BC Hydro
Power smart

Site C Clean Energy Project

Quarterly Progress Report No. 4

F2017 First Quarter

April 2016 to June 2016

Table of Contents

List of Figures

List of Tables

Appendices

1 Project Status

This Quarterly Progress Report No. 4 (**Report No. 4**) provides information concerning the Site C Clean Energy Project (**Project**) covering the period from April 1, 2016 to June 30, 2016.

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 Site C Project reduced slightly through the winter season, as expected, but has increased in the spring with 1,416 construction and environmental workers on site and a total workforce of 1,805 working on the project in June 2016, as reported by contractors. On the North Bank of the dam site, construction of the North Bank Access and River Roads are still in progress. River Road, which provides access to the Peace River Construction Bridge's North Approach, has been completed sufficiently and is being used to provide access to the bridge. Final completion of River Road is scheduled for August 2016. North Bank excavation works is under way. Merchantable logs harvested from the North Bank and South Bank have been substantially delivered to local mills in Fort St. John. 495 truckloads of logs from the South Bank were delivered to local mills once the Peace River Construction Bridge opened at the end of March 2016. The North Bank Road gully crossing embankment was scheduled for completion in early July 2016. Progress is delayed due to unforeseen ground conditions that required a redesign of the gully embankment.

Construction of the Worker Accommodation Camp continued with the opening of Phase 2, providing 900 additional rooms (to make a total of 1,200 to date) as well as

expanded kitchen and dining facilities, mudrooms, luggage storage, recreation and fitness facilities and a 500 vehicle parking lot. Phase 2 was completed on June 25, 2016 on time and on budget. Phase 3, which will provide an additional 400 rooms in the Construction Camp, is planned for completion in August 2016.

Work on both the North Bank excavations and the South Bank permanent work started in early June 2016 and July 2016 respectively. Some activities related to the Main Civil Works scope are two months behind schedule, due to a combination of factors including the late issuance of Federal permits, the delayed Provincial Leave to Commence approval, delays in submissions of approval documents and slower than planned mobilization.

Peace River Hydro Partners and BC Hydro worked collaboratively to re-sequence planned work over the fall and winter to ensure the larger schedule milestones are maintained the exact impact of which is not yet determined. However, certain work that was to be performed during summer will shift into winter.

Overall, the progression of work is on track to achieve the BC Hydro *Board of Directors (**Board**)* 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 Board approved P50 amount ($8.335 billion).

Table 1 provides a dashboard based on the Project status as at June 30, 2016.

Table 1 Project Status Dashboard

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

Status as of:		July 2016[1]	Overall:	●
Overall Assessment	●	The Project is on track for overall scope and schedule. The Project is on track with the Project completion date of November 2024.[2]		
Schedule ISDs	●	The overall schedule and progress remains on track to achieve the planned In-Service Dates. Some activities related to the Main Civil Works scope are two months behind schedule which is being mitigated by performing planned summer work during the winter.		
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.		
Permits and Environmental	●	**Provincial Permits:** Some permit applications are currently under review by Forest, Lands and Natural Resource Operation, but have not yet been issued. It is anticipated that these permits will be issued in time for the specific construction activities to commence as scheduled. The project received 16 permits this reporting period. The first Leave to Commence Construction was issued on April 1, 2016 and the second Leave to Commence Construction was issued on June 29, 2016. There have been challenges in receiving the required sub-component authorizations. **Federal Authorizations:** Applications for Main Civil Works and operations were submitted to both Transport Canada and Fisheries and Ocean Canada for review and both authorizations were received July 27, 2016 (date is outside of the reporting period for this report).		
Risks	●	Identified risks are being managed and treatments are in place or planned. For details refer to section 4 Material Project Risks below.		
Aboriginal Relations	●	Impact Benefit Agreement offers have been made to all Treaty 8 First Nations significantly affected by the Project.		
Regulatory and 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 was zero Level 1 safety incidents and two medical aid injuries at the construction site in this quarter.		

[1] The project status is as of July 2016. All financial information is as of June 30, 2016.
[2] 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.

1.2.2 Litigation

Of seven legal challenges of major environmental approvals and permits, two were discontinued, four were dismissed by the courts, one decision is pending, three appeals were filed and one appeal was heard by the B.C. Court of Appeal and a decision on that appeal is pending. In addition, two appeals of BC Hydro's water licence have been filed with the Environmental Appeal Board. The details of the various proceedings are summarized in Table 2 below.

On July 20, 2016, Sierra Club of British Columbia and Josette Wier filed a petition in the B.C. Supreme Court in which they seek various declarations regarding the validity or legality of an authorization under the *Wildlife Act* issued by Forests, Lands and Natural Resource Operations for certain Site C work. Specifically, in May 2016 some amphibians were relocated from the construction area on the south bank of the dam site to ensure they were not harmed or killed by construction activities.

