BC Hydro
Power smart

Fred James
Chief Regulatory Officer
Phone: 604-623-4046
Fax: 604-623-4407
bchydroregulatorygroup@bchydro.com

June 16, 2017

Mr. Patrick Wruck
Commission Secretary and Manager
Regulatory Support
British Columbia Utilities Commission
Sixth Floor – 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Mr. Wruck:

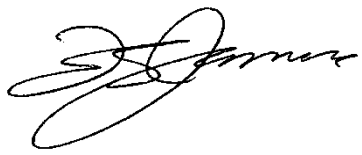
RE: British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
Site C Clean Energy Project
PUBLIC Quarterly Progress Report No. 7 – January to March 2017 (Report)

BC Hydro writes to provide its public Report. Commercially sensitive and contractor-specific information has been redacted.

A confidential version of the Report is being filed with the Commission only under separate cover

For further information, please contact Geoff Higgins at 604-623-4121 or by email at bchydroregulatorygroup@bchydro.com.

Yours sincerely,



Fred James
Chief Regulatory Officer

st/ma

Enclosure (1)

BC Hydro
Power smart

Site C Clean Energy Project

Quarterly Progress Report No. 7

F2017 Fourth Quarter

January 2017 to March 2017

PUBLIC

Table of Contents

List of Figures

List of Tables

Appendices

1 Project Status

This Quarterly Progress Report No. 7 (**Report No. 7**) provides information concerning the Site C Clean Energy Project (**Project**) covering the period from January 1, 2017 to March 31, 2017.

1.1 Overview and General Project Status

The Project will construct a third dam and hydroelectric generating station on the Peace River in northeast B.C. to provide 1,100 megawatts of capacity, and produce about 5,100 gigawatt hours per year. In December 2014, the Project received approval from the Provincial Government to proceed to construction. The Project is in Implementation Phase and construction commenced July 27, 2015.

Construction activity for the Project remained relatively constant through the winter season, with 1,779 construction and non-construction workers on site and a total workforce of 2,252 working on the project in March 2017, as reported by contractors. North and South Bank site preparation works were completed this quarter.

Peace River Hydro Partners and BC Hydro worked collaboratively to re-sequence planned work over the fall and winter to ensure the key schedule milestones are maintained. In mid-February 2017, a tension crack appeared on the left bank of the dam site upstream of the future location of the dam. While tension cracks are not unexpected in this area, this particular crack was significant due to its 400-metre length. A two-stage remediation plan was developed. Stage 1 was completed in April 2017 and Stage 2 has started and is scheduled to be completed in June 2017. Work on both the Right and Left Banks are on the critical path.

BC Hydro continues to have weekly meetings with Peace River Hydro Partners to review construction performance, quality and safety. Any cost impacts to BC Hydro associated with rescheduling activities can be managed from existing allocated contingency budgets.

Design and tender preparation work continued for the Cache Creek-Bear Flat section of Highway 29. Two tender packages will be issued by the Ministry of Transportation and Infrastructure: (1) for Grading and Paving; and (2) for a new bridge. Design for the Grading and Paving contract was completed and the Cache Creek Bridge design is substantially complete. Tenders for the Grading and Paving contract will be released in June 2017 and the Bridge contract in July 2017.

Clearing and grubbing work for the right of way and adjacent areas for the Cache Creek-Bear Flat section of Highway was completed during the quarter in preparation for the Highway construction work starting in summer 2017.

Procurement is complete for key packages including Worker Accommodation, Site Preparation, Main Civil Works, and Turbines and Generators. Remaining packages include the Generating Station & Spillways Civil, Hydro-Mechanical Equipment and Powertrain Balance of Plant Equipment & Completion, Transmission Lines, Substation, the Peace Canyon Substation upgrade and the Highway 29 Realignment.

Overall, the progression of work is on track to achieve the BC Hydro Board of Directors approved in-service dates; the first unit is expected to come on line in December 2023 and the final in-service date is expected in November 2024. Costs are forecast to come within the BC Hydro Board of Directors approved budget amount, excluding reserve subject to Treasury Board control ($8.335 billion).

Table 1 provides a dashboard based on the Project status as at March 31, 2017.

Table 1 Project Status Dashboard

● Green: No Concerns; ● Amber: Some Concerns but in Control; ● Red: Serious Concerns

Status as of:		March 2017	Overall:	●
Overall Project Health	●	The Project is on track for overall scope and schedule. The Project is on track with the Project completion date of November 2024.[1]		
Scope	●	Scope changes are minimal and the changes are expected to be managed mostly within contingencies.		
Schedule	●	The overall schedule and progress remains on track to achieve the planned In-Service Dates.		
Cost	●	The Project is monitoring and evaluating specific cost pressures as well as potential cost savings. Overall cost forecast remains on track and total project cost is forecast to be within budget. There have been no draws on Treasury Board reserve.		
Regulatory, Permits & Tenures	●	Permits are on track and meeting schedule requirements. The large volume of permits continues to be managed by early and ongoing engagement with regulators, Aboriginal groups, and contractors to share information, seek feedback, and identify process improvements.		
Environment	●	Two orders were received from the Provincial Environmental Assessment Office; one related to invasive plant management, a second related to erosion and sediment control around the L3 gully. For details refer to section 1.2.6.3 Environmental Compliance Inspection and Enforcement.		
Risks	●	Identified risks are being managed and treatments are in place or planned. For details refer to section 4 Material Project Risks below.		
Procurement	●	Project procurement activities continue to move ahead and are on track.		
Aboriginal Relations	●	Impact Benefits Agreement offers have been made to First Nations significantly affected by the Project.		
Litigation	●	Decisions made by the Crown may be subject to additional judicial reviews by First Nations and others who may oppose the project.		
Safety	●	There were three safety incidents this quarter: one lost time injury and two near misses.		
Stakeholder Engagement	●	Stakeholder engagement activities continue to move ahead productively.		

[1] The Board approved In Service Dates for total Project completion November 2024.

1.2 Major Accomplishments, Work Completed, Key Decisions and Key Issues

1.2.1 Aboriginal Consultation

Pursuant to the Environmental Assessment Certificate and Federal Decision Statement, BC Hydro is required to consult with 13 Aboriginal groups with respect to the construction stage of the Project. This consultation includes provision of information on construction activities, support for the permit review process, and review and implementation of mitigation, monitoring and management plans, and permit conditions.

Accommodation offers were originally extended to ten Aboriginal groups. Six agreements have been fully executed and are in various stages of implementation. One agreement is in legal drafting. Efforts are ongoing to conclude Impact Benefits Agreements with the remaining three Aboriginal groups. To date, Impact Benefits Agreements with Doig River First Nation, Halfway River First Nation and McLeod Lake Indian Band, and Project Agreement with Dene Tha' First Nation have been publically announced.

1.2.2 Litigation

There were several developments in legal proceedings during this reporting period:

- The Federal Court of Appeal dismissed the West Moberly and Prophet River First Nations appeal of the August 2015 Federal Court decision in which the Federal Court denied a legal challenge of the major Federal environmental approvals for Site C. These First Nations filed a leave to appeal application with the Supreme Court of Canada;
- The B.C. Court of Appeal dismissed the West Moberly and Prophet River First Nations appeal of the September 2015 B.C. Supreme Court decision in which the court denied a legal challenge of the major Provincial environmental

approval for Site C. These First Nations filed a leave to appeal application with the Supreme Court of Canada;

- The West Moberly and Prophet River First Nations requested that the Environmental Appeal Board continue to keep their appeal of BC Hydro's water licence in abeyance pending the outcome of their Supreme Court of Canada leave to appeal applications. Their request was denied. The Appeal hearing is scheduled to commence on January 15, 2018 and continue to February 9, 2018;
- The BC Hydro Ratepayers Association discontinued its legal challenge of the *Fisheries Act* Authorization; and
- The Sierra Club has since decided not to proceed with its judicial review of a *Wildlife Act* permit.

The details of the various proceedings and hearings with decisions pending are summarized in Table 2 below.

