines of both the Peace River Regional District and the City of Fort St. John, in the development of Environmental Management Plans for 85th Avenue Industrial Lands.

The following describes measures that will apply to 85th Avenue Industrial Lands, and may be implemented either by BC Hydro or by its contractors.

- Monitor noise at 85th Avenue Industrial Lands
- Develop Noise and Vibration Management Plans for work site
- Implement notification of work program / Communication Plan for residents
- If needed by BC Hydro for its own needs, BC Hydro will fund the extension of a potable water main from the existing City network to an appropriate 85th Avenue tie-in location. Where feasible installation would be undertaken commensurate with other road construction improvements.
- In the event that BC Hydro determines that it will, at its sole cost, install a water main to serve the site, BC Hydro will coordinate and cooperate with the City in the event the City wishes to install a sewer line at the same time at the City's cost.

The following describes the items that BC Hydro will incorporate into contractor bid requirements and Environmental Management Plans.

Minimizing Visual, Noise and Light Impacts

- Perimeter fencing around the site to restrict access and enhance safety
- Three-metre high berm around the site to provide a visual barrier
- Potential for secondary berms closer to work activities
- Plant with vegetation if required to create an increased visual barrier
- Maintain existing vegetation where possible to maintain a natural buffer
- Conveyor belt system would be covered
- Lights would be directed into the site

Air Quality and Dust

- Install air quality monitoring station in 2013 to collect baseline data
- Use water trucks and spray equipment to suppress dust
- Use of a conveyor system to transport material (rather than trucks) to reduce emissions
- Power the conveyor system with electricity to reduce emissions

Minimizing Noxious Weeds

- Hydro-seeding of exposed soils as appropriate
- Development and implementation of a weed management plan

Material Extraction, Transportation and Operations

- Extraction would not require any drilling or blasting therefore no explosives would be used
- Underpass structures would be constructed for the conveyor belt system at Old Fort Road and at 240 Road to avoid traffic conflicts
- Extraction, sorting and moisture conditioning of construction material into stockpiles is expected to occur for about 10 to 12 hours per day for six days per week during May to October in years four to seven
- Material transport via the conveyor belt system (including loading from the stockpile) is expected to take place for up to 12 hours per day for six days per week in year four, 20 hours per day in years five and six, and up to 12 hours per day in year seven
- Construction of a storm water retention pond to control surface water runoff

Site Reclamation

- Remove berm post-use and use berm material to re-profile slopes
- The slope around the extracted area would be graded to a stable slope to meet the higher ground to the north and west of the site – with input from the City on the slope profile
- After extraction operations, the areas of extraction would be left flat and useable for future development with positive drainage to the lower south portions of the site at a minimum 2% grade
- Final site landscaping would be done in accordance with Project commitments and environmental management plans for the site
- Site would be left in condition that aligns with future use and with input from the Peace River Regional District and the City

Contractor Mitigation Plan

- Prospective contractors would be required to include an impact mitigation plan in their contract proposal. The proposed mitigation plan would be evaluated as part of the contractor selection process. BC Hydro would welcome the City's input for consideration in development of a site mitigation plan.

Infrastructure and Servicing

- Design a storm water retention pond to a 1 in 100 year storm event

Future Land Use

- BC Hydro and the City agree to work together on a planning process for the future use of the site as Light Industrial
- To facilitate planning for the site, BC Hydro is proposing to provide local government with up to \$50,000 for the purpose of developing a site Master Plan for future land use post

Project construction. This plan would reflect future land use for the site, and would be taken into account by BC Hydro and its contractors during use of the land in consideration of final land profiles, retention of removal of roads, retention of removal of berms, fencing and vegetation during site reclamation.

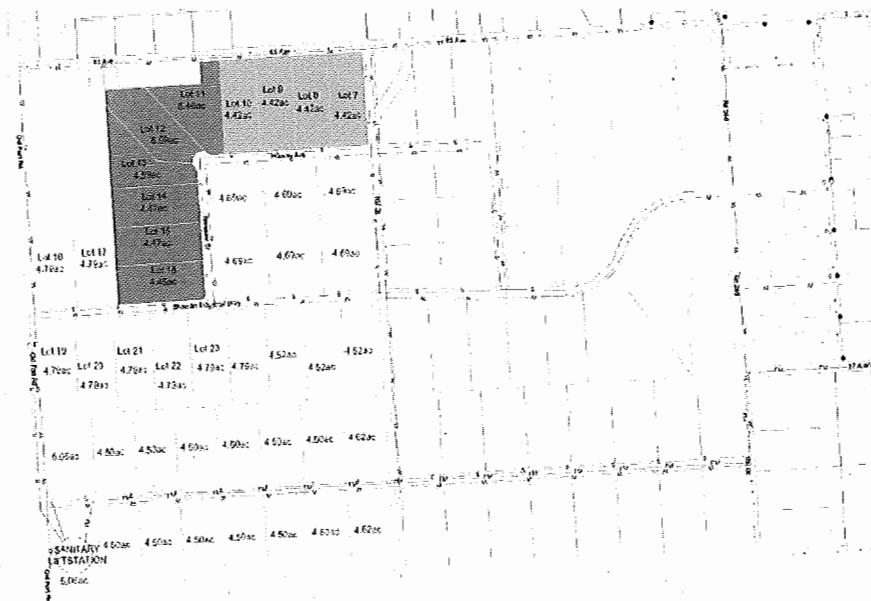
- BC Hydro will develop a plan for selling the land during the later years of construction. Unless there is a single buyer for all properties, BC Hydro would stage land sales such that all properties would not be for sale at the same time.

Appendix B: 85th Avenue Industrial Lands – Parcels

Option A:

CONFIDENTIAL DRAFT FOR DISCUSSION

Schedule A
RFR - Option 1



Option B:

CONFIDENTIAL DRAFT FOR DISCUSSION

Schedule A
RFR - Option 2



Appendix C: Summary of Financial Terms

[Redacted.]

Appendix D

[Redacted.]

Appendix E

In the EIS, BC Hydro has proposed measures to mitigate the potential adverse effects of the Project. This Appendix provides a complete list of proposed mitigation measures for the social and economic valued components, measures that would in turn benefit communities of the Peace Region. The list below reflects the mitigation measures proposed by BC Hydro as of July 19, 2013.

For a complete list of environmental mitigation measures, refer to the Site C Clean Energy Project Environmental Impact Statement, Volume 5, Section 39: Complete Lists of Mitigation and Follow-up Measures.

Social and Economic Valued Components	Proposed Mitigation
Local Government Revenue	<ul style="list-style-type: none">• Grants-in-lieu as determined by the provincial government is a well-understood and previously used mitigation for similar BC Hydro projects. Once operational, BC Hydro will provide annual grants-in-lieu payments to local governments as directed by provincial funding obligations order-in-council. (operations)• Local governments may experience increased costs related to meeting the demands of new local residents and Project workforce camp populations, or may have infrastructure that, if affected and not mitigated, would increase local government expenditures. To mitigate this change, Volume 4 Section 30 Community Infrastructure and Services further identifies adverse effects and mitigation and monitoring measures as appropriate. (construction)• Permanent inundation of land no longer available for development will be addressed by providing a one-time contribution of \$160,000 to the District of Hudson's Hope within one year of reservoir filling. (operations)
Labour Market	<p>Augment labour supply through recruitment and enhancing local labour market participation rate. (construction)</p> <p>Recruitment:</p> <ul style="list-style-type: none">• Access labour pools outside of the region, and attract new entrants to the local labour force (including mobile workers).• Encourage contractors to hire locally available workers with

the requisite skills.

Enhancing local labour market participation rate:

Enhance local labour market participation via training and skill development, focused on increasing the local labour market participation rate and skill level of LAA population:

- Provide \$1 million to the Northern Lights College Foundation to fund student bursaries, focusing on trades and skills training to support the development of skilled workers in the LAA
- Enter into a three-year (2011-2014) funding agreement with Northern Opportunities, a partnership of the school districts of Fort Nelson, Peace River North, and Peace River South, Northern Lights College, local First Nations, industry and local communities, with the objective of providing young people with a seamless learning pathway from secondary school to post-secondary training, which is open to Aboriginal and non-Aboriginal students
- Participate in regional workforce training initiatives, such as the Northeast Regional Workforce Table Task Force, to support alignment of training programs with the need for skilled workers to meet the needs of northeast B.C.
- May work with contractors and labour organizations to identify apprenticeship opportunities during construction
- Provide additional daycare spaces in the Fort St. John area to increase spousal participation in the labour market

Support Aboriginal training initiatives and students (construction):

- Consider commitments respecting capacity building, education, and training associated with Aboriginal participation in the labour market
- Support training, industry, and Aboriginal partnership opportunities in the region
- Support the North East Native Advancing Society (NENAS) with \$100,000 in funding over two years (2013-2014) to support trades training under its North East Aboriginal Trades Training Program
- Dedicate \$500,000 of the \$1 million provided to Northern Lights College to Aboriginal student bursaries
- Develop a plan for inclusion of Aboriginal persons in its Project contracted workforce, including communication of employment opportunities, and evaluation criteria for hiring and training Aboriginal persons in contractor procurement packages

**Regional Economic
Development**

General Population (construction):

- Implement Business Participation Strategy to increase awareness in the business community about Project
-

procurement opportunities (refer to Volume 1 Appendix F Project Benefits Supporting Documentation)

- Partner with local business organizations and with economic development offices and programs to deliver business information sessions and to communicate contracting opportunities
- Mitigation in the Labour Market assessment will also contribute to expansion and diversification of the contractor profile, capabilities, and capacity.