Table 2 Litigation Status Summary

Outcome		Date
Federal Court: Federal Environmental Approval		
Mikisew Cree Athabasca Chipewyan	Two judicial reviews were **discontinued** after agreements were reached with BC Hydro and the federal government	July 16, 2015
Peace Valley Landowner Association	**Dismissed**; no appeal filed	August 28, 2015
Prophet River First Nation West Moberly First Nations	**Dismissed** Appeal filed Hearing date	August 28, 2015 September 30, 2015 September 14, 2016
B.C. Supreme Court: Provincial Environmental Assessment Certificate		
Peace Valley Landowner Association	**Dismissed** Appeal filed Appeal hearing held Decision pending	July 2, 2015 July 30, 2015 April 4 to April 5, 2016
Prophet River First Nation West Moberly First Nations	**Dismissed** Appeal filed Hearing date	September 18, 2015 October 19, 2015 December 5 to December 8, 2016
B.C. Supreme Court: Provincial Permits		
Prophet River First Nation West Moberly First Nations	Injunction application dismissed Hearing of Petition complete Decision pending	August 28, 2015 November 17 to 23, 2015 and February 2, 2016
Environmental Appeal Board		
West Moberly and Prophet River First Nations	Water Licence appeals filed No hearing date yet	March 29, 2016
Other Proceedings		
BC Hydro versus Boon et al. (Rocky Mountain Fort)	Civil Claim filed Injunction decision	January 29, 2016 February 29, 2016
Building Trades versus BC Hydro	Civil claim filed Response to claim filed	March 2, 2015 April 10, 2015

Status as of June 30, 2016.

1.2.2.1 *Building Trades Claim*

In 2015, Building Trades representatives filed a claim in B.C. Supreme Court alleging that certain labour provisions in BC Hydro's contracts, such as "no organizing" at site, were contrary to the Charter. In May 2015, BC Hydro signed the

"Poly-Party" memorandum of understanding and, although settlement of the claim was not a condition of the memorandum of understanding, no further steps have been taken in the litigation since the memorandum was signed.

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.

1.2.3.2 *Provincial Permits*

The strategy for 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. Coordination with Peace River Hydro Partners has commenced and is ongoing. Peace River Hydro Partners will submit one comprehensive list of all permits (a "permitting plan") so that contractor, BC Hydro, regulator and First Nations resources can be planned.

Table 3 below provides a list of permits and authorizations that have been issued for site preparation works at the dam site, for vegetation clearing and quarries/pits. The project received 16 permits in this reporting period.

Table 3 Current Permits and Authorizations

Required Permit/Approval	Process Initiation/ Application Date	Plan Date	Approval Date
Occupant Licence to Cut	Various dates in 2015/2016	Others anticipated August – November 2016	March 11, 2016 (Occupant Licence to Cut 3)
First Leave to Commence Construction	February 2016	April 2016	April 1, 2016
Crown Land tenure – Cache Creek	September 2015	May 2016	June 20, 2016
Water Sustainability Act (sections 10 and 11)	Various dates in 2015	Others anticipated July/August 2016	June 2016 (Worker Camp Water Supply)
Second Leave to Commence Construction	April 8, 2016	May 2016	June 29, 2016
Wildlife Act	Various dates in 2015	May 2016	June 30, 2016 (amphibian and reptile salvage permit)
Third Leave to Commence Construction	June 2016	June 2016	July 20, 2016 (date is outside of the reporting period for this report).
Fisheries Act – Main Civil Works and Operations	December 2015	April 2016	July 27, 2016 (date is outside of the reporting period for this report).
Navigation Protection Act – Main Civil Works and Operations	October 2014	April 2016	July 27, 2016 (date is outside of the reporting period for this report).
Twenty-nine Permit applications currently under review with Forests, Lands and Natural Resource Operations	Various dates in 2015	July 2016 to October 2016	
Renewal and Future permit applications (Years 2 to 3)	July 2016 to September 2016	November 2016	
Mines Act (Notice of Works)	June 22, 2016	December 2016	
Renewal and Future permit applications (Years 3 to 8)	TBD	TBD	

The Water Licence for diversion and storage was issued February 26, 2016 by the Water Comptroller's office. The Water Licence was appealed on March 29, 2016. For further information, see section 1.2.2. The first Leave to Commence

Construction was issued on April 1, 2016 and the second Leave to Commence Construction was issued on June 29, 2016.

Forest Act, *Mines Act*, *Water Act* and *Land Act* permits were issued for works at Del Rio Pit and Portage Mountain Quarry during the first quarter of fiscal 2017. The Province also issued a *Wildlife Act* permit to remove radio collars from ungulates, amendments to *Heritage Conservation Act* Inspection and Alteration permits, and five notifications under the *Water Act/Water Sustainability Act*.

1.2.3.3 *Future Provincial Permits*

Table 4 below lists the general categories of future provincial permit requirements for the different Project components.

Table 4 General List of Future Permit Requirements

Project Component	Key Permit Requirements	Forecast Date
Main Civil Works	*Water Sustainability Act* (section 10 – short term use)	Estimated: June 2017
Highway 29 Re-alignment (Halfway River sections)	*Land, Water, Wildlife, Heritage Conservation, Forest Acts*	August 2016
Other sections	*Land, Water, Wildlife, Heritage Conservation, Forest Acts*	Spring 2017 and beyond
Transmission	*Land, Water*, *Wildlife, Heritage Conservation*, *Forest Acts*	August 2016
Quarries/Pits (West Pine)	*Land, Water*, *Wildlife, Heritage Conservation*, *Forest, Mines Acts*	Spring 2017
Mitigation Works (e.g., Fish and Wildlife)	*Water Act*, *Wildlife Act*	TBD

Assumptions

- Permit requirements listed are general in nature. Additional permits may be identified and required under the various acts as detail design and construction proceeds for the different Project components.
- The date required is subject to change based on changes to the construction design, methods and/or schedule and the consultation process currently being discussed with the Province, Department of Fisheries and Oceans and Transport Canada.