Table 2 Summary of Proceedings with Hearings or Decisions Pending

Outcome		Date
Federal Court: Federal Environmental Approval		
Prophet River First Nation West Moberly First Nations	**Dismissed** Appeal filed Hearing date **Appeal Dismissed** Leave to Appeal to Supreme Court of Canada filed	August 28, 2015 September 30, 2015 September 12, 2016 January 23, 2017 March 27, 2017
Federal Court: Federal Permits		
BC Hydro Ratepayers Association	Notice of Application filed **Discontinued**	September 19, 2016 January 23, 2017
B.C. Court: Provincial Environmental Assessment Certificate		
Prophet River First Nation West Moberly First Nations	**Dismissed** Appeal filed Hearing date **Appeal Dismissed** Leave to Appeal to Supreme Court of Canada filed	September 18, 2015 October 19, 2015 December 5 to December 8, 2016 February 2, 2017 April 4, 2017
B.C. Court: Provincial Permits		
Prophet River First Nation West Moberly First Nations	Injunction application **Dismissed** Hearing of Petition complete **Petition Dismissed** Appeal filed Hearing date	August 28, 2015 November 17 to November 23, 2015 and February 2, 2016 October 31, 2016 November 30, 2016 To Be Determined
Environmental Appeal Board		
Prophet River First Nation West Moberly First Nations C. London	Water Licence appeals filed Hearing date	March 29, 2016 January 15, 2018 to February 9, 2018
Other Proceedings		
Building Trades vs. BC Hydro	Civil claim filed Response to claim filed	March 2, 2015 April 10, 2015
Sierra Club of British Columbia	Judicial review filed **Discontinued**	July 20, 2016 January 27, 2017

Status as of May 10, 2017.

1.2.3 Permits and Government Agency Approvals

1.2.3.1 Background

In addition to the Environmental Assessment Certificate and the Federal Decision Statement, provincial permits and federal authorizations are required to construct the Project. Timing of the application for these permits and authorizations is staged and aligned with the construction schedule, availability of detailed design information, and by project component. Approximately 329 permits will be required throughout the life of the project. Prior to the reporting period, 144 permits had been received and are being actively managed. During the reporting period, six new permits were received in accordance with the schedule.

1.2.3.2 Federal Authorizations

Federal authorizations are required under the *Fisheries Act* (Fisheries and Oceans Canada) and the *Navigation Protection Act* (Transport Canada)*.* All major Federal authorizations for construction and operation of the Site C dam and reservoir were received in July 2016. At this time, no further *Fisheries Act* authorizations are anticipated. Additional *Navigation Protection Act* approvals for discrete works in the reservoir (e.g., shoreline works, debris booms and Highway 29 bridges), are anticipated to be issued at the regional level.

1.2.3.3 Provincial Permits

The plan for obtaining Site C provincial permits involves a phased approach to the submission of applications to the Ministry of Forests, Lands and Natural Resource Operations based on project components and construction schedule.

Provincial permits are required primarily under the *Land Act, Water Sustainability Act, Forest Act, Heritage Conservation Act,* and *Mines Act*. The majority of the permits are administered by the Ministry of Forests, Lands and Natural Resource Operations and the Ministry of Energy and Mines.

Approximately 293 Provincial permits and approvals will be required throughout the life of the project. Prior to this reporting period, 122 Provincial permits and approvals were received and are being actively managed. During this quarter, five new Provincial permits and approvals were received in accordance with the schedule.

1.2.3.4 Permitting Improvement

In order to efficiently and effectively manage the large volume of permits required for the project, BC Hydro continues to engage with regulators, Aboriginal groups and contractors to share information, seek feedback, and identify process improvements. Process improvements include the following:

- BC Hydro continues to facilitate meetings with the Comptroller of Water Rights and contractors to ensure permit applications are coordinated, timely and sufficient;
- Regular permitting forums are being held with Aboriginal Groups to share information on upcoming permit applications and to seek feedback before applications are submitted to regulators. In F2017, a total of four forums were held; and
- BC Hydro continues to support the Ministry of Forests, Lands and Natural Resource Operations during the First Nations consultation process by attending consultation meetings when invited to do so, and responding to First Nations questions on permit applications.

1.2.4 Engineering and Construction

1.2.4.1 Engineering

The technical specifications for the Spillway, Power Intakes and Powerhouse have been issued in draft to the shortlisted respondents to the Generating Station and Spillways Request for Qualifications. Main Civil Works implementation design is nearly complete. The Roller-Compacted Concrete Buttress Issue for Construction

Drawings have been completed based on the Turbine and Generators and Powerhouse dimensions and these have been issued to Peace River Hydro Partners for preparation of Roller-Compacted Concrete placement in 2017. The technical specifications for the Hydro-Mechanical Contract Completions Contract and Protection and Control specifications are progressing to meet project schedule. Implementation design is underway for the 500 kV transmission lines, Peace Canyon 500 kV Gas Insulated Switchgear and Site C Substation. The next Technical Advisory Board is scheduled for June 5 to 9, 2017.

1.2.4.2 Construction

Refer to Appendix F for the full construction schedule.

Early Works

Table 3 Status of Scope Completion

Scope	Complete	In Progress
Clearing		
North Bank	√	
South Bank	√	
Lower Reservoir Clearing	√	
North Bank Site Preparation		
North Bank Road	√	
North Bank Excavation	√	
North Bridge Approach	√	
South Bank Site Preparation		
Septimus Road	√	
Substation Pad & Associated Roads	√	
Septimus Siding	√	
Offsite Public Roads (around dam site)		
271 Road		√
Old Fort Road		√
North View Point		√

As of March 31, 2017 clearing at Lower Reservoir was complete and clearing at Moberly River was approximately 45 per cent complete. Remaining clearing on

Moberly River as well as the Eastern Reservoir is planned to be completed by March 2018. The South Bank Initial Access road scope was transferred to Peace River Hydro Partners. Work on Old Fort Road and 271 Road will be completed by July 2017. The North View Point road and viewing area gravel surfacing is substantially complete and paving is forecast to be completed in July 2017. Underlying embankment slippage of a section of River Road is currently being stabilized and is forecast to be completed in June 2017.

Main Civil Works

- The Right Bank Drainage tunnelling started in February 2017 and is behind schedule due to delays with portal construction, meeting WorkSafeBC requirements, and BC Hydro technical and safety approvals. This scope of work has been taken off the critical path by utilising an alternate design for the Right Bank instrumentation and drainage;
- The Right Bank Approach Channel and Powerhouse excavation is progressing though it is approximately one month behind schedule. The contractor has accelerated the excavation in order to maintain the Powerhouse Roller-Compacted Concrete placement milestone of October 2017;
- The Right Bank Cofferdam and cut off wall was completed at the end of March 2017 and deficiencies were completed in April 2017; and
- The Roller-Compacted Concrete trial placement was completed between December 2016 and March 2017. The concrete is undergoing testing to ensure that it is compliant with contract technical requirements.

Figure 1 Map of Main Civil Works Work Areas

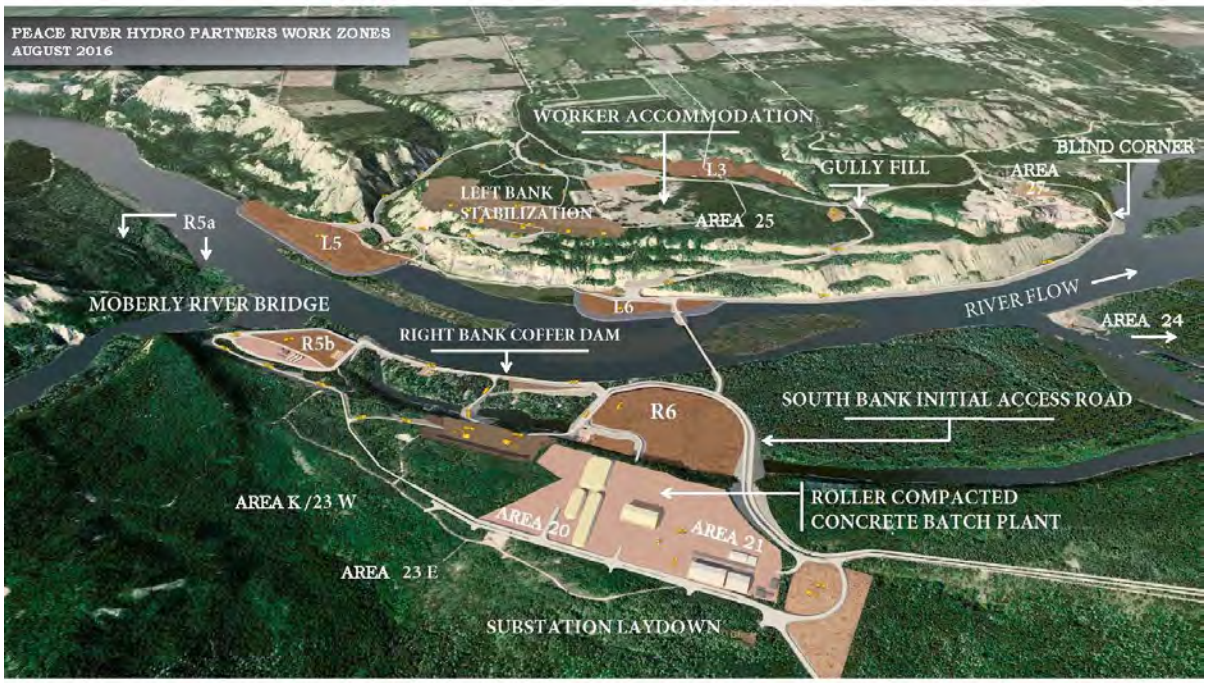


Table 4 Scope of Main Civil Works Contract

Component	Description
Diversion works	Two approximately 11 metre diameter concrete-lined tunnels approximately 750 metres in length
Excavation and bank stabilization	Approximately 26 million cubic metres of overburden and rock excavation
Relocation	Relocation of surplus excavated material (including management of discharges)
Dams and Cofferdams	A zoned earth embankment 1,050 metres long and 60 metres above the present riverbed and stages 1 and 2 cofferdams
Roller-Compacted Concrete	Buttress – 800 metres long with 2 million cubic metres of concrete