Aboriginal Peoples (construction):

- Continue outreach initiatives to make Aboriginal businesses aware of Project contracting opportunities
- Where identified by Aboriginal groups as an interest, BC Hydro will consider commitments respecting capacity building, education, and training associated with Aboriginal participation in labour market opportunities
- Implement a Business Participation Strategy: continue to notify Aboriginal groups of business information sessions, and about opportunities to register with BC Hydro's Aboriginal Business Director (refer to Volume 1 Appendix F Project Benefits Supporting Documentation)
- Continue to engage directly with the Aboriginal business community in the LAA and elsewhere in the province, including providing opportunities to sponsor and participate in Aboriginal business events and conferences
- BC Hydro's Aboriginal Contract and Procurement Policy includes a commitment to increasing Aboriginal participation in providing its goods and services. Activities to achieve this objective include set-asides, direct awards, select tenders, and the inclusion of Aboriginal content in bidding documents
- BC Hydro will seek information from Aboriginal suppliers in the LAA, and from other Aboriginal groups with whom BC Hydro is engaged, about their business capacity and capabilities to provide goods and services for the Project

Outdoor Recreation and Tourism

- Traffic Management Plan (including access restrictions where required) will mitigate effects on Land and Resource Use Valued Components. (construction)
 - Any overlap or conflict between existing third-party recreation tenure holders and BC Hydro's proposed activities, or BC Hydro's required tenure over Crown land, will be addressed through discussions, permitting and, where appropriate, agreements with the tenure holders. Further information is available in Volume 2 Section 11.3 Land Status, Tenure, and Project Requirements. (construction)
 - Develop an Outdoor Recreation Mitigation Plan (Volume 3
-

Appendix E). The plan specifies opportunities for recreation infrastructure on the Site C reservoir, and provides technical support to recreation providers in the region to assist with their development along, or adaptation to, new shoreline conditions. (construction)

- Develop a Public Safety Management Plan that will identify public communications procedures for public safety hazards, and access restrictions and closures during construction and operation of the Site C reservoir (Volume 5 Section 35 Summary of Environmental Management Plans). (construction)
- Establish and operate three new permanent Site C reservoir launches and day use sites (Cache Creek and Lynx Creek trailer launches and Hudson's Hope Shoreline Protection small craft launch) to replace flooded boat launch areas. (construction)
- Provide funds to the District of Hudson's Hope for the enhancement of Alwin Holland Park or other community shoreline recreation areas (operations)
- Provide a Community Recreation Site Fund to support development of new shoreline recreation sites within the Peace River and tributaries through to the Alberta border, as well as the Site C reservoir. (construction/operations)
- Provide technical support to outdoor recreation providers that require access to the Site C reservoir to assist with their development along, or adaptation to, new shoreline conditions. (operations)
- Fund the development of a B.C. Peace River / Site C Reservoir Navigation and Recreation Opportunities Plan (operations)
- Enter into agreements with the owners of the campground at Cache Creek and the hunting camp near the Site C dam site. Where it is both physically and economically feasible, the costs to relocate facilities will be included in the agreements. (operations)
- Establish a permanent north bank Site C dam site public viewpoint. (construction)
- Project effects on outdoor recreation levels are expected to be beneficial and not require mitigation. However, mitigation proposed for changes in recreation and tourism infrastructure will enhance outdoor recreation benefits by replacing and improving outdoor recreation infrastructure that is lost due to the Project. BC Hydro will also work with the private sector and local governments to develop new RV sites (per mitigation described in Volume 4 Section 29 Housing). (construction)
- Mitigation proposed in Volume 4 Section 29 Housing (e.g., implementing on-site workforce housing) will enhance tourism benefits by avoiding shortages in hotel, motel, and campground availability that might inconvenience leisure travellers.

(construction)

Population and Demographics

- Implement mitigation measures proposed for the Labour Market and Housing VCs (Volume 3 Section 17 and Volume 4 Section 29), including measures to increase the local labour supply (thus reducing the need to hire persons living outside the LAA) and the provision of camp accommodation, to moderate growth of the local population (construction)
- Implement mitigation measures proposed for the Community Infrastructure and Services VC (Volume 4 Section 30) to mitigate the effects of an increased local population (construction)
- Implement mitigation measures as proposed for the Labour Market, Housing and Community Infrastructure and Services VCs (Volume 3 Section 17, Volume 4 Section 29, and Volume 4 Section 30). If implemented with Aboriginal organizations and First Nations communities, these measures will eliminate the adverse effect of certain population and demographic changes from the Project. (construction)
- Support Aboriginal persons in maintaining permanent residence in home communities by providing camp housing and commuter support where demand warrants. (construction)
- Implement workforce management policies to require contractors to offer cross-cultural awareness training to their workers and to adopt and monitor codes of conduct. BC Hydro will work with local area First Nations to develop and deliver the cross-cultural awareness training. (construction)
- Procurement of local Aboriginal businesses for Project construction contracts where feasible. (construction)

Housing

- Scale camp capacity up or down as required to accommodate direct workers. Two smaller camps may be used in off-site locations depending on short-term housing market conditions in the local area at the time of construction, while the south bank camp would be designed to be easily expanded to accommodate potentially higher annual direct workforce during construction. (construction)
 - Provide logistical assistance to the Project workforce seeking local accommodation, through a community camp co-ordinator. (construction)
 - Expand the supply of rental housing by building at least 40 rental units in partnership with BC Housing for use by Project workforce during construction. Transition the units to permanent affordable housing use after construction (in partnership with BC Housing). (construction)
 - Build up to 10 new affordable housing units to be used by the community in the Fort St. John area, in partnership with BC
-

Housing, to expand the supply of affordable housing.
(construction)

- Expand the supply of temporary accommodation by expanding the supply of long-stay RV sites in partnership with the private sector or local governments. (construction)
- Pre-book hotel and motel space when substantial temporary hotel accommodations are required when feasible.
(construction)
- Provide financial support to emergency or transitional housing providers in the City of Fort St. John (e.g., Salvation Army), to support for people who require transitional or emergency housing, or who need help to become job-ready and able to participate in market housing (construction)
- Mitigation measures listed above will address adverse effects on Aboriginal renters in the City of Fort St. John as well as on its non-Aboriginal renters. It is proposed that BC Hydro work with First Nation communities in the LAA to track net migration to on-reserve housing and, using the results of the monitoring of rental market conditions in the City of Fort St. John, identify if additional housing related mitigation may be needed.
(construction)

**Community
Infrastructure and
Services**

- On-site accommodation and services will be provided for the direct construction workforce. Services required for dam-site accommodations and for the overall construction areas will be provided through a combination of on-site development and private procurement. For example, for worker camp accommodation, on-site water and sewer services will be developed, site electricity will be provided by BC Hydro, and site telecommunications services will be procured by or provided by BC Hydro. Firefighting and emergency services will be provided as on-site activities and augmented as necessary by private services. On-site recreation, safety and medical transport, and health services will be provided at the Project site, including at the worker camp accommodations, and would be augmented by provincial health services (e.g., hospital care and, for B.C. residents, the use of Medical Services Plan) or by local government providers, where agreements are reached. (construction)
 - Work with Northern Health to plan for appropriate health care services for Project workforce, including camp residents; on-site health care for all workers residing in camps would include a combination of (construction):
 - Physician care
 - On-site nurse or nurse practitioner care
 - Coordination on program delivery (i.e., Employee Assistance Program, men's health programs)
 - Provide Northern Health with actual workforce and camp population statistics to help plan for service levels (construction)
 - Support Northern Health and partner agencies in planning for
-

anticipated changes in resident population by communicating workforce schedules, in-community population forecasts, housing plans, and on-site medical and social services (construction)