Future applications include *Land, Water, Wildlife, Forest, Mines, and Heritage Conservation Act* permits for the Main Civil Works, transmission line, Highway 29 re-alignment, quarries and pits and the mitigation and monitoring works (e.g., fish

contouring for minimizing the risk of fish stranding). Weekly meetings with the Ministry of Forests, Land and Natural Resource Operations are continuing to ensure that these future applications meet the scheduling needs of the Project.

1.2.3.4 *Federal Authorizations*

Navigation Protection Act Authorization for Main Civil Works was issued by Transport Canada on July 27, 2016. Authorization for Main Civil Works under the *Fisheries Act* was issued by Fisheries and Oceans Canada on July 27, 2016. Both of these dates are outside of the reporting period for this report.

1.2.4 Engineering and Construction

1.2.4.1 *Engineering*

The technical specifications for the Spillway, Power Intakes and Powerhouse are in the final review stages in preparation for issuance of the Generating Station and Spillways Civil Works contract Request for Proposals in September 2016. Main Civil Works implementation design is continuing; the issuing of the construction drawings commenced following contract award. The roller-compacted concrete Buttress Issue for Construction Drawings have been completed based on the Turbine/Generator and Powerhouse dimensions and these have been issued to the Peace River Hydro Partners for preparation of roller-compacted concrete placement in 2017. The technical specifications for the Hydromechanical 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 Substation and Site C substation. The fifteenth meeting of the Technical Advisory Board was convened in Vancouver from April 25 and April 29, 2016. The primary objective of this meeting was to update the Technical Advisory Board on the status of the project since it has entered the Implementation Phase with the issue of the Main Civil Works (**MCW**) contract. In addition, technical evaluation of some residual issues, as well as new considerations

arising from design submissions from the MCW Contractor were reviewed. The board provided a number of recommendations which the Site C Project team are completing. These recommendations are being tracked and reviewed monthly.

1.2.4.2 *Construction*

Refer to Appendix F for the full construction schedule.

North (Left) Bank Site Preparation

Key contract scope for North Bank Site Preparation includes constructing approximately 7 km of access roads and excavation of approximately 2 million cubic metres of material.

- North Bank Road gully embankment construction commenced in February 2016 and 82 per cent of excavation is now completed; and
- Approximately 95 per cent of the River Road subgrade is completed, and the road is in usable condition. A shortfall in material occurred with the balance being sourced from the Area K borrow source on the Right Bank. Installation of cross drainage (culverts) and lock block debris catches are currently underway. An embankment failure has developed near the 'Blind Corner' area of River Road. Tetratech has completed geotechnical investigations to assess the ground conditions and remedial measures are being developed. Final grade of the River Road is expected to be completed in July 2016.

South (Right) Bank Site Preparation

South Bank site preparation work commenced in September 2015 and includes vegetation clearing, construction of new access roads, a temporary substation pad, and a new rail siding.

- Work on the Septimus rail siding resumed this quarter. Site preparation for the rail siding was substantially completed by the end of June 2016 and the forecast is to complete the rail siding work by the end of August 2016.There is

currently no anticipated consequence of delay to the Main Civil Works Contractor at this time;

- Construction of temporary substation pad access roads to final grade is complete. In-service date for the temporary substation is anticipated for late July 2016 and is progressing according to plan; and
- 85 per cent of the standing timber decks have been removed from site; outstanding decks are located on the west bank of the Moberly River (required bridge access to be reinstated prior to removal), in the eastern portion of Area A, and along Septimus siding. These timber decks are not currently impacting the project schedule.

Worker Accommodation

- Phase 1 of the Worker Accommodation camp (300 beds) was completed on February 29, 2016, on schedule;
- All of the modules for the Phase 2 Core facilities and dormitories were installed and commissioned (1,200 beds) on schedule on June 25, 2016; and
- All modules for the Phase 3 scope of work have been erected. Construction continues to finish and commission Phase 3. Work is expected to be complete by late August 2016.

Ministry of Transportation and Infrastructure Public Road Upgrades

The Ministry of Transportation and Infrastructure's contractor, Al Simms and Sons, has substantially completed 269 Road and 240 Road. Both components are now paved and require minor works to finish. Old Fort Road re-alignment is under construction near the Gate B entrance to Site C dam site. Shoulder widening is also being carried out on Old Fort Road from the re-alignment section north to Highway 97. Works are scheduled to be completed by the end of September 2016.

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 is expected to commence in late July and be completed by the end of September 2016.