Ministry of Transportation and Infrastructure Public Road Upgrades

The Ministry of Transportation and Infrastructure's contractor, A.L. Sims and Sons, has substantially completed 269 Road and 240 Road. Both components are now paved and require minor work to finish. Old Fort Road re-alignment was completed near the Gate B entrance to the Site C dam site with bottom left paving completed and is open to traffic. The final paving will be completed in June 2017. Shoulder

widening is also being carried out on Old Fort Road from the re-alignment section north to Highway 97. Work is scheduled to be completed in July 2017.

BC Hydro has entered into a contract with a designated business partner of an Aboriginal group for the shoulder widening of 271 Road, which is under Ministry of Transportation and Infrastructure jurisdiction. Work commenced in late August 2016 but was stopped due to winter weather conditions. It is now scheduled to be completed by July 2017, which does not affect the critical path.

Work commenced on Highway 29 at Cache Creek-Bear Flat in February 2017. Under the management of the Ministry of Transportation and Infrastructure, clearing and grubbing of the new Highway right of way and the areas identified as gravel sources to support the future Highway construction, was carried out and completed on March 29, 2017.

Transmission

Transmission line access roads were upgraded to facilitate the start of right-of-way clearing, which began in February 2017. Approximately 25 kilometers of the 75 kilometer right-of-way was cleared in the period. The remaining clearing will occur in fall/winter 2017, in time for the start of transmission line construction. The transmission line in-service date of October 2020 is on schedule to be achieved.

Turbines & Generators

Voith Hydro, the successful proponent for the turbines and generators contract, arrived on-site on April 3, 2017 to begin work. This milestone was marked with a special on-site ground-breaking event. Voith Hydro is building a temporary facility at the dam site to manufacture the steel structures for the turbines and generators. Excavation and foundation preparation for the temporary building facility started in April 2017 and construction is expected to be complete in August 2017.

Generating Station & Spillways

BC Hydro developed a detailed planning schedule that will form the baseline for the Generating Station and Spillways milestones. This work has been influenced by the risk-based schedule analysis performed by the Main Civil Works team. The Generating Station and Spillways team will use this work to better determine the start of Generating Station and Spillways Civil Works permanent construction.

Quality Management

Implementation and monitoring of Quality Control and Quality Assurance Plans are required of all contractors. Table 5 below identifies quality management non-conformity instances during the quarter ending March 31, 2017.

Table 5 Quality Management Non-Conformity Report Metrics

Contract	Contractor	Reported this Period	Closed this Period	Reported to Date	Closed to Date
South Bank Site Preparation	Duz Cho Construction	1	1	2	2
Main Civil Works	Peace River Hydro Partners	122	69	259	141
Turbines and Generators	Voith Hydro Inc.	1	0	1	0

The reported non-conformity for this reporting period from Duz Cho Construction is related to rip rap material not meeting project requirements. The non-conformity has been resolved and closed.

The top three disciplines that have the most non-conformities reported to date from Peace River Hydro Partners are Construction (93), Instrumentation (42) and Tunnel (38). Outstanding non-conformities are being resolved and reviewed weekly through face-to-face meetings with management from BC Hydro and Peace River Hydro Partners.

The reported non-conformity for this reporting period from Voith Hydro Inc. is related to material certification of Units 1 to 6 pier nose liners. The non-conformity is under review by BC Hydro.

1.2.5 Safety

There were two serious near misses and one lost time incident. The first near miss incident was in relation to two workers observed working at heights greater than 10 ft. (3 m) without the use of fall protection. The second near miss incident occurred when a worker inside the Right Bank Drainage Tunnel had a rock fall from the roof/ceiling approximately 1 ft. away from the worker. The third incident was a lost time accident where the worker was struck in the knee by a large diameter water hose that had been under pressure.

In this quarter, there were a total of 30 WorkSafeBC orders written against Contractors at site. There were 20 orders written against Peace River Hydro Partners, one against International SOS Canada, two against Canadian Industrial Paramedics, and seven against 4EverGreen Resources. Further information will be provided regarding the outcome of these orders in the next quarterly report.

Table 6 below identifies the project safety metrics during the quarter ending March 31, 2017.

Table 6 Safety Metrics

	Reported this Period	Reported since Inception (July 27, 2015)
Fatality & Serious Injury[2] (Lost Time Accident & Medical Assistance)	0	0
Lost Time Injury	1	4
Lost Time Injury Frequency (number of injuries resulting in lost time per 200,000 hours worked)[3]	.24	.23
Severity Rate (number of calendar days lost due to injury per 200,000 hours worked)[3]	n/a	1.4
Contractor near miss incidents	105	379
Employee near miss incidents	4	20
Public near miss incidents	0	4
Equipment/property damage reports[4]	76	251
WorkSafeBC orders	30	54

1.2.6 Environment

1.2.6.1 Mitigation, Monitoring and Management Plans

The Environmental Assessment Certificate and Decision Statement conditions require the development of draft and final environmental management, mitigation and monitoring plans, as well as the submission of annual reports on some of these plans.

As of the end of this quarter, all required submissions have been made in accordance with the schedule and requirements of the conditions.

During the reporting period, nine annual reports were submitted in accordance with the conditions.

[2] Excludes health events unrelated to work standards.

[3] BC Hydro is now capturing safety metrics data each week from our two Prime Contractors which includes man-hours worked. Submissions have improved during the reporting period, resulting in improvements in the timeliness and accuracy of the safety metrics.

[4] Types of equipment and property damage include vehicle damage, minor electrical fire damage, etc. Equipment damage data is collected through contractor monthly reports not the BC Hydro Incident Management System.

1.2.6.2 Technical Committees Required under Schedule A of the Conditional Water Licence

Schedule A of the Conditional Water Licence requires that BC Hydro establish with Provincial and Federal Regulators two Technical Committees to provide oversight and guidance to the refinement and implementation of BC Hydro's Mitigation, Monitoring and Management Plans. The two Committees are: the Fisheries and Aquatic Habitat Mitigation and Monitoring Technical Committee; and the Vegetation and Wildlife Mitigation and Monitoring Technical Committee. Schedule A of the Conditional Water Licence outlines a delivery schedule linked to Site C Project Construction Component for when the Technical Committees must review and revise various Mitigation and Monitoring Plans.

The Fish and Aquatic Technical Committee has met a total of 24 times to date, including four meetings in this reporting period. The Vegetation and Wildlife Technical Committee has met a total of 16 times to date, including three meetings in this reporting period.

1.2.6.3 Environmental Compliance Inspections and Enforcement

Inspectors from the BC Environmental Assessment Office and Forests, Lands and Natural Resource Operations, Fisheries and Oceans Canada and from the Canadian Environmental Assessment Agency Office are expected to regularly inspect the Project to assess its compliance with Provincial Environmental Assessment Certificate conditions, Provincial permits and the Federal Decision Statement Conditions, respectively.

Inspectors from Forest, Lands and Natural Resources conducted one independent site inspection during the quarter (mid-January) and they accompanied the Canadian Environmental Assessment Agency on one day (March 28, 2017) of their inspection (see below). They did not issue a formal inspection report during the reporting period.