- Support Northern Health initiatives as they develop approaches for delivery of health services for camp workers (construction)
- Provide new families with local information package about health, education, and social services. (construction)
- Provide on-site emergency services to minimize the need for community-based services (construction):
 - Security services that support compliance and enforcement of all camp and construction policies relating to the terms of employment
 - Firefighting services for all project construction activities and work sites
 - First aid and medical transport for medical emergencies at the on-site accommodations and work sites
- Implement policies on safe living and work environment (construction)
- Implement Traffic Management Plan (construction)
- Work with local fire departments to identify incremental demands on emergency rescue services, and provide funding to local governments for accident coverage during Project construction. (construction)
- Work with RCMP to identify incremental demands on policing services, and provide direct funding to detachments in the LAA to cover identified increases during Project construction. (construction)
- Develop emergency service provide site access protocols to enable safe site access during construction and operations. (construction)
- Work with emergency service providers to plan for and adjust to anticipated changes in resident population and new service demands by communicating workforce schedules, in-community population forecasts, housing plans, and on-site emergency services. (construction)
- Develop and update Project emergency plans, including integration with existing BC Hydro Peace River generating facilities during Project construction. (construction)
- Communicate project management plans and activities to emergency service providers. (construction)
- Work with School Districts 59 and 60 to plan for and adjust to anticipated changes in resident population and potential new enrolments by communicating in-community population forecasts. (construction)
- Work with School Districts and Northern Lights College to identify the number of foreign worker hires and the potential need for in-community education services to match their skills to Project requirements. (construction)
- Communicate with School Districts and post-secondary institutions about expected deficits in the local labour pool and how education providers can tailor high school and post-secondary apprenticeship

programs to help meet those needs. (construction)

- Continue to participate in and support northern training initiatives, including participation in Northern Opportunities and financial support to Northern Lights College Foundation, for funding student bursaries. (construction)
- Provide recreation facilities and programming at the camps for workforce. (construction)
- Work with City of Fort St. John to resolve local concerns about potential use of community recreation or leisure facilities by Project workforce (construction)
- Develop and implement construction Waste Management Plan that integrates waste reduction, recycling and reuse standard practice, and management of industrial waste, in coordination with the PRRD municipal waste management plan. (construction)
- Evaluate options to integrate sewer and water systems required for the workforce camps to provide lasting benefits to the City of Fort St. John system. Otherwise camps will operate on self-sufficient systems that will not affect municipal systems. (construction)
- Work with local governments to plan for and adjust to anticipated changes in resident population by communicating workforce schedules, in-community population forecasts, and housing plans. (construction)
- Provide funds for the relocation or replacement of Hudson's Hope water intake, pumping station, and treatment plant to meet the reasonable water supply needs of the residents and District of Hudson's Hope (construction)
- Work with each local government to develop an approach to determine or monitor the effects of the Project on the Hudson's Hope sewage lagoon, Fort St. John water supply (production and access), Taylor water supply, and Peace River Regional District's Charlie Lake outfall. BC Hydro would fund appropriate mitigation measures to maintain functionality of these municipal systems if adverse effects from the Project are identified. (construction/operations)
- Mitigation measures identified for Community Infrastructure and Services have general applicability in the LAA, and will therefore also avoid adverse effects on Aboriginal people living in Fort St. John and other urban centres that will see a rise in population related to the Project. (construction)

Transportation

Highway 29 North

- Implement Traffic Management Plan to include Traffic Control Plans, Public Information Plans, Incident Plans, and Implementation Plans. (construction)
 - Realign sections of Highway 29 that would be inundated by the reservoir between Hudson's Hope and Bear Flat, incorporating geometric and cross-section improvements. (construction)
 - On Canyon Drive west of Hudson's Hope, construct a paved brake check before the start of the 10% grade, and make it a mandatory requirement for Project-related trucks to stop and
-

check vehicle brakes. (construction)

- Explore opportunities for constructing, and install if feasible, either arrestor beds or runaway lanes, or both, on Canyon Drive above Hudson's Hope. (construction)

Highway 29 South

- Provide shuttle service between Chetwynd and dam site, based on demand. Work with District of Chetwynd to identify suitable parking locations for workers using shuttles. (construction)

Jackfish Lake Road

- Provide a shuttle service between Chetwynd and the Project site, based on demand (construction)
- Equip Project vehicles travelling on Project access road with radios. (construction)
- Control access to Project access road at north end of Jackfish Lake Road. (construction)
- Strengthen road base and hard-surface 31 km of Jackfish Lake Road, widening where required. (construction)
- Examine the feasibility of widening the shoulders along the first 30 km of Jackfish Lake Road to meet current MoTI rural collector standards, potentially including two 1.5 m wide paved shoulders. (construction)

North Bank Minor Roads

- Provide carpool programs, such as preferred parking, for regional workforce commuters, to reduce the number of private vehicles commuting to site (construction)
- Use conveyor belt for transport of materials from 85th Avenue Industrial Lands to dam site. (construction)
- Hard-surface 240 Road and the portion of 269 Road south of the intersection with 240 Road. (construction)
- Realign a portion of Old Fort Road south of 240 Road.
- Potentially widen shoulders or add a path on Old Fort Road between Highway 97 and the realigned segment, and between the end of the realigned segment and the gravel pit entrance at km 5.5. (construction)
- Widen shoulders or add a path on 271 Road between the Wuthrich Quarry and Highway 97. (construction)
- Conduct intersection lighting calculations to determine if illumination is warranted and then, in collaboration with MoTI, consider installing intersection lighting. (construction)

Taylor Bridge and Approaches

- Monitor Taylor Bridge and low-lying approaches for changes in fog hours and density during the early years of Project operations. If required, implement mitigation measures to reduce driver speed, minimize fog-related collisions and maintain overall road safety by considering the following

(construction/operations):

- Illumination on, and on the approaches to, the Taylor Bridge
- Changeable message signs that are visible in dense fog
- Radio broadcasts and other forms of public communication

Human Health

Change in ambient air quality during construction

Project Activity Zone

Implement the following:

- Air Quality Management Plan
- Dust Control Management Plan
- Vegetation and Clearing Debris Management Plan
- Smoke Management Plan

Site C Dam, generating station, and spillways (including worker accommodation sites):

- Install baghouses at concrete batch plants and crushers
- Install silos for fly ash cement and aggregate at concrete batch plants
- Retain vegetation barriers where practical
- Reduce burning of wood waste and follow BC Ministry of Environment Open Burning Smoke Control Regulation
- Conduct detailed modelling once the exact locations of emission sources are better defined. Use modelling results to determine where to place PM_{2.5} and PM₁₀ monitors on the north and south bank.
- Locate work camps outside the area of potential air quality exceedance.

Site C reservoir preparation and filling (including clearing):

- Reduce burning of vegetative debris and follow BC Ministry of Environment Open Burning Smoke Control Regulation

Transmission Line to Peace Canyon (corridor and clearing preparation; vehicle operations)

- Reduce burning of vegetative debris and follow BC Ministry of Environment Open Burning Smoke Control Regulation
- Monitor air quality associated with construction of Hudson's Hope shoreline protection; implement mitigation measures as required

Construction access road development and Highway 29

Realignment

- Reduce burning of vegetative debris and follow BC Ministry of Environment Open Burning Smoke Control Regulation
- Utilize filters at crushers

Quarried and excavated material development

- Reduce burning of vegetative debris and follow BC Ministry of
-

Environment Open Burning Smoke Control Regulation

- Conduct further screening modelling at residences located 1.5 km from West Pine Quarry to identify potential exceedances at this site and implement an air quality management plan at this site as required

Site C Reservoir (Hudson's Hope Shoreline Protection)

- Erect temporary barriers
 - Erect portable enclosures/barriers
 - Implement notification program for residents
-

Schedule 2
85th Avenue Industrial Lands: Legal Descriptions of Parcels

PID/PIN	Legal Description
026-886-201	Lot 1 Section 25 Township 83 Range 19 West of The 6th Meridian Peace River District Plan BCP 27273
008-588-881	Lot 1 Section 25 Township 83 Range 19 West of the 6th Meridian Peace River District Plan 22271 Except the North 347.154 Feet
009-556-168	Lot 1 Section 25 Township 83 Range 19 West of the 6th Meridian Peace River District Plan 21292
012-344-966	Lot 1 Section 25 Township 83 Range 19 West of the 6th Meridian Peace River District Plan 12486
012-344-982	Lot 2 Section 25 Township 83 Range 19 West of the 6th Meridian Peace River District Plan 12486
026-886-219	Lot 2 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-227	Lot 3 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-235	Lot 4 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-243	Lot 5 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-251	Lot 6 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-260	Lot 7 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-278	Lot 8 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-286	Lot 9 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-294	Lot 10 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-308	Lot 11 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-316	Lot 12 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273

PID/PIN	Legal Description
026-886-324	Lot 13 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-332	Lot 14 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-341	Lot 15 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-359	Lot 16 Section 25 Township 83 Range 19 West of the 6th Meridian Peace River District Plan BCP 27273
026-886-367	Lot 17 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-375	Lot 18 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-383	Lot 19 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-391	Lot 20 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-405	Lot 21 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-413	Lot 22 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-421	Lot 23 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-430	Lot 24 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-448	Lot 25 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-456	Lot 26 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
026-886-464	Lot 27 Sec 25 Tp 83 Rge 19 West of The 6th Meridian PRD Plan BCP 27273
014-587-041	Part NE1/4, Section 25, Township 83, Range 19, Meridian W6, Peace River Land District, Except Plan 8973, AND EXC PLANS 12798, 15925, 23040, PGP47579, BCP2838, BCP12455 AND BCP21635

Schedule 3

Traffic Monitoring and Mitigation Plan, Fort St. John and North Bank Area Roads

Attached.