Main Civil Works

The Main Civil Works contract was signed on December 18, 2015 with Peace River Hydro Partners, a partnership between ACCIONA Infrastructure Canada Inc., Samsung C&T Canada Ltd, and Petrowest Corporation. Peace River Hydro Partners mobilized to site on March 22, 2016. The scope of the Main Civil Works contract is described in Table 5.

Figure 1 Map of Main Civil Works Work Areas

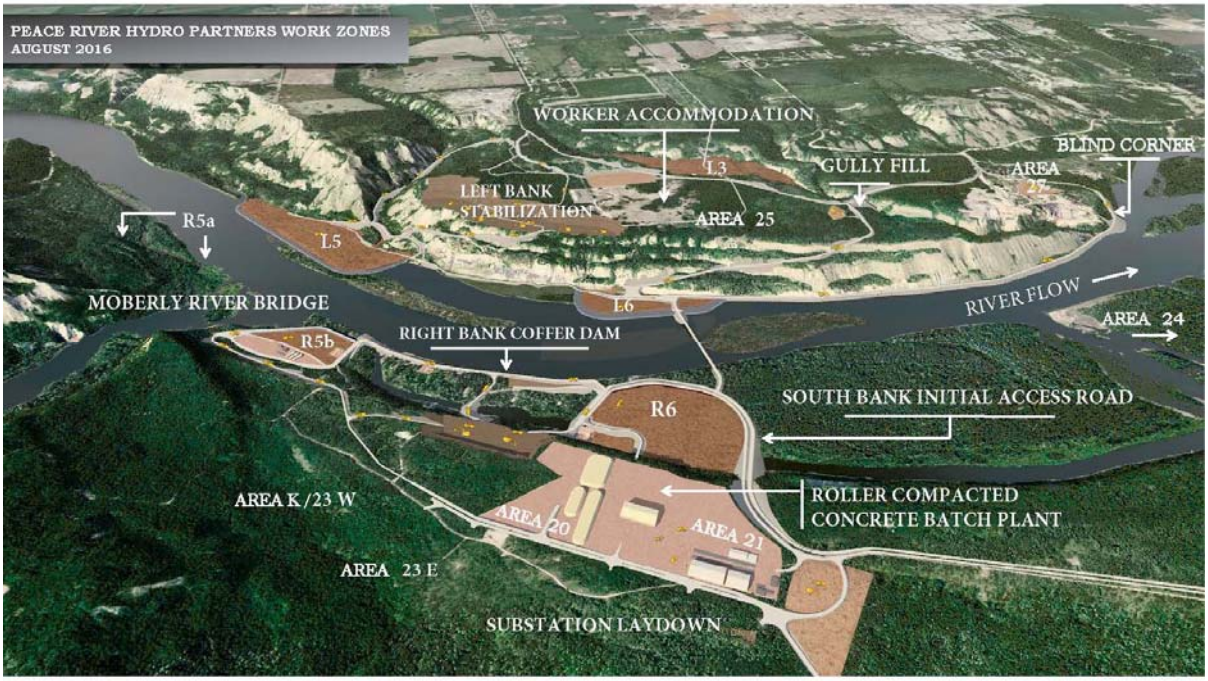

Table 5 Scope of Main Civil Works Contract

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

- The Main Civil Works contractor has established their office facilities on the left bank. The offices, consisting of nine-plex and 30-plex temporary structures, have been erected adjacent to the BC Hydro Construction Office on site. Work to complete servicing and allow full occupancy is expected to be complete by the end of July 2016.
- The Main Civil Works component of the left bank excavation commenced on June 18, 2016. Material from the excavation is being relocated to a surplus material stockpile located on the North bank with approximately 125,000 m^3 of fill being diverted to enable Morgan Construction to complete the gully fill.
- Laydown Areas 20 and 21 have been stripped and grubbed in preparation of aggregate crushing and the establishment of the roller-compacted concrete batch plant. Crushing equipment has been established in Area 20; production of aggregate is currently underway. The batch plant components have been delivered to site and have been staged in Area 21 in preparation for installation.
- A portion of Area A on the Right Bank has been stripped and grubbed. The Main Civil Works contractor has established laydown areas and temporary site offices.
- The Main Civil Works contractor stripped and grubbed the Substation Laydown Area and completed geotechnical site investigations to assess the aggregate quality available for the planned roller-compacted concrete test pour.

Geotechnical drilling and installation of instrumentation into the approach channel and roller-compacted concrete buttress foundation commenced in June 2016. Surface installations are expected to be complete by late July 2016.

Quality Management

Implementation and monitoring of Quality Control and Quality Assurance Plans are required of all contractors. Table 6 below identifies quality management non-conformity instances during the quarter ending June 30, 2016.

Table 6 Quality Management Non-Conformity Report Metrics

Contract	Contractor	Reported this period	Closed this period	Reported to date	Closed to date
North Bank Site Preparation	Morgan Construction & Environmental	8	8	14	14
South Bank Site Preparation	Duz Cho Construction	1*	0	1	0
Main Civil Works	Peace River Hydro Partners	4**	4	4	4

* The one non-conformity incidence reported was culvert SR-20.

** One of four non-conformity incidences reported was related to design and the other three incidences were related to instrumentation installation.