In this reporting period, the BC Environmental Assessment Office and Forests, Lands and Natural Resource Operations completed a single coordinated inspection from March 13 to March 16, 2017. They did not issue a final inspection report within the reporting period. In March 2017, the BC Environmental Assessment Office issued two orders pursuant to section 34(1) of the *Environmental Assessment Act* to BC Hydro, based on inspections conducted in August and September of 2016. An order was issued on March 3, 2017 and related to the requirements for turbidity monitoring in the L3 channel, Peace River, and Peace River side channel and the requirement to report sediment release events to the Environmental Assessment Office. Another order was issued on March 22, 2017 and was related to invasive plant management and compliance related to the applicable environmental management plans, specific to individual contractors.

From March 24 to March 28, 2017 the Canadian Environmental Assessment Agency conducted a site inspection. They did not issue a final inspection report nor were any enforcement notifications received within the reporting period. Given the timing of the inspection, enforcement notifications may be possible outside of the reporting period.

1.2.6.4 Heritage

In accordance with a number of Environmental Assessment conditions and the Federal Decision Statement, the Site C Heritage Resources Management Plan addresses the measures that will be used to mitigate the adverse effects of the Project on heritage resources.

The Heritage field work includes regulatory requirements for pre-construction archaeological impact assessments in areas not accessible until now, systematic data recovery at selected archaeological sites, investigation of chance finds as required, and inspections of archaeological sites post-ground disturbance in construction. In addition, heritage reporting, and heritage compliance reviews of

contract documents, contractor environmental plans and construction readiness plans were performed.

In this reporting period, 12 reports compiling the heritage data were completed, submitted and shared with First Nations.

1.2.6.5 Agriculture Mitigation and Compensation Plan – Framework

BC Hydro worked with the Consultation Steering Committee comprised of staff from BC Hydro, the Ministry of Agriculture, and the Ministry of Energy and Mines, to develop the Framework for the Agricultural Mitigation and Compensation Plan (submitted July 2016) and the draft Agricultural Mitigation and Compensation Plan (submitted January 2017). In developing the Framework and the draft Plan, the Consultation Steering Committee considered the requirements of the Environmental Assessment Certificate condition (30); consultation feedback from regional agricultural stakeholders including directly affected land owners and tenure holders, Peace Region agricultural associations and local stakeholders; legal and financial advice; and background information including the Environmental Impact Statement and the Joint Review Panel Hearing report.

In accordance with the requirements of the condition, BC Hydro submitted the draft Plan on January 27, 2017 to the Peace River Regional District, the District of Hudson's Hope, and provided notification to affected landowners, tenure holders, and consultation participants of the draft Plan being available on the Site C website. A meeting was held on February 23, 2017 with some land owners and Peace Region agricultural associations to receive feedback. The comment period closed on March 13, 2017, and feedback will be considered in development of the final Agricultural Mitigation and Compensation Plan. The final Plan must be filed by July 2017 with the B.C. Environmental Assessment Office, Peace River Regional District, District of Hudson's Hope, the Ministry of Agriculture, the Ministry of Forests,

Lands and Natural Resource Operations and affected landowners and tenure holders.

1.2.7 Employment and Training Initiatives

Employment

BC Hydro is using a managed open site labour approach which is an inclusive labour model. It does so by allowing all qualified contractors, regardless of union affiliation or status, to participate in the construction of the project.

With multiple employers working on site with different union affiliations there is a risk of union activity (e.g., organizing, raiding) that could cause labour disruption, resulting in safety and security issues, schedule delay, low productivity and morale, and increased costs. As with other major construction projects in B.C. there remains a risk of union activity occurring at certain periods during the length of the project.

To mitigate this BC Hydro has:

- Entered into a Memorandum of Understanding with certain British Columbia Building Trades unions to achieve labour stability and a mix of labour representation on site. This Memorandum of Understanding is specific to unions who have negotiated labour agreements for project work;
- Included labour stability terms such as no strike, no lockout, and no raiding provisions in major contracts on the site; and
- Implemented a site wide Labour Relations Contractor Labour Committee to support labour stability on the site through communication, consultation, coordination and cooperation among contractors on the project.

To date there have been two successful union organizing drives on the project with no site disruption. ATCO Two Rivers Lodge operations workers were certified by the Teamsters 213 and they have successfully negotiated a first collective agreement. In

addition, Saulteau Securiguard voluntarily recognized Teamsters as their union and have successfully negotiated and ratified a collective agreement.

During this reporting period, the International Union of Operating Engineers Local 115 began a raid campaign on site and requested access to the camp in order to organize the Peace River Hydro Partners Construction workforce, who are represented by the Christian Labour Association of Canada. The BC Labour Relations Board issued a decision that allowed the International Union of Operating Engineers Local 115 union access to camp for specific days until April 20, 2017. On April 12, 2017 the T.E.L. Group (a poly party of the Teamsters, the International Union of Operating Engineers, and the Labourers Union) applied for certification (raid application) at the Labour Relations Board. The Labour Relations Board determined that the T.E.L Group did not have threshold for a union vote and the application was dismissed. The Labour Relations Board confirmed that the statutory time bar of 22 months for other raid applications applies. This means that the T.E.L Group cannot raid the Peace River Hydro Partners workforce during their 2018 open period. The open period for Peace River Hydro Partners Construction is now closed for this year.

Contractors submit monthly workforce data electronically to BC Hydro. Table 7 shows a snapshot of the total number of Construction contractors, Non-Construction contractors, Engineers, and Project Team workers for this quarter by month.

Table 7 Site C Jobs Snapshot

Month	Number of B.C. Workers[5]	Number of Total Workers[5]	% of BC Workers
January 2017	1,719	2,124	81
February 2017	1,804	2,211	82
March 2017	1,814	2,252	81

[5] Employment numbers provided by Site C contractors and consultants are subject to revision. Data not received by project deadline may not be included in the above numbers. Employment numbers are direct only and do not capture indirect or induced employment.

Refer to Appendix E for additional workforce information. The number of workers continues to vary as the construction work progresses. As job opportunities become available, they are posted on the WorkBC website as well as on the Fort St. John Employment Connections website.

BC Hydro met with regional employment agencies, local training institutions and organizations, and a Site C Contractor on site in March 2017 to facilitate discussions between these groups regarding regional hiring concerns. BC Hydro provided a Site Tour for these groups.

Training Programs and Initiatives

The Christian Labour Association of Canada has proposed an initiative to explore the establishment of an onsite training facility on the Site C project, for the training of the project workforce. This facility would be accessible to all contractors regardless of union affiliation or status and would be housed on site. This facility would be able to deliver theory portions of Construction Craft Worker training, and other relevant apprenticeship programs at the site. Currently the Christian Labour Association of Canada has developed a concept paper for the training facility and has provided it to the Ministry of Jobs, Tourism and Skills Training and the Ministry of Advanced Education for consideration. The Christian Labour Association of Canada has reported that provincial government funding will likely not be available for this until after spring 2017.

Additionally, in August 2013, Northern Lights College started distributing BC Hydro Trades & Skilled Training Bursary Awards. As of March 2017, 180 students had received bursaries, including 69 Aboriginal students who have benefitted from the bursary in programs such as electrical, welding, millwright, cooking, social work, and many others.

1.2.8 Community Engagement & Communication

1.2.8.1 Local Government Liaison

BC Hydro entered into community agreements which set-out implementation of applicable Environmental Assessment conditions and to meet community interests with the City of Fort St. John, District of Taylor, District of Chetwynd, District of Hudson's Hope. BC Hydro is still negotiating with the Peace River Regional District.

During the quarter, BC Hydro signed the Partnering Relationship Agreement with the District of Hudson's Hope and began implementation of the Agreement. BC Hydro has achieved all of the deadlines in the Agreement to date. BC Hydro continues to work cooperatively with the City of Fort St. John, District of Taylor and the District of Chetwynd to oversee implementation of their respective agreements. The Fort St. John Agreement Monitoring Committee also met on March 10, 2017 to track progress against that agreement.

BC Hydro and the Peace River Regional District have renewed discussions in hopes of reaching an agreement to primarily address direct impacts on their sewage outfall located several kilometres upstream from the dam site. Independent of negotiations, BC Hydro staff continue to work with Peace River Regional District staff on the outfall mitigation as this is required by Environmental Assessment Certificate Condition 47.

The Regional Community Liaison Committee, which is comprised of local elected officials and local Aboriginal groups, met most recently on March 10, 2017 and attendance remains high. As of this quarter, a total of 11 communities have participated as committee members, including eight local governments and three local Aboriginal groups (McLeod Lake, Doig River and Blueberry River) as well as the two MLAs for Peace River North and Peace River South. Representatives from the Project's major contractors have also attended the meetings as invited guests,

including Peace River Hydro Partners, ATCO Two Rivers Lodging Group and the Ministry of Transportation and Infrastructure.