Site C Clean Energy Project

Traffic Monitoring and Mitigation Plan

- Fort St. John and North Bank Area Roads

October 29, 2015

Revision Record

Rev.	Date	Revision
00	14.3.18	Initial document.
01	14.5.30	Final draft.
.02	15.10.29	Final

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1.0 Introduction

The Site C Clean Energy Project (Site C or the Project) is a proposed third dam and hydroelectric generating station on the Peace River in northeast B.C. The proposed Site C Project is located approximately seven kilometres from the City of Fort St. John (the City). Construction of the dam would generate an increase in traffic volumes on roadways in and surrounding the City during the construction period, and to a lesser extent during the dam operating period, resulting from worker, equipment and material movements.

As part of the Site C Clean Energy Project's Environmental Impact Statement (EIS), BC Hydro studied the potential effects that an increase in vehicle traffic in the Peace River Regional District (PRRD) would have on future traffic operations and road safety. BC Hydro, the British Columbia Ministry of Transportation and Infrastructure (MOTI), and the City of Fort St. John have agreed that a Traffic Monitoring and Mitigation Plan (the TMMP) should be developed with regard to traffic operations and road safety for implementation during the term of construction of the Project. Accordingly, BC Hydro studied traffic operations near the proposed dam site and in the City of Fort St. John, along and north of Highway 97, to help with developing the TMMP.

This TMMP provides the content for the Construction Safety Management Plan, Appendix B – Traffic Monitoring and Mitigation Plan – Fort St. John and North Bank Area Roads. The TMMP includes the traffic volume and road safety monitoring activities that would take place leading up to and during Project construction. This TMMP may be amended from time to time in response to monitoring and/or mitigation results, and as construction contractors' traffic management plans are developed and implemented.

This TMMP includes MOTI roads in the PRRD, in the vicinity of the dam site on the north bank, and the City of Fort St. John's roads. The Site C Construction Safety Management Plan: Traffic Management Plan includes these roads as well as those elsewhere in the PRRD that would accommodate construction Project traffic.

The effect of BC Hydro operations on traffic in and around the PRRD and Fort St. John is expected to be negligible, and BC Hydro will not monitor road safety post-construction of the Project.

2.0 Background

As part of the Project's Environmental Impact Statement, BC Hydro prepared the Project Traffic Analysis 2013¹ that studied traffic volumes and road safety on highways, roads and intersections within the PRRD. The analysis included roads on the north bank of the Peace River and Highway 97 including portions of the highway within the municipal boundaries, but did not include roads within the City north of Highway 97.

As a result of consultation with the City, additional traffic data collection and analysis commenced in June of 2013 to study traffic operations at intersections in the City, generally north of Highway 97. This data and analysis is documented in the Traffic Report – Fort St. John 2013². Additional road safety data collection and analysis was also completed³.

The results of this work shaped the TMMP, identifying those roads and intersections where existing traffic operations and road safety are a concern, and where traffic operations and road safety may be influenced by Project traffic.

¹ Site C Clean Energy Project, Environmental Impact Statement, Volume 4, Appendix B: Project Traffic Analysis, Amended July 2013

² Nova Trans Engineering Inc. 2013. Site C Clean Energy Project, Traffic Report – Fort St. John, Prepared for BC Hydro by NovaTrans Engineering Inc., December 2013

³ De Leur Consulting. 2014. Traffic Monitoring and Mitigation Plan (TMMP) for Fort St. John, Road Safety Component, Site C Clean Energy Project.

3.0 Definitions

Intersection: includes signalised and unsignalised intersections in the PRRD and Fort St. John.

Collision Rate: for a roadway section, it is defined as the number of vehicle collisions per million vehicle kilometres or, at an intersection, the number of vehicle collisions per million entering vehicles.

Collision Severity Index: represents a measure of collision severity levels and is defined as the weighted sum of fatal, injury (together, casualties) and property-damage-only collisions.

Critical Collision Rate: a function of the average collision rate and traffic exposure, and is based on the average collision rate for similar facilities. The critical rate is a commonly used statistical technique employed by highway agencies to identify hazardous locations.

Level of Service (LOS): a quality measure describing operating conditions within a traffic stream, generally in terms of speed and travel time, freedom to manoeuvre, traffic interruptions, and comfort and convenience. LOS A, represents little delay to vehicles and LOS F represents much delay. As a rule, LOS E and F indicate congested operations and, typically, a road authority would not consider improving an existing condition until the LOS erodes to E or F, indicating that a facility is at or over capacity.

Mitigation: the process of improving a traffic condition or level of safety in response to an anticipated or realized traffic operation or safety concern, which would be limited to the design or plan to implement an improvement or which may involve the construction of an improvement. The improvement may be of a temporary nature or permanent and may include signal timing or phasing changes, or additional capacity through construction of additional lanes.

Monitoring: the process of counting traffic by either automated or manual means, analysing the traffic count data in terms of determining level of service, vehicle delays, and/or queue lengths, and which may include forecasting traffic into the future using growth rates developed by BC Hydro in collaboration with MOTI, the PRRD and the City of Fort St. John agree. Monitoring also involves the assessment of safety performance by analyzing collision data, comparing the level of safety against safety performance benchmarks, and predicting future safety performance based on forecasted traffic volumes and design features / characteristics of the infrastructure.

Peak Year Traffic: The sum of (i) vehicle traffic contributed by background (without Project) traffic and (ii) Project-generated traffic, where Project-generated traffic is taken to be the greatest number of vehicles contributed by each Project component (workforce, bulk materials movement, materials and equipment, clearing, transmission lines, Highway 29 realignment and Hudson's Hope berm construction) for the peak quarter of the peak year for that particular component. Since the workforce component contributes the greatest to Project-generated traffic in the vicinity of the dam site on the north bank, and the peak workforce year is anticipated to be year 5 of the dam's construction, year 5 is considered the Peak year for traffic in the vicinity of the dam site on the north bank.

Project Traffic: Vehicles using the public road system to transport materials and personnel to and from the dam site from various locations.

Queue: A line of vehicles, bicycles, or persons waiting to be served by the system in which the flow rate from the front of the queue determines the average speed within the queue.⁴

Traffic: vehicle traffic, pedestrian traffic and bicycle traffic, further divided into either background traffic which exists today or is forecast into the future without the Project, and Project traffic which would be generated as a result of the Project.

Vehicle Delay: The additional travel time experienced by a driver, passenger, or pedestrian compared to travel time under free flow conditions.

⁴ Highway Capacity Manual, Transportation Research Board, National Research Council, 2000

4.0 Monitoring

4.1 *Traffic Performance*

4.1.1 *Traffic Performance Assessment - Pre-Construction*

As part of the Site C Clean Energy Project's Environmental Impact Statement (EIS), BC Hydro studied the potential effects that an increase in vehicle traffic in the PRRD would have on future traffic operations and road safety. Potential effects on traffic operations were examined along Highway 97 through the City and on some roads in the PRRD south of the City. The conclusions from that assessment, reported in the Project Traffic Analysis 2013, are that some existing intersections on Highway 97 through the City and on roads south of Highway 97 would see a one-level decrease in performance (Level of Service, or LOS) for some movements, i.e., from LOS A without Project traffic to LOS B with Project traffic added, or from B to C.

Subsequently, in developing the TMMP, traffic operations on the local Fort St. John road network were assessed. BC Hydro collected traffic volumes in the City from a number of sources. Traffic data collected by MOTI and originally collected by BC Hydro in 2011 was used for Highway 97 intersections in the City. This was supplemented with data collected by BC Hydro in June 2013 for Highway 97 intersections and for intersections within the City and the PRRD.

Manual intersection counts were taken in June 2013 at the locations shown with blue dots in Figure 4.1. These counts were taken on weekdays between 0600 hours and 0900 hours and between 1500 hours and 1800 hours. In addition, a mid-day weekday count (1100 hours to 1300 hours) was taken at the intersection of 100th Avenue and 100th Street.