1.2.5 Safety

There were zero Level 1 safety incidents and two medical aid injuries at the construction site in this quarter. Table 7 below identifies the project safety metrics during the quarter ending June 30, 2016.

Table 7 Safety Metrics

	Reported this Period	Reported since Inception
Fatality & Serious Injury[3]	0	0
Severity (number of calendar days lost due to injury per 200,000 hours worked)	0	2*
Lost Time Injury Frequency (number of injuries resulting in lost time per 200,000 hours worked)	0	2*
Contractor, employee, public near miss reports	39	105
Lost time incidents	0	2
Equipment/property damage reports**	26	46

* Complete information not provided by the contractors

** 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 IMS system.

Two Level 3 employee injuries were reported and 40 contractor injuries were reported of which 38 were Level 3 injuries and two were Level 2 injuries. None resulted in lost time. Of the near miss reports, 85 per cent were Level 3 type (lowest severity), whereas 15 per cent were Level 2. The most serious near miss involved a branch coming through an unguarded portion of a bulldozer, breaking a window and damaging the interior. The public near miss involved an employee observing a plume of smoke on public land near the BC Hydro Right of Way. Assistance was dispatched to put out the fire.

1.2.6 Environment

1.2.6.1 *Mitigation, Monitoring and Management Plans*

In accordance with Environmental Assessment Certificate conditions, environmental management, mitigation and monitoring plans have been developed. Draft plans were submitted to regulators, local governments and potentially affected Aboriginal groups. Comments were incorporated into the final plans and submitted in accordance with required timelines.

[3] Excludes health events unrelated to work standards.

During the reporting period the following program reports were submitted:

- Water Quality Monitoring Program Results – Annual Update (June 1, 2016)

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 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 Technical Committees have been meeting regularly to meet this schedule.

1.2.6.3 *Environmental Compliance Inspections*

Inspectors from Environmental Assessment Office, Canadian Environmental Assessment Agency and Forest, Land and Natural Resource Operations attended an inspection of Site C construction late March 2016. Following that inspection, an Order was issued that focused on sediment and erosion control. Some corrective actions were put in place prior to the order being issued. Secondary actions that had longer timelines associated with them are in progress and timelines are being met.

Ongoing inspections will be taking place frequently. In addition, independent environmental monitors, contractor and BC Hydro monitors are conducting compliance checks on an ongoing basis.

1.2.6.4 *Heritage*

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

During the reporting period, archaeological work began in early April following the early spring start. Of the field work planned for the 2016 season, which is subject to refinement based on findings, weather conditions and property access permissions, about 35 per cent is complete. The field work includes regulatory requirements for pre-construction archaeological impact assessments in areas not accessible until now, systematic data recovery at selected archaeological sites, 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.

1.2.6.5 *Agricultural Mitigation and Compensation Plan - Framework*

Working with a Consultation Steering Committee comprised of staff from BC Hydro, the Ministry of Agriculture, and the Ministry of Energy and Mines to guide consultation, BC Hydro has considered feedback received during consultation about the Agricultural Mitigation and Compensation Plan Framework. In accordance with the requirements of the condition, BC Hydro will develop the Framework for an Agricultural Mitigation and Compensation Plan and will submit the Framework to the Peace River Regional District and the District of Hudson’s Hope for review by July 2016. A draft Agricultural Mitigation and Compensation Plan will be provided for review in January 2017, and a final plan filed with the B.C. Environmental Assessment Office, Peace River Regional District, District of Hudson’s Hope, the Ministry of Agriculture and the Ministry of Forests, Lands and Natural Resource Operations by July 2017. In addition, the Framework, draft Plan and final Plan will be

posted on the Site C website for review, and notification will be provided to affected land owners, tenure holders, agricultural stakeholders, and consultation participants.

1.2.7 Employment and Training Initiatives

Employment:

Contractors submit monthly workforce data electronically to BC Hydro. Table 8 shows a snapshot of the number of workers for this quarter by month.

Table 8 Site C Jobs Snapshot

Month	Number of B.C. Workers*	Number of Total Workers*
April 2016	957	1248
May 2016	1223	1547
June 2016	1494	1805

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

Refer to Appendix E for additional workforce information. The number of workers continues to vary as the construction work progresses. For example, it is expected that the number of workers will increase overall given the Main Civil Works contractor's mobilization to site in March 2016. The Main Civil Works contractor, Peace River Hydro Partners, has indicated that approximately 1,500 workers will be working at the peak of construction. As these job opportunities become available, they will be posted on the WorkBC website as well as on the local Fort St. John's WorkBC Employment Centre's website (Employment Connections).

BC Hydro will continue to work with the contractors on site to facilitate reporting of workforce information such as the types of jobs, number of apprentices, and the diversity of their workforce. Some preliminary data is available but we anticipate being in a position to more thoroughly report on these additional categories of information as the construction progresses and the size of the workforce increases.

Training Programs and Initiatives:

The Christian Labour Association of Canada has proposed an initiative to explore the potential 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 in a double wide construction trailer. 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 is working with their signatory contractor, Peace River Hydro Partners Construction and training institutions (including Northern Lights College) to explore the feasibility of this training and potential funding arrangements.