1.2.8.2 Business Liaison and Outreach

On February 8, 2017 BC Hydro provided notification to the Site C business directory about the shortlist for the Site C Hydro-Mechanical Equipment contract.

On February 24, 2017, BC Hydro sent an updated business directory list to ATCO, Peace River Hydro Partners and Voith Hydro.

1.2.8.3 Community Relations and Construction Communications

BC Hydro continued to implement its construction communications program during the quarter. This program includes updating and maintaining the project website www.sitecproject.com with current information.

Construction Bulletins:

Bi-weekly Construction Bulletins were issued throughout this period. These bulletins are posted on the project website and sent by email to the web-subscriber list.

Public Enquiries:

In total, BC Hydro received 636 public enquiries between January 2017 and March 2017, compared to 666 in the previous quarter. The majority of these enquiries continued to be about business and job opportunities, although there were also some construction impact concerns from local residents. Table 8 shows the breakdown of some of the most common enquiry types:

Table 8 Public Enquiries Breakdown

Enquiry Type[6]	January 2017	February 2017	March 2017
Job Opportunities	211	150	159
Business Opportunities	17	14	17
Construction Impact[7]	9	5	5

1.2.8.4 Communications Activities

Based on a search using the media database Infomart, there were 257 stories in B.C. news media in the January 2017 to March 2017 period on the Site C Project, compared to 277 stories in the previous quarter.

Key activities during the quarter included announcements related to a Partnering Relationship with the District of Hudson's Hope; non-profit funding recipients; and agreements with Doig River First Nation and Halfway River First Nation. Information bulletins were issued during the quarter related to Site C and the Peace-Athabasca Delta, and the tension crack at the dam site.

1.2.8.5 Housing Plan and Housing Monitoring and Follow-Up Program

BC Hydro and BC Housing signed a Contribution Agreement on July 19, 2016 related to the development, construction and operation of a building in Fort St. John comprised of 50 residential rental units. This Agreement is the outcome of detailed discussions between the two partners to find the most appropriate approach to meeting Condition 48 and the housing terms of the Community Measures Agreement with the City of Fort St. John. The Agreement structured the financial contribution from BC Hydro to enable financially viable operation of the ten affordable housing units in the near-term and financially viable operation of all 50 units of affordable housing in the longer term.

The Agreement sets out the terms of the housing project, and has a target completion date for occupancy of October 31, 2018. BC Housing has decided to

[6] This table is a sample of enquiry types and does not include all enquiry types received.
[7] The nature of the construction impact inquiries is primarily air quality, noise and traffic conditions.

proceed with a Certified Passive House standard to provide the opportunity to showcase the Project's energy efficiency features. The City of Fort St. John has been a strong advocate for Passive Houses and will partner with BC Hydro in showcasing the building as a demonstration project for energy efficient building techniques. BC Housing also purchased the land for the housing project from the City of Fort St. John in December 2016.

BC Housing issued the Request for Proposals for construction of the building on December 21, 2016 and anticipates breaking ground in summer 2017 after awarding the contract in spring 2017.

On January 20, 2017, BC Hydro issued the annual Rental Apartments – Monitoring Report 2016 which includes the results of the monitoring program for private apartment rental units in the City of Fort St. John. The monitoring program did not identify any impacts due to the Project.

1.2.8.6 Labour and Training Plan

In accordance with Environmental Assessment Condition 53, a Labour and Training Plan was developed and submitted to the Environmental Assessment Office on June 5, 2015.

This plan, as well as Environmental Assessment Condition 45, includes reporting requirements to support educational institutions in planning their training programs to support potential workers in obtaining Project jobs in the future. This report was issued to the appropriate training institutions in the Northeast Region of B.C., in July 2016. The next report will be issued in summer 2017.

1.2.8.7 Health Care Services Plan and Emergency Service Plan

The Project Health Clinic is contracted by BC Hydro with Halfway River International SOS Medical Ltd., a partnership between Halfway River First Nation and International SOS. The Clinic continues to operate in its permanent location within

the Two Rivers Lodge, and based on camp occupancy was staffed 24/7 during this period with a Nurse Practitioner and Advanced Care Paramedics.

BC Hydro and the clinic operator continue to liaise with the local health care community. The Clinic provides workers with access to primary and preventative health care and work-related injury evaluation and treatment services and is currently open seven days a week, 24 hours a day. Since opening the Project health clinic there have been a total of 2,853 patient interactions. During the reporting period, there were 1,085 patient interactions, of which 164 were occupational and 921 non-occupational. During the quarter, several preventive health themes were promoted to workers, including: smoking cessation, hypertension and tuberculosis.

1.2.8.8 Property Acquisitions

The price for the dam site Crown Grant was settled and BC Hydro continued negotiations on completing the acquisition of the Crown Grant for the sub-station. BC Hydro continued discussions with owners whose land is required for eastern reservoir clearing in 2018, Halfway River Highway 29 re-alignment in 2018 and Hudson's Hope shoreline protection in 2019. In addition, access was granted to 16 out of 20 private properties to carry out surface inspections for Hudson's Hope shoreline protection in preparation for geotechnical testing.

1.3 Key Procurement and Contract Developments

The Project procurement approach was approved by the Board of Directors in June 2012 for the construction of the Project. The procurement approach defined the scope of the major contracts and their delivery models, as summarized in Table 9 below.

Table 9 Major Project Contracts and Delivery Models

Component	Contract	Procurement Model	Anticipated Timing
Worker Accommodation	Worker Accommodation and site services contract	Design-Build-Finance-Operate-Maintain	Completed
Earthworks	Site Preparation contracts	Predominantly Design-Bid-Build	Completed
	Main Civil Works contract	Design-Bid-Build	Completed
Reservoir /Transmission Clearing	Multiple reservoir clearing contracts to be awarded over seven to eight years	Design-Bid-Build	Five agreements completed (lower and east reservoirs, transmission line)
Generating Station and Spillways	Turbines and Generators contract	Design-Build	Completed
	Generating Station and Spillways Civil Works contract	Design-Bid-Build	Request for Proposals issued September 2016. Three shortlisted proponents currently participating in Request for Proposal process
	Hydro-Mechanical Equipment contract	Supply Contract	Request for Proposals issued February 2017. Four shortlisted proponents currently participating in Request for Proposal process
	Powertrain Balance of Plant Equipment Supply	Supply Contracts	Commence: F2018 to F2019
	Completion Contract (Powertrain Balance of Plant Equipment Installation)	Install Contract	Commence: F2018 to F2019
Electrical and Transmission Infrastructure	Transmission Lines contract	Design-Bid-Build	Various through F2018
	Site C substation contract	Design-Bid-Build	Commence: F2018
	Peace Canyon Substation upgrade contract	Design-Build	Contract Award: Quarter 1 F2018
Highway 29 Realignment	Design-Bid-Build in partnership with B.C. Ministry of Transportation and Infrastructure with anticipated award of the first contracts in 2017 with subsequent contract being awarded through 2018 to 2019.		

1.3.1 List of Major Contracts Awarded (Excess of $50 million)

Since inception of the Project, four major contracts (e.g., greater than $50 million in value) have been awarded: Worker Accommodation, Site Preparation: North Bank, Main Civil Works and Turbines and Generators. The contracts were procured

through a public competitive process and awarded based on a rigorous evaluation process within the budget established for each contract. A list of contracts in excess of $50 million is shown in Table 10 below.

Table 10 Major Project Contracts Awarded

Work Package	Contract Value[8] ($ million)	Current Status
Site Preparation: North Bank	60	Contract executed July 2015 and includes amendments to December 2016.
Worker Accommodation	465	Contract executed September 2015
Main Civil Works	1,782	Contract executed December 2015
Turbine and Generators	464	Contract executed March 2016

In 2016, procurement of two major work packages commenced: Generating Station and Spillways Civil Works contract and Hydro-Mechanical Equipment contract. Procurement of these work packages is currently underway.

1.3.2 Large Contracts to Date (Excess of $10 million)

BC Hydro has provided a table in Appendix B which shows the breakdown to date of the contracts awarded in excess of $10 million and cumulative variances.

1.3.3 Contract Management

1.3.3.1 Material Changes to the Major Contracts

For the Main Civil Works contract there has been an increase in the contract value of $34 million to reflect approved change orders to date.

1.3.3.2 Contingency and Project Reserve Draws

As part of the total project capital cost estimate of $8.335 billion, $794 million (nominal) of contingency was allocated to the Site C Project at Final Investment Decision in December 2014. This excludes $440 million of project reserve which is

[8] The above-contract value reflects the current value including executed change orders to the end of the reporting period.

being held by the Treasury Board. There have been no draws on project reserve to date.