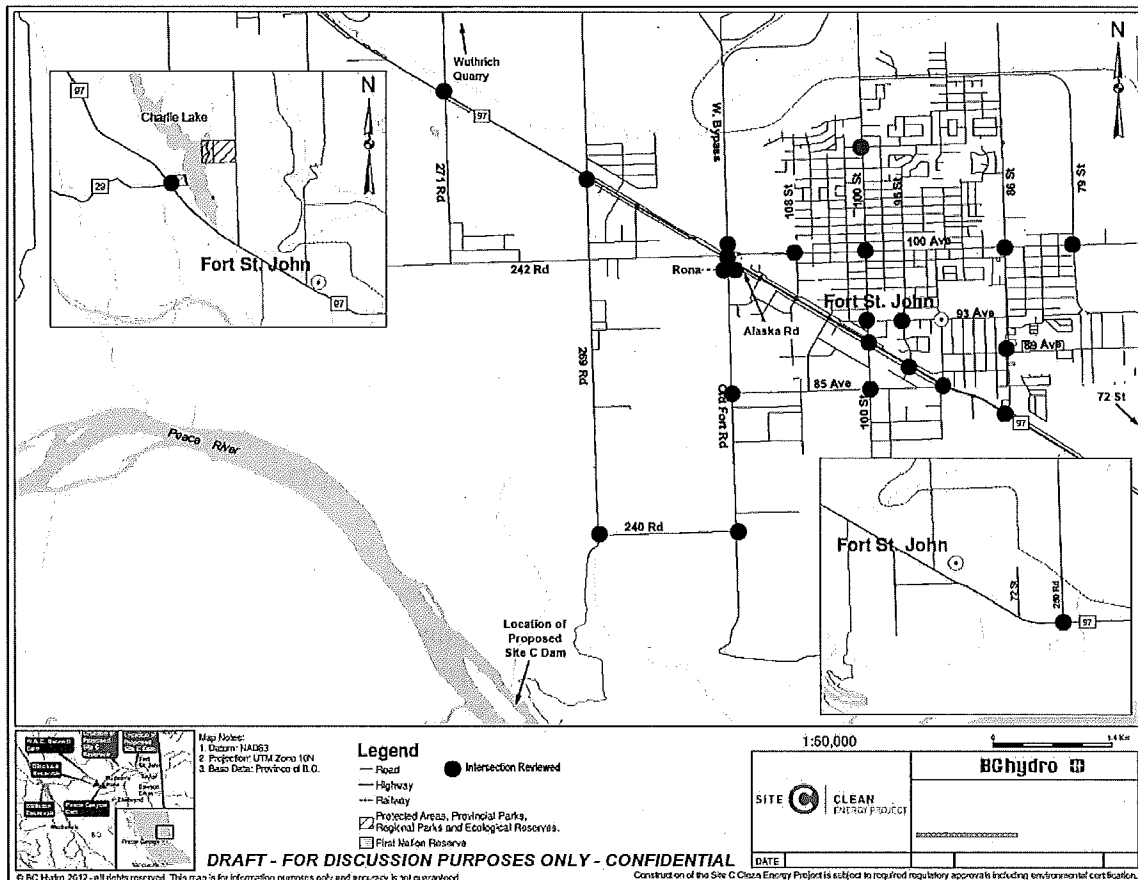


Figure 4.1 - June 2013 Traffic Volume Count Locations

These traffic volumes were factored up to the anticipated peak year of construction, 2019, to which estimated Project traffic was added. BC Hydro determined intersection levels of service in the existing (2013) and peak (2019) years, the latter with and without the Project, to identify intersections where traffic performance is projected to deteriorate with the Project traffic added.

The results of this traffic work are reported in the document Traffic Report – Fort St. John 2013.

In brief, the Traffic Report – Fort St. John 2013 concluded that there are intersections within Fort St. John and in the PRRD south of Fort St. John where some movements are currently operating at level of service D and E. However, it is presently estimated that, while the addition of Project traffic may exacerbate traffic operations in the peak year of Project construction, the additional Project traffic would not, by itself, trigger any mitigation. This is discussed further in Section 5.1.

4.1.2 Traffic Performance Monitoring - Construction Phase

As part of the traffic monitoring program, traffic volumes at defined intersections would be monitored at regular periods throughout Project construction. The frequency of monitoring will be implemented as proposed below and in consideration of input during construction from MOTI, the PRRD and the City of Fort St. John, and in consideration of the Project contractors' construction schedules and activities to anticipate potential Project traffic peaks, including the nature of Project traffic at defined monitoring locations. More frequent counts than those proposed would be undertaken if required based on review of the annual or interim data reports, anticipated or realised traffic peaks, or in response to stakeholder concerns.

BC Hydro would implement the monitoring, using manual or automated means: manual counts (traditional on-site counts, or video / webcam-observed counts) or automated counts (in-pavement detection, or pressure hose).

Traffic counts are proposed for the following locations:

1. Dam Site Entrance: count at the main Project entrance to the dam site, to define the daily volume of Project traffic;
2. Old Fort at 85th Avenue: turning movement count at the intersection of Old Fort Road and 85th Avenue, to understand the split in traffic choosing to travel north versus east;
3. Highway 97 Intersections where Project traffic may access or cross including turning movement counts at the following Highway 97 intersections:
 - a) Old Fort Road,
 - b) 100th Street,
 - c) 85th Avenue, and
 - d) 86th Street)
4. 85th Avenue at 100th Street: turning movement count at 85th Avenue and 100th Street, to understand the split of traffic proceeding into Fort St. John via 100th Street and that continuing east.
5. 100th Avenue at West Bypass Road: turning movement count at 100th Avenue and West Bypass Road to evaluate changes in traffic demand and patterns at this location.

It is noted that the intersections of Highway 97 and 86th Street and 100th Avenue and West Bypass Road intersections shows 2013 LOS of E/F and D respectively. BC Hydro has not forecast that these routes would be used by Project traffic as they are not on main routes for goods and services transport to the dam sites. As forecast LOS for both

intersections will be F, in the future without the Project⁵, raw count data will be captured and provided to the City and MOTI as requested by the City, however analysis for these two intersections will not be undertaken by BC Hydro.

Dam Site Entrance count:

The count at the main dam site entrance is proposed to be undertaken quarterly. This would provide the basic trip generation data for the workforce and corresponds to the quarterly estimates undertaken at the other locations listed above.

Turning movement counts:

The turning movement counts will be undertaken annually, except in three instances: the first year, the year prior to the peak year, and in the peak year of construction, when quarterly counts are proposed (to be taken in the AM and PM peak hours). These years of quarterly data will provide seasonal traffic information useful for future construction years.

In addition to collecting traffic volume data, BC Hydro will make and report on site observations where a traffic-operation problem has been identified, as well as periodically during construction.

Once traffic counts are taken and using the traffic models developed prior to Project construction, BC Hydro would determine intersection levels of service using the same methodologies used in pre-construction monitoring work and, for signalised intersections, using actual signal timing plans. These results would be compared against thresholds at which mitigation measures could be considered for implementation. Based on consultation and technical analysis the thresholds would be:

1. left and right turn queue lengths that exceed the available storage; and
2. delays that result in vehicles experiencing a degradation of two levels of service (relative to service levels associated with no Project traffic).

If these thresholds are exceeded, then additional traffic observations or counts would be taken at the location(s) of concern to confirm that the reduction in traffic performance extends is frequent and continuous, and not just periodic.

⁵ Nova Trans Engineering Inc. 2013. Site C Clean Energy Project, Traffic Report – Fort St. John, Prepared for BC Hydro by NovaTrans Engineering Inc., December 2013

Intersections that experience traffic performance that encroaches upon or reaches/exceeds these thresholds would be considered for mitigation.

BC Hydro would make available to MOTI, the PRRD and the City the traffic count data and/or results, so that these entities may review the data directly. In addition, it is anticipated that the City of Fort John may conduct traffic counts at other locations in the City and that this data will be provided to BC Hydro for review.

BC Hydro will monitor traffic operations on other routes and at intersections where, in discussion with MOTI, the PRRD and the City, it is reasonable to deduce that Project traffic may be straining traffic operations at intersections or along routes. In this case, additional traffic count locations may be identified and observed during the construction period to support the review and analysis of project impacts. Additional count locations will be identified in discussion with BC Hydro, MOTI, and the City. Other projects in the local area or in the Region may be underway concurrent with the Project and so some monitoring activity may be the responsibility of others, including MOTI generally.

4.2 Road Safety

4.2.1 Road Safety Assessment - Pre-Construction

As part of the EIS, BC Hydro studied the potential effects that an increase in vehicle traffic in the PRRD would have on future traffic operations and road safety. Potential effects on road safety were examined along Highway 97 through Fort St. John. The conclusions from that assessment, reported in the Project Traffic Analysis 2013, are that some existing links and intersections would have calculated collision rates and calculated collision severity indices greater than the average collision severity index for the northern region and greater than the critical collision rate. The potential increase in the number of collisions per year on Highway 97 through the City was estimated to increase by only 0.1% between 2014 and 2022.

In developing the TMMP, road safety on roads in the PRRD south of the City was assessed. BC Hydro collected ICBC's claims-based collision data from 2008 through 2012 to assess the safety performance at intersections in the PRRD south of and within the City. These intersections are shown with red dots in Figure 4.2. Intersection collisions were assessed since this is where the majority of collisions occur within a municipality. Links in the road network (i.e., between intersections) were not assessed.