The Christian Labour Association of Canada is also working on an initiative with the Saulteau First Nations to provide Aboriginal Construction Craft Worker training via video conference (virtual classroom) in the First Nation's community. Peace River Hydro Partners has committed to hiring up to 12 individuals who graduate from the program for Site C work (provided they pass all standard Peace River Hydro Partners pre-employment tests). The program is projected to start in the fall of 2016, and run for six weeks. BC Hydro is providing input and assisting in coordinating discussions between stakeholders.

BC Hydro, ATCO Two Rivers Lodging, North East Native Advancing Society and the BC Construction Association have partnered to offer a training to employment kitchen skills program. The program will include five days of pre-employment and kitchen skills training with ATCO's Red Seal Chefs, and is being offered to Treaty 8 members interested in pursuing a career in culinary arts. The program is scheduled to commence the week of July 17, 2016.

1.2.8 Community Engagement & Communication

1.2.8.1 *Local Government Liaison*

BC Hydro and the District of Hudson's Hope have renewed discussions toward a community agreement that would include both Site C and existing operations in the vicinity of Hudson's Hope. The District has identified its key interests in respect of a potential agreement. BC Hydro and the Peace River Regional District have also renewed discussions toward a community agreement to address direct impacts on their infrastructure and services. Both communities have changed their representation in these discussions.

BC Hydro and the City of Fort St. John have established a Community Agreement Monitoring Committee to oversee implementation of the Community Agreement. BC Hydro continues to work cooperatively with the District of Taylor and the District of Chetwynd to oversee implementation of their respective agreements.

A Regional Community Liaison Committee continues to meet approximately every six to eight weeks. Recent meetings have included site tours. The Committee agreed to a Terms of Reference for the Committee which establish that the Committee will meet no less than four times annually and that they will receive information about the Project and have a timely opportunity to raise issues directly to BC Hydro during Project construction. The next meeting is scheduled for September 2016.

1.2.8.2 *Business Liaison and Outreach*

On April 6, 2016 BC Hydro and the Province announced that the Turbines and Generators contract had been awarded to Voith Hydro Inc. Notification of the contract award was provided to the Site C business directory along with business stakeholders such as local chambers of commerce, construction associations and economic development commissions.

On May 5, 2016 BC Hydro issued the Request for Qualifications for the Generating Station and Spillways Civil Works contract on BC Bid. Notification of the Request For Qualifications was provided to the Site C business directory along with business stakeholders such as local chambers of commerce, construction associations and economic development commissions.

Throughout the quarter, BC Hydro provided tours to local chambers of commerce, including:

- Dawson Creek Chamber of Commerce (May); and
- Fort St. John & District Chamber of Commerce (June)

1.2.8.3 *Community Relations and Consultation*

BC Hydro continued to implement its construction communications program during the quarter. This program includes 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:

Analysis of the types of enquiries in previous periods showed that the majority of enquiries were about job and business opportunities. To help people access information more quickly, an initial auto-response is now provided by phone and email that directs individuals to the relevant areas for job and business information. This approach appears to have met the needs for many as seen in a reduced number of enquiries in these areas as compared to recent periods.

In total, BC Hydro received 960 public enquiries between April and June 2016, down from 1,642 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 9 shows the breakdown of some of the most common enquiry types:

Table 9 Public Enquiries Breakdown

Enquiry Type	April	May	June
Job Opportunities	327	164	225
Business Opportunities	62	44	37
Construction Impact	13	5	8

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

1.2.8.4 *Communications Activities*

Based on a search using the media database Infomart, there were 242 media stories in the April to June 2016 period on the Site C Project, compared to 405 stories in the previous quarter.

Key communications activities in the quarter included:

- On April 6, BC Hydro and the provincial government announced at an event in Victoria that Voith Hydro has been awarded the contract for the Site C Turbines and Generators;
- On April 14, BC Hydro released a Spring 2016 Project Newsletter to its web-subscriber list and posted on the project website;
- On April 22, BC Hydro announced that it had signed a Community Measures Agreement with the City of Fort St. John related to the construction of Site C.
- On May 17, BC Hydro announced that it was partnering with School District 60 to create 37 new childcare spaces in Fort St. John;
- On May 25, BC Hydro issued a media statement in response to a public letter from the Royal Society of Canada;

- On May 25, BC Hydro announced that it has an agreement in place with Halfway River International SOS Medical Ltd. to provide health services for the Site C project workforce at the worker accommodation lodge. Halfway River International SOS Medical Ltd. is a partnership between Halfway River First Nation and International SOS;
- On June 1, a news release was issued announcing that main civil works was now underway and that the Energy Minister had toured the site to observe progress; and
- On June 8, BC Hydro released the results of a new public opinion poll. The poll found that 73 per cent of British Columbians supported or could accept building Site C, and province-wide awareness had increased to 77 per cent.

1.2.8.5 *Housing Plan and Housing Monitoring and Follow-Up Program*

BC Hydro has worked with BC Housing on the Agreement with respect to the construction and operation of a total of 50 rental units (the “Housing Project”) to be owned and operated by BC Housing (anticipated completion in October 2018), to be delivered in accordance with Environmental Assessment Certificate Condition 48. Through the Agreement, BC Hydro will provide a substantial capital contribution toward the Housing Project and will pay market rents to occupy up to 40 units within the Housing Project during the Site C construction phase. Together these financial contributions create a capital and operating financial structure that will enable the construction and operation of affordable housing units for the benefit of the community (10 units during Site C construction and 50 units following construction completion).