The Interest-During-Construction savings and unallocated budget amounts totalling $251 million was added to the original contingency allocation of $794 million, resulting in the revised total contingency budget of $1,044.5 million.

As of March 31, 2017, $391.7 million has been released to management of which $321.1 million has been allocated to work packages (e.g., to be spent) through a work package change notice in order to fund contract award and/or contract contingency, leaving a balance of contingency released to management but uncommitted in contracts of $70.6 million

Refer to Appendix D for more detailed information regarding contingency and project reserve draws.

1.4 Plans During Next Six Months

The key milestones for the next six months are listed in Table 11.

Table 11 Key Milestones

Milestone	Plan Date	Forecast/ Actual Date	Variance (months)	Status
North Bank (271) Road complete	June 2016	July 2017	(13)	Late – No impact to progress of work.
Tender Design for 5L5 Complete	February 2017	June 2017	(4)	Late – No impact to overall schedule.
Transmission Peace Canyon Gas Insulated Switchgear Contract Award	February 2017	May 2017	(3)	Late – No impact to overall schedule.
Transmission 5L5 & 5L6 Tower Contract Award	February 2017	May 2017	(3)	Complete
South Bank Stage 1 Cofferdam Complete	April 2017	April 2017	0	Complete
Powerhouse Excavation Complete	April 2017	May 2017	(1)	At Risk – The delay does not impact the overall Main Civil Works schedule and Peace River Hydro Partners remain on track for the concrete placement milestone.
Cache Creek Roads Contract Award	June 2017	July 2017	(1)	At Risk – The delay may impact the overall work schedule.
Generating Station & Spillways Civil Contract Award	July 2017	December 2017 (Limited Notice to Proceed)	(5)	At Risk – Procurement timeline adjusted but construction milestones unchanged.

1.5 Impacts on Other BC Hydro Operations

For the reporting period, there were no material impacts on the generation operation at the GM Shrum and Peace Canyon Dams or on water management at the Williston and Dinosaur reservoirs.

1.6 Site Photographs

Refer to Appendix A for site construction photographs.

2 Project Schedule

2.1 Project In Service Dates

BC Hydro currently shows all in service dates on track per Table 12.

Table 12 Project In-Service Dates

Description/Status	Final Investment Decision Planned ISD[9]	F2017-F2019 Service Plan[10]	Status[11] and Comments
5L5 500kV Transmission Line	October 2020	September 2020	On Track
Site C Substation	November 2020	October 2020	On Track
5L6 500kV Transmission Line	July 2023	September 2023	On Track
Unit 1 (First Power)	December 2023	December 2023	On Track
Unit 2	February 2024	February 2024	On Track
Unit 3	May 2024	May 2024	On Track
Unit 4	July 2024	July 2024	On Track
Unit 5	September 2024	September 2024	On Track
Unit 6	November 2024	November 2024	On Track

The approved Final Investment Decision schedule involved the first unit coming into service in December 2023. The Project has advanced implementation phase activities to mitigate schedule risk.

[9] Based on plan at Final Investment Decision, December 2014.
[10] Based on BC Hydro F2017-F2019 Service Plan approved in January 2016.
[11] Status based on comparison to BC Hydro F2017-F2019 Service Plan.

3 Project Costs and Financing

3.1 Project Budget Summary

Table 13 below presents the overall Project Budget, based on the Final Investment Decision (December 2014), represented in nominal dollars.

Table 13 Project Budget Summary

Description	Capital Amount (Nominal $ million) *
Dam, Power Facilities, and Associated Structures	4,120
Offsite Works, Management and Services	1,575
Total Direct Construction Cost	**5,695**
Indirect Costs	1,235
Total Construction and Development Cost	**6,930**
Interest During Construction	1,405
Project Cost, before Treasury Board Reserve	**8,335**
Treasury Board Reserve	440
Total Project Cost	**8,775**

* Budget values are rounded to the nearest $5 million and include allocations of contingency.

3.2 Project Expenditure Summary

Table 14 provides a summary of the Final Investment Decision approved *total* Project cost, the current forecast *total* Project cost and the variance between the two; and the plan *to date* amounts, the actual costs *to date* and the variance between the two.

Table 14 Total Project Expenditure Summary ($ million Nominal) Compared to Final Investment Decision

Description	Final Investment Decision	Forecast	Final Investment Decision Plan to Date	Actuals to March 31, 2017	Variance
Total Project Costs	8,335	8,335	1,149	1,631	(482)
Treasury Board Reserve	440	440	0	0	0
Authorized Project Cost	**8,775**	**8,775**	**1,149**	**1,631**	**(482)**

Table 15 provides a summary of the F2017-F2019 Service Plan *total* Project cost, the current forecast *total* Project cost and the variance between the two; and the plan *to date* amounts, the actual costs *to date* and the variance between the two.

Table 15 Total Project Expenditure Summary ($ million Nominal) Compared to F2017-F2019 Service Plan

Description	F2017-F2019 Service Plan	Forecast	F2017-F2019 Service Plan to Date	Actuals to March 31, 2017	Variance
Total Project Costs	8,335	8,335	1,724	1,631	93
Treasury Board Reserve	440	440	0	0	0
Authorized Project Cost	**8,775**	**8,775**	**1,724**	**1,631**	**93**

There is no variance between the *total* project costs approved in the Final Investment Decision and the total project costs approved in the F2017-F2019 Service Plan. Variances between the plan to date amounts occur due to differences in the timing of project implementation activities.

Variances are primarily due to a shift of expenditures for some Properties purchases, Mitigation and Compensation, Highways and Lower Reservoir clearing into future periods. Further explanations are in Appendix D.

3.3 Internal Project Financing versus External Borrowings to Date

To date, all project funding has been from internal borrowings and there has been no Site C Project specific debt issued. As part of BC Hydro's debt management strategy, BC Hydro has reduced its exposure to variable debt and is managing variable rate debt within a board approved range of 5 per cent to 25 per cent and a target of 15 per cent. In addition, to lock in historically low interest rates, BC Hydro has hedged 50 per cent ($4.4 billion) of its forecast future debt issuances from F2017 to F2024 through the use of derivative contracts.

4 Material Project Risks

This section describes the material Project risks that have high residual exposure to BC Hydro. Commercially sensitive numbers and content, and/or content that could be seen to prejudice BC Hydro's negotiating position, are redacted in the public version. Note that the residual consequence and residual probability levels are qualitative assessments. Refer to Table 16 for a list of risks.

Table 16 Material Project Risks

Risk Event/ Description	Risk and Response Summary	Trend in Risk Exposure[12]
Delay to Permitting	Permits and licences are still required for several portions of construction activity. Delays to these permits and licences could result in delays to the associated construction work. BC Hydro is proactively working with contractors, federal and provincial authorities, and First Nations to mitigate this risk. Please refer to section 1.2.2 for further information on legal issues related to permits and approvals.	➔
Environmental Non-compliance	The Project must comply with the requirements of the Environmental Assessment Certificate (Provincial) and the Federal Decision Statement as well as conditions in licenses, permits and authorizations. All Contractors on the Project have experienced difficulties in adapting their construction methodologies to achieve the Project's environmental commitments. To address this, BC Hydro has added additional environmental specialists and is working with the Contractors to implement solutions that meet regulators' expectations.	↑

[12] Arrow direction represents the change since the last Quarterly Progress Update report.