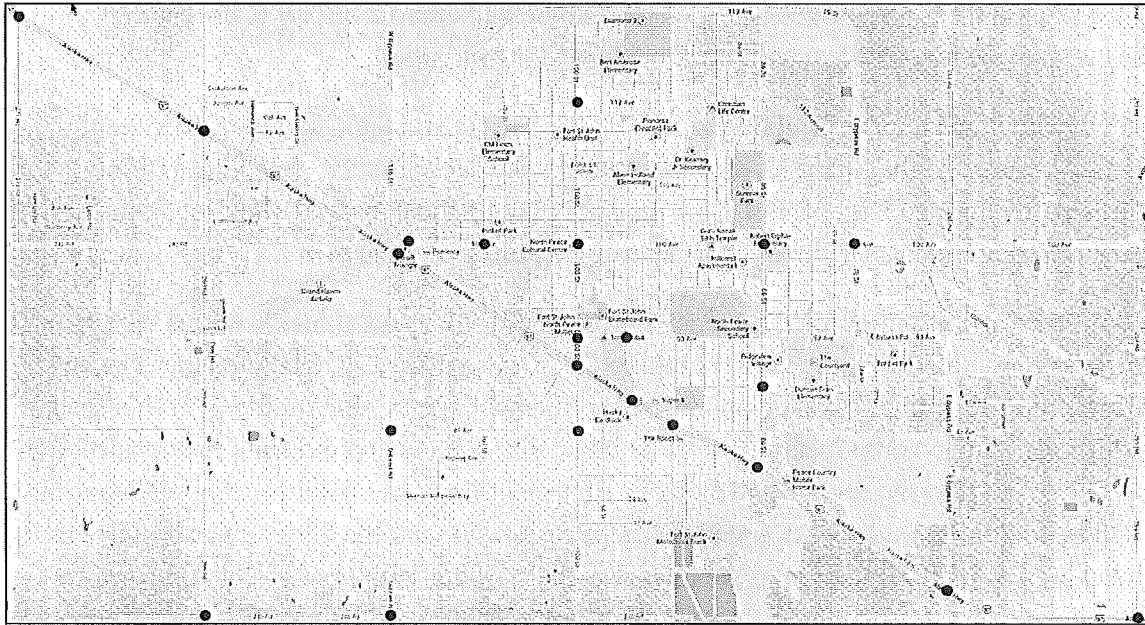


Figure 4.2 – Safety Monitoring Locations

Road safety performance for 2013 was estimated using collision prediction models, and then calibrated against the ICBC collision data. Road safety performance for 2019 with and without Project traffic was then estimated using the same collision predictions models and the calibration factor.

In brief, the results of that road safety work concluded that, of the intersections assessed, five⁶ have collision rates that presently exceed the average collision rate for similar intersections, and nine⁷ have collision severity indices that presently exceed average collision severity indices for similar intersections. Furthermore, with the addition of Project traffic during the peak year of Project construction, most of the intersections are predicted to experience a less than 10% increase in annual collision frequency. However, assuming that no changes / improvements to infrastructure occur, the intersections of 100th Street and 85th Avenue, 85th Avenue and Old Fort Road, and 240 Road and 269 Road are predicted to experience an increase in annual collision frequency of greater than

⁶ 100th Avenue and 100th Street, 100th Avenue and Highway 97, 100th Street and Highway 97, 86th Street and 89th Avenue, and 240 Road and 269 Road

⁷ 100th Avenue and 79th Street, 100th Avenue and 86th Street, 100th Street and 85th Avenue, 86th Street and 89th Avenue, 93rd Avenue and 96th Street, 96th Street and Highway 97, Highway 97 and 269 Road, 240 Road and 269 Road, and Highway 97 and 259 Road

10% with the addition of Project traffic in the peak construction year. This is discussed further in Section 5.2.

4.2.2 Road Safety Monitoring - Construction Phase

ICBC claims-based collision data will be used to undertake on-going monitoring of the locations to be included in the monitoring plan (note that the availability of the historical collision data is typically several months behind the current date). Police reported collision data for roadways outside of the municipal boundary (i.e., intersections along and south of Highway 97) would be obtained to understand the difference between the claims-based collision data and police reported collision data and the impact on reported safety performance. The police reported collision data would allow BC Hydro to understand the collision causation and to identify collision patterns and trends.

Monitoring will involve extracting the collision data for each location and comparing the number of collisions with previous years' collision totals. The frequency of safety monitoring should be linked to the level of construction activity and traffic, such that the safety assessment should be conducted more often at times when the construction activity / traffic is high and less often when the construction activity and traffic is low. For example, during peak construction / traffic periods, the safety assessment could be completed at three month intervals, but when the level of construction and traffic reduces, it may be more appropriate to complete the safety assessment on an annual basis.

The outcome of this work would be to identify and confirm locations that experience poor safety performance (i.e., 'hot-spots'). Because of the rare and random nature of collisions, confidence in identifying 'hot spots' may be limited in the short term (i.e., shortly after Project construction has started), but confidence will increase over time. Locations of concern can be reviewed and improvements can be planned based on discussion and agreement between BC Hydro, MOTI, the PRRD and the City. In addition, discussions would take place with contractors to alert them of any growing road-safety concerns, and the need for contractors to bring such concerns to the attention of their driving-workforce.

In addition, BC Hydro will explore opportunities to work with the RCMP to monitor collision occurrences at intersections which will be monitored as part of the TMMP.

5.0 Mitigation

5.1 Traffic

5.1.1 Traffic Performance – Construction Phase

From the results of the pre-construction traffic monitoring work cited in section 4.1.1, there are no intersections where Project traffic alone is predicted to cause traffic operations to change to the point that mitigation would be warranted. Details of this work are summarised in the report Traffic Report – Fort St. John 2013. There are, however, several intersections where existing traffic operations or future traffic operations (without the Project) are predicted to change to the point that one or more of the aforementioned thresholds (queue length and at least a two level change in Level of Service) are breached. These intersections, as noted in the Traffic Report – Fort St. John 2013, are:

- 100th Avenue / West Bypass Road;
- 100th Street / 93rd Avenue;
- Highway 97 / 100th Street;
- Highway 97 / 86th Street; and
- Highway 97 / Old Fort Road.

Deterioration of intersection levels of service, to thresholds determined by BC Hydro in collaboration with MOTI, the PRRD and the City that can reasonably be identified as associated with Project traffic, and which experience lower levels of traffic performance over a sustained period, would be remedied through implementation of mutually agreeable improvements. As reported in Section 4.1.2, for intersections, these thresholds are:

- left and right turn queue lengths that regularly exceed the available storage; and
- delays that result in vehicles experiencing a degradation of two levels of service (relative to service levels associated with no Site C-generated traffic).

Mitigation that could be considered to remedy these reductions in level of service include:

- changing traffic control and/or intersection configuration;
- re-timing traffic signals;
- adding phases to existing traffic signals;
- lengthening intersection auxiliary lanes; and/or
- installing guide or information signs, or distributing information throughout the community and Site C workforce encouraging alternative travel routes.

As BC Hydro is not the agency responsible for public roads and intersection performance, it is anticipated that MOTI, the PRRD or the City may decide to address

intersection performance based on current or future traffic conditions, regardless of the Project traffic. For those intersections predicted to experience deterioration in performance, even without the Project, possible measures that may be considered are discussed in the Traffic Report as follows:⁸

- 100th Avenue / Western Bypass Road; Reconfigure to protected-T or signalize
- 100th Street / 93rd Avenue; Re-time traffic signal
- Highway 97 / 100th Street; Re-direct traffic to alternative intersections
- Highway 97 / 86th Street; Signalize
- Highway 97 / Old Fort Road; Re-time traffic signal

As Project construction unfolds, and with the benefit of the traffic monitoring program noted in Section 4, the traffic performance observed during construction may differ from that predicted in pre-construction projections to the extent that Project traffic triggers an improvement at one or more intersections. When that happens, or if BC Hydro anticipates that it will happen based on an upward trend in Project traffic growth, appropriate analysis (including additional traffic counts) and mitigation will be discussed with MOTI, the PRRD and the City, and other stakeholders.

Initially, at signalised intersections, traffic signal timing plans may need to be adjusted to reflect changes in traffic volumes on arriving legs. Such operations would be identified through the monitoring work, and then BC Hydro would work with MOTI and the City to determine if and when the traffic signals should be re-timed.

Through their traffic management plans, contractors would be responsible for managing one-off or short-term traffic interruptions resulting from a specific contractor operation or operations. Such operations may require alternating single lane closures, deploying traffic control personnel, and/or informing the public through local, regional and social media. BC Hydro and its contractors will work together to inform the public in a timely manner of such traffic interruptions.

5.1.2 Post-Construction

BC Hydro will work with the road authority to determine whether or not any mitigation should be removed post-construction and to determine which party will be responsible for re-instating the pre-mitigation condition at BC Hydro's expense. For example, traffic

⁸ Nova Trans Engineering Inc. 2013. Site C Clean Energy Project, Traffic Report – Fort St. John, Prepared for BC Hydro by NovaTrans Engineering Inc., December 2013

signals may have to be re-timed. Physical improvements or changes made to road infrastructure would remain in place.