Key milestones to date on the Housing Project include the following:

- In April 2015, BC Housing completed a Request for Information seeking to understand market capacity for construction of energy efficient housing and availability of a suitable site for 50 units. BC Housing reviewed the findings of

the Request for Information with BC Hydro and stated they were satisfied that there is sufficient capacity in the market for construction of an R2000 energy efficient building and adequate available sites;

- BC Hydro has confirmed its requirements with respect to the 40 units available at market rent to BC Hydro (and its contractors) during the Site C project construction, with respect to building specifications, energy efficiency minimum requirements, parking and unit allocation and amenities;
- BC Housing has continued to engage with owners of potentially suitable development land and it is anticipated that BC Housing will confirm the land on which the Housing Project will be situated in the coming months; and
- BC Hydro and BC Housing have negotiated the overall terms of the Project to ensure the Project meets the conditions of EAC condition #48 as well as the Community Measures Agreement with the City of Fort St. John.

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 (**EAO**) on June 5, 2015.

This plan 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 will be issued to the appropriate training institutions in the Northeast Region of B.C., by the end of summer 2016.

In accordance with Environmental Assessment Condition 53 (provision of additional daycare spaces in Fort St. John to increase spousal participation in the labour market), and in accordance with the Community Measures Agreement between BC Hydro and the City of Fort St. John, BC Hydro will provide 37 additional day-care spaces in Fort St. John through an agreement with School District 60 that was

signed March 31, 2016. BC Hydro will provide $1.8 million to School District 60 to build the new childcare centre as part of a new school, targeted for completion by spring 2018. School District 60 will own the childcare centre and will seek an operator.

1.2.8.7 *Health Care Services Plan and Emergency Service Plan*

The Project Health Clinic is open and providing on site health services for the Site C project workforce at the worker accommodation lodge, contracted by BC Hydro with Halfway River International SOS Medical Ltd., a partnership between Halfway River First Nation and International SOS.

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, 12 hours a day, with emergency after-hour access. A Project Health Clinic opened in an interim location on March 1, 2016, in conjunction with the opening of Phase 1 of the Worker Accommodation facility. In conjunction with the opening of Phase 2 in late June, 2016 the Clinic moved to its new location within the Two Rivers Lodge.

In accordance with the Emergency Services Plan the Project team has met with British Columbia Ambulance Service local staff to provide information about the Project's plan for first aid and emergency transport of workers.

1.2.8.8 *Properties Acquisitions*

In the first quarter of fiscal 2017, BC Hydro obtained agreements in principle with the owners of lands impacted by the conveyor dam site area (three land holdings) and continued discussions with land owners including those who own land in Cache Creek/Bear Flat area (eight landholdings) and the transmission line (two land holdings). In addition, BC Hydro commissioned valuation reports for the landholdings in Cache Creek/Bear Flat area in preparation for making offers to purchase as well

as continued to undertake geotechnical, heritage and environmental field studies on the private land at Cache Creek/Bear Flat.

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 10 below.

Table 10 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	Various, through fiscal 2017
	Main Civil Works contract	Design-Bid-Build	Completed
Reservoir Clearing	Multiple reservoir clearing contracts to be awarded over seven to eight years	Design-Bid-Build	One Agreement awarded for the Lower Reservoir
Generating Station and Spillways	Turbines and Generators contract	Design-Build	Completed
	Generating Station and Spillways Civil Works contract	Design-Bid-Build	Commence: Quarter 1 fiscal 2017
	Hydro-Mechanical Equipment contract	Supply Contract	Commence: Quarter 2 fiscal 2017
	Powertrain Balance of Plant Equipment Supply	Supply Contracts	Commence: 2017 to 2018
	Completion Contract (Powertrain Balance of Plant Equipment Installation)	Install Contract	Commence: 2017
Electrical and Transmission Infrastructure	Transmission Lines contract	Design-Bid-Build	Various, through fiscal 2017 to fiscal 2018
	Site C substation contract	Design-Bid-Build	Commence: fiscal 2017
	Peace Canyon Substation upgrade contract	Design-Build	Contract Award: Quarter 3 fiscal 2017
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 (i.e., greater than $50 million in value) have been awarded: Worker Accommodation, Site Preparation: North Bank, Main Civil Works and Turbine-Generator. 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 11 below.

Table 11 Major Project Contracts Awarded

Work Package	Contract Value	Current Status
Site Preparation: North Bank ($ million)	52	Contract executed July 2015
Worker Accommodation ($ million)	464	Contract executed September 2015
Main Civil Works ($ billion)	1.75	Contract executed December 2015
Turbine-Generator ($ million)	464	Contract executed March 2016

In 2016, procurement of two major work packages will commence: Generating Station and Spillways Civil contract and Hydro-mechanical equipment. Procurement of these work packages is currently on track.

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*

There have been no material changes to the Major contracts to date.