Risk Event/ Description	Risk and Response Summary	Trend in Risk Exposure[12]
Litigation	Refer to section 1.2.2 and Table 2 for status of judicial reviews related to environmental approvals and permits. On January 23, 2017 the Federal Court of Appeal dismissed an appeal by West Moberly and Prophet River First Nations (the First Nations applied for leave to appeal to the Supreme Court of Canada) BC Hydro Ratepayers Association discontinued their federal court challenge of BC Hydro's Fisheries Act Authorization. On January 27, 2017 the Sierra Club of British Columbia discontinued their challenge of a Wildlife Act authorization. On February 2, 2017 BC Court of Appeal dismissed the appeal of the West Moberly and Prophet River First Nations (the First Nations applied for leave to appeal to the Supreme Court of Canada).	→
First Nations	BC Hydro has continued to negotiate agreements with several First Nations. The status of some specific negotiations is confidential at this time. In March 2017 Impact Benefits Agreements with Doig River First Nation and Halfway River First Nation were executed. The purpose of these agreements is to provide First Nations with Project benefits and mitigate the risk of legal challenges.	↓
Market response to procurement	BC Hydro received a strong response to the Request for Qualifications for the Generating Station and Spillways Hydro-Mechanical Equipment contract. There remains a risk that a proponent withdraws, however BC Hydro continues to maintain engagement with suppliers. To date, BC Hydro has received positive and competitive market responses and will continue with market sounding, robust request for qualification processes, honorariums for unsuccessful short-listed proponents in certain larger two stage procurements, and other engagement activities. Market response risks will continue to be monitored.	→

Risk Event/ Description	Risk and Response Summary	Trend in Risk Exposure[12]
Labour Relations & Stability	BC Hydro is using an inclusive labour approach with a managed open site, that allows for participation by all union and non-union labour groups and allows access to the largest pool of skilled and experienced labour. BC Hydro has a memorandum of understanding with certain B.C. Building Trades unions to achieve labour stability and a mix of labour representation on site, including building trades unions. This is specific to unions who have negotiated labour agreements for Project work. All major contracts contain no strike, no lockout, and no raiding provisions. In addition, BC Hydro has implemented a site wide Labour Relations Contractor Committee to support labour stability on the site. Due to multiple employers at site with different union affiliations there is a risk of site labour disruption (e.g. organizing, raiding and increased site union activity) that could result in safety and security issues, schedule delays, low productivity and morale, and increased costs. Due to multiple employers working on site with different union affiliations there could be various raiding periods due to multiple collective agreement durations/terms.	→
Geotechnical risks	Unknown or changes to geotechnical ground conditions is a risk impacting the schedule and cost. The mitigation strategy is to transfer some degree of ground condition risk to the contractor such as including conducting field-scale trials and applying additional monitoring to determine the response when shale bedrock is exposed to the elements. In February 2017, a tension crack developed on the Left Bank Excavation while constructing a haul road and work on the excavation has stopped. BC Hydro and the contractor have agreed on a plan to stabilize the slope and work began on March 20, 2017. Work on the Left Bank Excavation haul road resumed in late April 2017.	↑
Construction cost – labour	Potential cost increases could arise if there is competition with other projects for labour resources, labour instability, or changing workforce demographics. Based on current market conditions in the infrastructure and energy sector, the labour risk is low, however the recent federal announcement of pipeline projects could impact labour prices and availability of skilled labour. There remains the potential for market labour conditions to shift in the future and if so this risk may increase.	→

Risk Event/ Description	Risk and Response Summary	Trend in Risk Exposure[12]
Construction cost – commodities and equipment	Construction commodity and equipment cost risks have declined slightly over the past year and Canadian exports are down. Key commodities such as steel, diesel and gasoline are below BC Hydro's forecast when preparing the original cost estimate. Diesel and gasoline rack pricing are currently slightly below the baseline rate established for fuel escalation in the Main Civil Works contract, although underlying oil prices rose during the 2016 calendar year. There remains an external risk of higher-than-expected commodity costs due to a material change in market conditions or changes to North American Free Trade Agreement that may impact Site C contracts not awarded that include commodities (refer to section 1.3, Procurement, Table 9, Contracts to be Awarded).	→
Construction execution	The Main Civil Works contractor has experienced delays on several of their critical path activities, requiring a re-sequencing of planned work. Risk remains on the Right Bank Drainage Tunnel activities due to challenges obtaining WorkSafeBC approvals. Following the Tension Crack re-sequencing, plans are in place to address potential delays with Diversion Tunnel construction.	↑
Foreign exchange	Some of Site C project costs are in foreign currency, and will be affected by fluctuations in the exchange rate between the Canadian Dollar and these foreign currencies. Approximately 20 per cent of the Site C direct construction costs are based on foreign currency. The Canadian dollar has weakened significantly compared to the U.S. dollar since the 2014 capital cost estimate was developed. However, the award of major contracts (particularly the Turbine Generator contract) has reduced BC Hydro's exposure to currency fluctuations by transferring the risk to the contractor after award. The impact on future procurements may be larger than BC Hydro has seen to date, depending on future movement in foreign exchange markets, future movement in commodity and equipment markets, and the ability of the proponents to source from a range of foreign markets. Residual risk on contracts yet to be procured is partially mitigated through contractor flexibility around sourcing of material, resulting in an exposure to a basket of currencies, rather than solely the U.S. dollar.	→

Risk Event/ Description	Risk and Response Summary	Trend in Risk Exposure[12]
Interest rate variability	Interest during construction costs will be affected by fluctuations in market interest rates. Currently, market interest rates are expected to be lower than assumed in BC Hydro's budget at the Final Investment Decision. BC Hydro has reduced its exposure to variable rate debt and increased its exposure to fixed rate debt. In March 2016, the British Columbia Utilities Commission approved a Debt Hedging Regulatory Account for BC Hydro to capture the gains and losses related to the hedging of future debt issuance. BC Hydro has hedged 50% of its forecast future debt issuances from F2017 to F2024 through the use of derivative contracts.	↓
Change in Tax Rates	There is the potential for a change in tax rates that apply to Site C (e.g., PST, carbon tax) as well as the potential for a portion of GST to be unrecoverable. BC Hydro is monitoring potential changes to federal and provincial taxes and their potential effects. Where appropriate, BC Hydro will secure advance rulings on tax applicability to reduce uncertainty in treatment.	→

BC Hydro
Power smart

Site C Clean Energy Project

Quarterly Progress Report No. 7

Appendix A

Site Photographs

Figure A-1 River Island Laydown Truck Maintenance Shop; Working on Structural Steel. Photo taken January 4, 2017.

Figure A-2 Area 21 - Installing Cladding at Conventionally-vibrated Concrete Plant #6. Photo taken January 18, 2017.

Figure A-3 Area 21 - Facing North; Continue Setting up BC Hydro Field Office. Photo taken February 11, 2017.

Figure A-4 Right Bank Cofferdam – Facing North; Excavator Loading Rock Truck with Excess Rip Rap. Photo taken February 12, 2017.

Figure A-5 South Bank Initial Access Road - Facing Northeast. Photo taken February 17, 2017.

Figure A-6 North Bank Tension Crack. Photo taken February 20, 2017.

Figure A-7 **Foundex on Site Drilling for Instrumentation at the North Bank Slope Failure Area. Photo taken March 1, 2017.**

Figure A-8 **Area 23 - Facing Northwest; CAT D8 with Mulcher Operating. Photo taken March 11, 2017.**

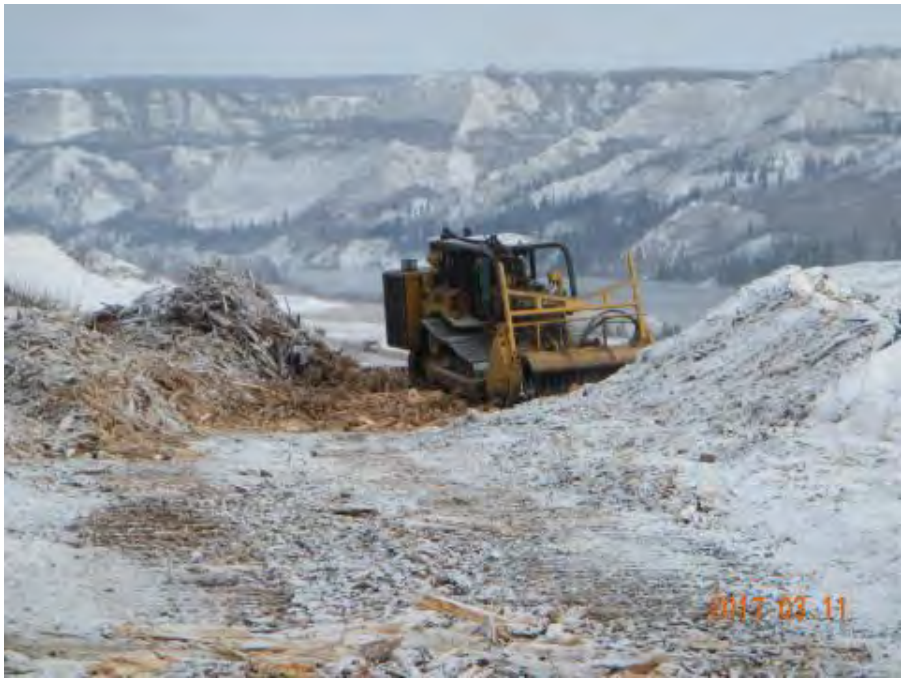


Figure A-9 **Transmission Line Right of Way Stringing Conductor Line. Photo taken March 13, 2017.**

Figure A-10 **Wuthrich Quarry - Overview of Quarry Operations. Photo taken March 11, 2017.**

Figure A-11 Right Bank Tunnel. Photo taken March 17, 2017.