5.2 Road Safety – Construction Phase

Based on anticipated Project traffic and routes, current road conditions, and results of technical studies, BC Hydro has proposed, in the EIS⁹, to undertaking road safety improvements on several North Bank roads, should the Project receive environmental certification and proceed to construction. These improvements include limited extents of shoulder widening on 271 Road, Old Fort Road, 240 Road and 269 Road (south of 240 Road) as well as a realignment of the 'switchback' on Old Fort Road. In addition, illumination would be added at the intersections of Old Fort Road and 85th Avenue, Old Fort Road and 240 Road, and Old Fort Road at the Mica Sand and Gravel entrance.

As a result of the road safety analyses documented in the report Traffic Monitoring and Mitigation Plan (TMMP) (de Leur Consulting, 2014), BC Hydro proposes to complete an in-service road safety audit after road upgrades are complete at the intersections of:

1. 85th Avenue and Old Fort Road,
2. 240 Road and 269 Road and
3. 85th Avenue and 100th Street.

BC Hydro would discuss the results of the audit with the appropriate road authority (MOTI or the City).

Additional mitigation and improvements, with the view to improving road safety, would be implemented by BC Hydro if the road safety performance monitoring at a location reaches a level when BC Hydro, MOTI, the PRRD and/or the City determine that improvements are necessary. This deterioration in safety performance must be due, substantively, to Project traffic. Other road authorities may also, independent of BC Hydro, undertake road upgrades on monitored routes based on their own planning and requirements.

In determining mitigation, the first step would be for BC Hydro to assess the 'hot-spot' location based on the design and operational characteristics of the site, and to determine the features of the site that may contribute to the deterioration in safety performance. The second step would be for BC Hydro to assess the collision data to identify patterns and trends in the data, such as collision type, temporal patterns, etc. Finally, with input from

⁹ Site C Clean Energy Project, Environmental Impact Statement, Section 31: Transportation. Amended July 2013

MOTI, the PRRD, the City, the RCMP and/or other stakeholders, BC Hydro may take the lead in developing improvement options to mitigate safety deficiencies. Alternatively, MOTI, the PRRD or the City may be the lead agency. The types of safety-related mitigation plans / improvement implemented due to Project traffic are likely to be modest, as Project traffic will be temporary, such as the following types of safety improvements:

- add a dedicated left-turn phase at a signalized intersection;
- add a left-turn lane at an intersection;
- improve lighting;
- speed mitigation techniques;
- add signing and/or pavement markings; and/or
- pedestrian crossing facilities.

Depending on the results of the road safety performance monitoring work, improvements could be planned and implemented responding to developing or expected safety concerns. Alternatively, BC Hydro would lead development and implementation of safety improvements after collisions occurred, leading to greater confidence in the improvement's effectiveness.

In advance of implementing any identified safety mitigation, BC Hydro would work with MOTI, the PRRD and the City to collaborate on improvement plans and assign level of responsibility between parties.

6.0 Resources and Organisation

It is proposed that BC Hydro would identify an individual who would be responsible for managing the TMMP and for overseeing the monitoring and mitigation components identified in the TMMP. This individual – a TMMP Coordinator – would be a BC Hydro representative and would provide recommendations to senior Project management for the type and timing of warranted mitigation measures.

The TMMP Coordinator would provide on-going liaison with other BC Hydro personnel, construction contractors, MOTI, the PRRD, and the City during pre-construction and the construction phase of the Project. A Traffic Technical Working Group would be established with representatives appointed by appropriate parties (including MOTI and the City of Fort St. John) to review information as described in the TMMP. The Traffic Technical Working Group would also make recommendations with respect to additional data collection and analysis that may be required beyond what has been specifically identified in the TMMP. Final reports would be provided by BC Hydro to the Fort St. John Community Liaison Committee for review.

Schedule 4

Fort St. John Water Supply Monitoring and Mitigation Plan

Attached.

Site C Clean Energy Project

Fort St. John – Water Supply Monitoring and Mitigation Plan

September 11, 2015



Power smart

Rev.	Date	Revision
00	14.3.18	Initial document.
01	14.5.30	Final draft.
02	15.9.11	Final

Power smart**Table of Contents**

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1.0 Introduction

The City of Fort St. John (the City) operates a groundwater supply system in an aquifer beside the Peace River, downstream from the proposed Site C Clean Energy Project (Site C). The purpose of this monitoring and mitigation plan is to detect changes to water quantity and water quality that could potentially be caused by Site C construction or operation. The plan includes monitoring of groundwater from the City's water supply wells and surface water from the Peace River. In addition, monitoring is proposed to detect deposition or erosion of the City water supply aquifer materials.

Data collection is proposed to begin prior to Site C construction in order to document baseline conditions. The City currently conducts monitoring to maintain a safe drinking water supply (see Appendix for details). The proposed monitoring and mitigation plan represents additional monitoring not currently conducted by the City as part of its ongoing water supply system operation.

This monitoring plan was developed based on the Site C Environmental Impact Assessment, written comments from the City, and discussion and feedback from a series of meetings between BC Hydro and the City, and their consultants, in 2013 and 2014.

2.0 Background

2.1 Site C Project Overview

Site C is a proposed third dam and hydroelectric generating station on the Peace River in northeast BC. Site C will be an earth-fill dam, approximately 1,100 meters in length, and 60 meters high above the river bed. The reservoir will be approximately 83 kilometres long and will be, on average, two to three times the current width of the river (BC Hydro 2013). Construction began for Site C on July 27, 2015.

2.2 City Water Supply System Infrastructure Overview

The City production wellfield is located along the north bank of the Peace River, approximately 9 km southeast of the City. The City production wells are located approximately 10 km east of the proposed Site C Dam (approximately 12 km downstream).

The City well system currently includes 5 wells; TPW-1, TPW-5, TPW-6, TPW 7 and TPW-8. The wells are located within the Peace River Valley, along a point bar on the north side of the river (Golder Associates Ltd. 2013). The wells are located approximately 20 to 110 m from the typical shoreline of the river. Wells TPW-5, TPW-6, TPW-7 and TPW-8, which are the closest to the river, are designed such that they can be operated even if they are flooded at ground level (Golder Associates Ltd. 2013). The wells are completed in the Fort St. John Aquifer and are in close hydraulic connection with the Peace River. Therefore, well capacity is sensitive to changes in Peace River water levels.

Water from the wells is pumped, via a high-lift pumping station, through approximately 11 km of piping to the City Water Treatment Plant (Fort St. John 2013A). There, the water is filtered, chlorinated and fluoridated at the treatment plant (Fort St. John 2013A and 2013B). Two reservoirs with capacities of 6,800 and 36,400 m³ provide storage of the treated water (Fort St. John 2013A).

The combined production capacity of the well system is limited to a maximum rate of approximately 200 L/s by the piping and treatment system infrastructure (Golder Associates Ltd. 2004 and 2013). Average system demand is about 105 L/s with peak demand approaching 200 L/s (Fort St. John 2013B).

2.3. *Potential Impacts as a Result of Dam Construction and Operation*

Site C construction and operation is not expected to result in significant effects to the City water supply. However, monitoring is proposed to confirm actual conditions during Site C construction and operations, and to detect the following adverse effects if they occur:

- Degraded water quality due to increased concentrations of suspended or dissolved sediments, or from increased pumping from well TPW-1;
- Reduced well efficiency and aquifer productivity due to increased rates of sedimentation, biofouling, mineral precipitation, or other water chemistry- cause;
- Erosion of aquifer materials due to a changed downstream flow regime.

3.0 Monitoring Plan

3.1. *Water Quality*

Water samples will be collected from each City's 5 groundwater supply wells and surface water locations near the City wellfield. At pre-scheduled times directed by BC Hydro; City staff will collect a groundwater sample from each of the 5 water supply wells and deliver these to BC Hydro. BC Hydro staff will collect water samples from surface water monitoring locations. All reasonable effort will be undertaken to coordinate the collection of the surface water and groundwater samples within a 48 hour period. BC Hydro staff will then transport all samples to an accredited lab for analysis of the parameters listed in Table 1. Results will be distributed to BC Hydro and the City in electronic format.

Sampling will be conducted quarterly with the collection time corresponding with each season (i.e. Spring, Summer, Fall and Winter), weather and access permitting. The sampling program will begin in September 2015 and continue for a period of 2 years after Site C construction has finished and operations begin.

After 2 years of dam operation, the surface water and groundwater supply wells' quality results will be reviewed by BC Hydro and the City to confirm whether the seasonal water quality has stabilized. If this can be demonstrated, then no further surface water or groundwater monitoring will be required for the City. If surface water and groundwater quality have not stabilized after 2 years of Site C operations, then the sampling program would continue until such time that BC Hydro and the City agree the parameters have stabilized. In the event the parties cannot agree, an external subject matter expert agreeable to both parties will be engaged to evaluate the Project's influence on the water supply system.

3.2. *Water Levels*

BC Hydro will monitor daily (or more frequently) water levels in the Peace River using existing Water Survey of Canada gauges at selected locations upstream from the Site C dam, downstream of the dam, and near the City's wellfield. The City currently monitors water levels in each water supply well hourly. No changes to the current water supply well water level monitoring program are proposed.

Water level monitoring results will be shared between the City and BC Hydro in electronic format at the same frequency as described for the water quality monitoring data.

3.3. *Well Performance*

The City currently conducts monthly well capacity and well efficiency tests for each well. The City also currently monitors flow rates and cumulative flows for each water supply well, and for the total system. No changes to the

current well performance monitoring program are proposed. The City will provide well performance data to BC Hydro in electronic format at the same frequency as water quality results.

3.4. *Sediment Deposition and Erosion*

BC Hydro is implementing the Peace River Physical Habitat Monitoring Program during construction and operations for approximately 30 years. The focus of the program is between Wilder Creek upstream of the dam site and the Many Islands area in Alberta with more frequent data gathering closer to the dam site.

Changes to the geomorphology adjacent to the well field will be assessed using a combination of:

- Channel cross-section surveys upstream and downstream of the well field
- Photographs of the shoreline; and
- From LiDAR data.

Currently, City staff routinely visit the wellfield as part of water supply operation. City staff proposes to note changes to the shoreline configuration during routine visits to the wellfield. If physical changes to the shoreline are identified, then they will be reported to BC Hydro.

4.0 Mitigation

If an adverse effect is identified and is due to Site C construction, then BC Hydro will compensate the City for its reasonable efforts to correct the adverse effect. Possible mitigation measures may include (but not be limited to):

- Additional water treatment to maintain water quality
- More frequent filter maintenance or backwashing
- More frequent well rehabilitation
- More frequent well replacement due to shortened well life
- Additional wells and related infrastructure
- System replacement at the same location (e.g., surface water supply)
- System replacement at a different location (e.g., water supply at Charlie Lake or within the Site C reservoir).

5.0 Reporting

Quarterly data reports will be prepared by BC Hydro and provided to the City which will present the surface and groundwater quality data. The data reports will be provided approximately 30 days after the water chemistry data have been received from the analytical laboratory.

BC Hydro will also prepare an annual Fort St. John Water Quality report to document monitoring results for each calendar year (i.e. January 1st to December 31st). The report will include the quarterly data reports and also the following elements:

- A site location map illustrating the monitoring locations
- A hydrogeological cross section indicating the relationship between the wellfield and the Peace River
- Input from the City on its water supply operation, maintenance activities, and well performance during the previous year (to be provided by January 30th of each year).
- Tabulated quarterly water quality results for the previous year
- Tabulated summary of well performance for the previous year
- LiDAR collected for the wellfield in the previous year (if any)

Power smart

- Graphs indicating trends in water quality, water levels, river flows, water supply system flows, and well performance since the beginning of the monitoring program
- Interpretation and discussion of results
 - Statistical data examination (e.g., Shewhart-CUSUM or Mann-Kendall), if adverse trends in water quality or well performance are suspected)
- Summary of the monitoring program in the previous year
- Recommended monitoring program for the next year.

BC Hydro will provide a draft of the annual report for the City's review and comment no later than March 15th in the year following annual monitoring. Review comments from the City will be considered up to March 30th with issuance of the final report no later than April 15th.

6.0 References

BC Hydro and Power Authority (BC Hydro), 2013, Environmental Impact Statement - Executive Summary, dated July 19, 2013, 90 p., Available Online: http://www.bchydro.com/energy-in-bc/projects/site_c/document_centre/stage_3_reports.html#enviro [accessed September 23, 2013].

Fort St. John, 2013A, Water [Summary of Fort St. John Water System], dated 2013, 1 p., available online: <http://www.fortstjohn.ca/water> [accessed September 12, 2013].

Fort St. John, 2013B, Investment Ready Community Profile, undated, 50 p., available online: <http://npedc.ca/sites/npedc.ca/files/document/113/fort-st-john-investment-ready-community-profile-web.pdf> [accessed September 12, 2013]. Health Canada, 2012, Guidelines for Canadian Drinking Water Quality, dated August 22, 2012, 22 p.

Golder Associates Ltd., 2004, Report on Data Compilation - Production Well TPW-5, -6, and -7 – Fort St. John, BC, dated February 23, 2004, 18 p.

Golder Associates Ltd., 2013, Fort St. John, BC - Summary Report on Construction of Production Well TPW-8, dated June 25, 2013, 124 p.

Table - Proposed Water Quality Monitoring Parameters

BC Hydro will have samples tested for the standard laboratory drinking water quality parameters. These may change over time based on laboratory decisions but are expected to generally include all or most of the following parameters.

Parameter	Field	Laboratory
Water – Physical Tests		
Colour, True		x
Turbidity	X	x
Temperature	X	
Oxidation Reduction Potential (ORP)	X	
Dissolved Oxygen (DO)		X
Water - Anions & Nutrients		
Alkalinity, Bicarbonate (as CaCO ₃)		X
Alkalinity, Carbonate (as CaCO ₃)		X
Alkalinity, Hydroxide (as CaCO ₃)		X
Alkalinity, Phenolphthalein (as CaCO ₃)		X
Alkalinity, Total (as CaCO ₃)		X
Anion Sum		X
Cation - Anion Sum		X
Cation - Anion Sum Balance		X
Bicarbonate (HCO ₃)		X
Bromide (Br)		X
Carbonate (CO ₃)		X
Chloride (Cl)		X
Conductivity (EC)		X
Fluoride (F)		X
Hardness (as CaCO ₃)		X
Hydroxide (OH)		X
Ion Balance		X
Nitrate and Nitrite (as N)		X
Nitrate (as N)		X

Parameter	Field	Laboratory
Nitrite (as N)		X
pH	X	X
Phosphorus (P) - Total		X
Sulfate (SO ₄)		X
Silicate (SiO ₂)		X
TDS (Calculated)		X
Water - Organic/Inorganic Carbon		X
Total Organic Carbon		X
Dissolved Organic Carbon		X
Water - Bacteriological Tests		X
Total Coliform		X
E. Coliform		X
Heterotrophic Platelet Count (HPC)		X
Total & Dissolved Metals		
Aluminum (Al)		X
Antimony (Sb)		X
Arsenic (As)		X
Barium (Ba)		X
Beryllium (Be)		X
Bismuth (Bi)		X
Boron (B)		X
Cadmium (Cd)		X
Calcium (Ca)		X
Chromium (Cr)		X
Cobalt (Co)		X
Copper (Cu)		X
Iron (Fe)		X
Ferrous Iron (FeO) (Fe ⁺²)		X
Lead (Pb)		X

Parameter	Field	Laboratory
Lithium (Li)		X
Magnesium (Mg)		X
Manganese (Mn)		X
Mercury (Hg)		X
Molybdenum (Mo)		X
Nickel (Ni)		X
Potassium (K)		X
Selenium (Se)		X
Silicon (Si)		X
Silver (Ag)		X
Sodium (Na)		X
Strontium (Sr)		X
Thallium (Tl)		X
Tin (Sn)		X
Titanium (Ti)		X
Uranium (U)		X
Vanadium (V)		X

City of Fort St. John Current Water Monitoring Program - Water Quality

Water quality results for Fort St. John provided by the Northern Health Authority (NHA, 2013) and Fort St. John indicate that samples are collected and analyzed as follows:

- Samples of treated water are collected every two weeks from four to six locations at the Fort St. John Water Treatment Plant and analyzed for *E. coli* and total coliforms;
- A sample of treated water is collected daily and analyzed for calcium, total hardness, pH, manganese, iron, alkalinity and operational parameters such as turbidity, fluoride and chlorine residuals;
- A sample of raw water is collected approximately every two to three days and analyzed for total hardness, fluoride, turbidity, pH, manganese, iron, sodium (up until March 2012) and alkalinity;
- A single sample of each of raw and treated water are collected quarterly (January, April, August and November) and analyzed for a broader suite of parameters including a variety of physical, nutrient, anion and metal parameters; and
- A raw water sample from each of the active wells is collected twice annually (April and November) for a broader suite of parameters including a variety of physical, nutrient, anion and metal parameters.

Results generally compare favorably with Canadian Drinking Water Quality Guidelines (CDWQG). Levels in excess of the applicable CDWQG values have been noted previously for iron, manganese, total dissolved solids and total hardness in raw water samples (Pacific Hydrology Consultants Ltd., 1996; Golder Associates Ltd., 2004 and 2009). The source of the elevated parameters has been interpreted to be recharge from the underlying shale bedrock (Golder Associates Ltd., 1997 and 2013).

Water quality is somewhat variable between the various wells, with improved water quality noted at the production wells further upstream and closer to the Peace River (*i.e.*, TPW-7 and TPW-8) relative to those further downstream and further from the Peace River (*i.e.*, TPW-1 and TPW-4). This trend may also be influenced by differing construction methods between the wells (*i.e.*, the base of the screens in wells TPW-7 and TPW-8 are approximately 3 m above the top of the bedrock, whereas the base of the screens in TPW-1 and TPW-4 are effectively at the top of the bedrock).