BC Hydro
Power smart

Site C Clean Energy Project

Quarterly Progress Report No. 7

Appendix B

Summary of Individual Contracts Exceeding $10 million

PUBLIC

CONFIDENTIAL ATTACHMENT

FILED WITH BCUC ONLY

BC Hydro
Power smart

Site C Clean Energy Project

Quarterly Progress Report No. 7

Appendix C

Project Progression

PUBLIC

CONFIDENTIAL ATTACHMENT

FILED WITH BCUC ONLY

BC Hydro
Power smart

Site C Clean Energy Project

Quarterly Progress Report No. 7

Appendix D

Detailed Project Expenditure

PUBLIC

CONFIDENTIAL ATTACHMENT

FILED WITH BCUC ONLY

BC Hydro
Power smart

Site C Clean Energy Project

Quarterly Progress Report No. 7

Appendix E

Workforce Overview

Table E-1 Current Site C Jobs Snapshot (January to March 2017)[13]

	January 2017		February 2017		March 2017	
Type of Work	**Number of B.C. Workers**	**Number of Total Workers**	**Number of B.C. Workers**	**Number of Total Workers**	**Number of B.C. Workers**	**Number of Total Workers**
Construction and Non-- Construction Contractors[14] (including some subcontractors). Excludes work performed outside of B.C. (e.g., Manufacturing)	1,348	1,671	1,444	1,786	1,417	1,779
Engineers and Project Team[15]	371	453	360	425	397	473
TOTAL	**1,719 (81%)**	**2,124**	**1,804 (82%)**	**2,211**	**1,814 (81%)**	**2,252**

Employment numbers provided by Site C contractors and consultants are subject to revision. Data not received by project deadline may not be included in the above numbers.

BC Hydro has contracted companies for major contracts, such as Main Civil Works, who have substantial global expertise. During the months of January 2017 to March 2017 there were up to four workers in specialized positions, which were subject to the Labour Market Impact Assessment process under the federal Temporary Foreign Worker Program. Additionally, in January 2017 to March 2017, there were 30 to 32 management and professionals working on the project through the federal International Mobility Program.

[13] Employment numbers are direct only and do not capture indirect or induced employment.

[14] Construction and Non-Construction Contractors includes work performed on Site C dam site, transmission corridor, reservoir clearing area, public roadwork, worker accommodation and services.

[15] Project Team includes consultants, BC Hydro Construction Management and other offsite Site C project staff. An estimate is provided where possible if primary residence is not given.

Table E-2 Preliminary Site C Apprentices Snapshot (January to March 2017)

Month	Number of Apprentices
January 2017	42
February 2017	24
March 2017	38

Data is subject to change based on revisions received from the contractors.

Table E-3 Current Site C Job Classification Groupings

Biologists & Laboratory	Carpenters	Inspectors	Construction Managers/ Supervisors	Crane Operators	Electricians	Engineers
Foresters	Health Care Workers	Heavy Equipment Operators	Housing Staff	Heating, Ventilation, and Air Conditioning	Kitchen Staff	Labourers
Mechanics	Millwrights	Office Staff	Pipefitters/ Plumbers	Security Guards	Sheet Metal Workers	Truck Drivers
Underground Mining	Welders					

Table E-4 Aboriginal Inclusion Snapshot (March 2016 to March 2017)

Month	Number of Aboriginal Workers
March 2016	90
April 2016	104
May 2016	131
June 2016	179
July 2016	176
August 2016	196
September 2016	118
October 2016	145
November 2016	149
December 2016	187
January 2017	195
February 2017	216
March 2017	221

The information shown has been provided by BC Hydro's on-site construction and non-construction contractors and their sub-contractors that have a contractual requirement to report on Aboriginal inclusion in their workforce.

Employees voluntarily self-declare their Aboriginal status to their employer and there may be Aboriginal employees that have chosen not to do so; therefore, the number of Aboriginal employees may be higher than shown in the table.

As with any construction project, the number of workers — and the proportion from any particular location — will vary month-to-month and also reflects the seasonal nature of construction work. The number of workers will also vary as a contract's scope of work is completed by the contractor.

Women

During the period of January 2017 to March 2017, there were 257 to 343 women working for Site C Construction and Non-Construction contractors. The number of women was provided by on-site Construction and Non-Construction contractors that have a contractual requirement to report on the number of women in their workforce.

BC Hydro
Power smart

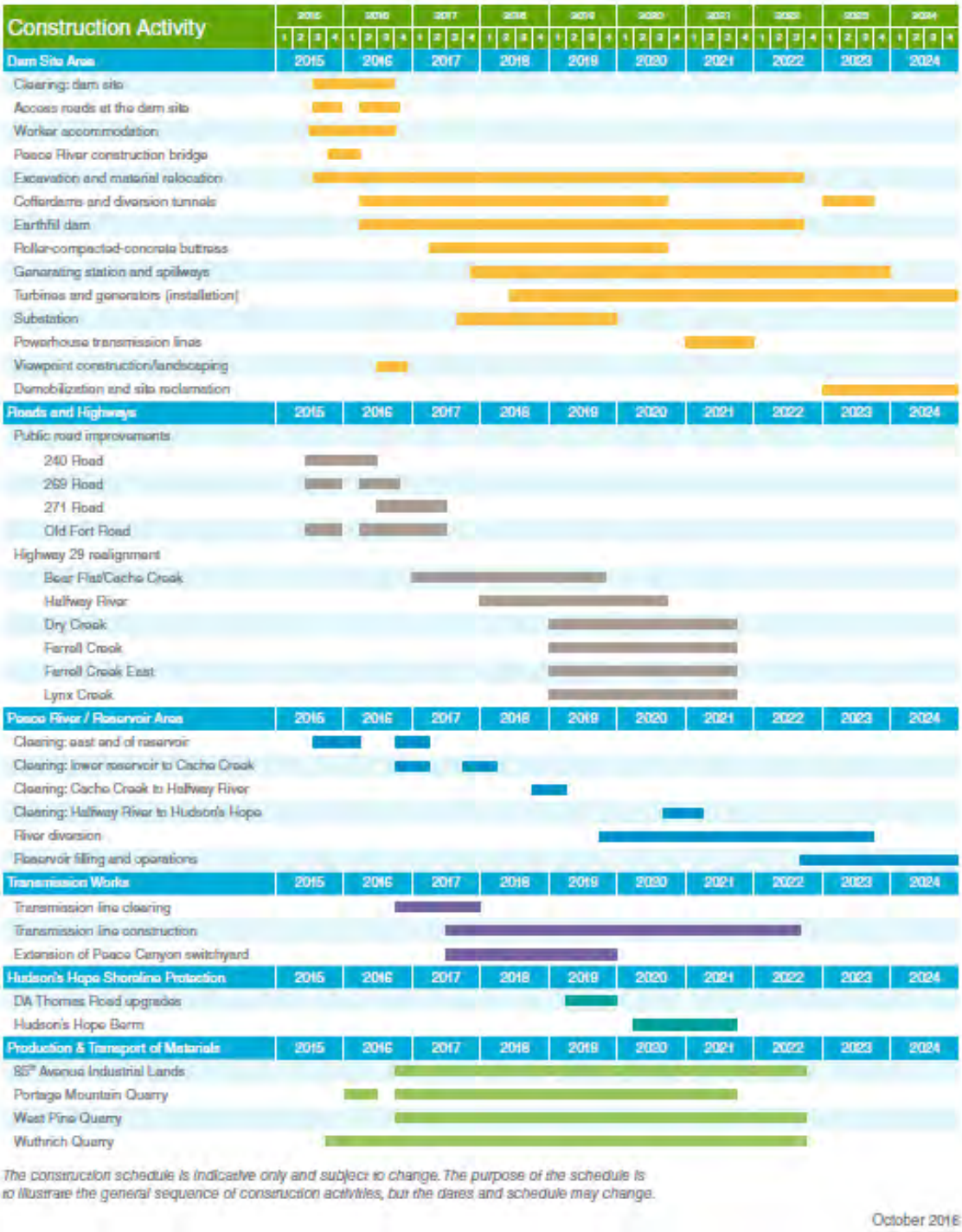
Site C Clean Energy Project

Quarterly Progress Report No. 7

Appendix F

Site C Construction Schedule

Table F-1 Site C Construction Schedule



The construction schedule is indicative only and subject to change. The purpose of the schedule is to illustrate the general sequence of construction activities, but the dates and schedule may change.

October 2016