1.3.3.2 *Contingency and Project Reserve Draws*

The project is on track to manage budget within the approved amounts including contingency. The project budget includes contingency of $794 million in nominal

dollars. There have been no draws on project reserve to date. 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 12.

Table 12 Key Milestones

Milestone	Final Investment Decision Plan Date[4]	Revised Plan[5]	Forecast Date	Variance[6] (months)	Status[7]
Ministry of Transportation & Infrastructure: North Bank Roads (240) Work	October 2015	October 2015	July 2016	-9	Late[8]
Site Prep North Bank Complete	February 2016	June 2016	August 2016	-2	At Risk
North Bank Road Gully Section to River Road complete	January 2016	February 2016	August 2016	-6	Late
Main Civil Works Commence North Bank Excavations	January 2017	April 2016	June 2016	-2	Late
Phase 3 – Worker Accommodation	July 2016	August 2016	August 2016	0	On Track
North Bank (271) Road complete	July 2016	June 2016	October 2016	-4	Late
South Bank Stage 1 Cofferdam complete	December 2016	April 2017	November 2016	5	On Track

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.

[4] Plan based on plan at Final Investment Decision, December 2014.
[5] Revised Plan updated as of December 2015 to reflect start of construction activities and award of contracts.
[6] Variance based on comparison of Forecast to Revised Plan.
[7] Status based on comparison of Forecast to Revised Plan.
[8] Work on North Bank Roads (240) rescheduled (not on critical path).

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 13.

Table 13 Project In-Service Dates

Description/Status	Financial Investment Decision Planned ISD[9]	F2017-F2019 Service Plan10	Status[11] and Comments (e.g., complete, on schedule, delayed, possibly delayed, probable delayed)
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 14 below presents the overall Project Budget, based on the Final Investment Decision (December 2014), represented in nominal dollars.

Table 14 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 15 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 15 Total Project Expenditure Summary ($ million Nominal) Compared to Final Investment Decision

Description	Final investment Decision	Forecast	Forecast vs Final Investment Decision Approved Budget	Final Investment Decision Plan to Date	Actuals to Date	Variance
Total Project Costs[1]	8,335	8,335	-	745	1,100	(365)
Treasury Board Reserve	440	440	-			
Authorized Project Cost	8,775	8,775	-	745	1,100	(365)

Table 16 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 16 Total Project Expenditure Summary ($ million Nominal) Compared to F2017-F2019 Service Plan

Description	F2017-F2019 Service Plan	Forecast	Forecast vs F2017-F2019 Service Plan	F2017-F2019 Service Plan to Date	Actuals to Date	Variance
Total Project Costs[1]	8,335	8,335	-	1,053	1,100	(57)
Treasury Board Reserve	440	440	-	-	-	-
Authorized Project Cost	8,775	8,775	-	1,053	1,100	(57)

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 earlier than planned expenditures related to Worker Accommodation and Main Civil Works. 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. In March 2016, the British Columbia Utilities Commission approved a Debt Hedging Regulatory Account that will capture the gains and losses related to the hedging of future debt issuance (which includes financing of expenditures related to Site C) over a 10-year period. In addition to portfolio adjustments that are currently being implemented whereby BC Hydro is reducing its exposure to variable rate debt and increasing its issuance of fixed rate debt, a strategy has been developed that recommends hedging 50 per cent of BC Hydro's future forecasted borrowing requirements from fiscal 2017 to fiscal 2024 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 17 for a list of risks.

Table 17 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 will result in delays to the associated construction work. BC Hydro continues to consult with federal and provincial authorities, local government and First Nations to mitigate this risk. BC Hydro is awaiting the outcome of a judicial review of permits as described below. If BC Hydro is unsuccessful, this could result in a delay to the work underway and claims arising. Delays in the issuance of the Federal fisheries authorization and other permits have increased the risk exposure for the reporting period.	↑

[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. Two appeals of the Water Licence have been filed by West Moberly and Prophet River First Nations and an individual with the Environmental Appeal Board. There is a potential for additional legal proceedings. If any are successful, there may be delays.	→
First Nations	BC Hydro has made progress on negotiating agreements with First Nations and has reached substantive agreement with several First Nations including an Impact Benefit Agreement with McLeod Lake Indian Band, which was ratified in June 2016. The status of other specific negotiations is confidential at this time. Impact Benefit Agreements with First Nations provide First Nations with Project benefits and mitigate the risk of legal challenges.	→
Market response to procurement	There is a risk that strong competition does not occur during procurement, which may result in higher premiums, mark ups and overall prices on labour and materials. Risk has been mitigated via market soundings, robust Request for Qualifications process, honorariums for successful bidders, and other engagement activities. All three major procurement processes completed to date (Worker Accommodation, Main Civil Works, Turbine and Generators) have had positive responses. Market response risk will continue to be monitored and could be impacted if the project construction schedule is delayed significantly.	→
Labour Relations & Stability	BC Hydro is using an inclusive labour approach with a managed open site. This 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 entered into 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. All major contracts contain no strike, no lockout, and no raiding provisions. BC Hydro is planning on implementing a site-wide Labour Relations Contractor Committee in the fall. The purpose of this committee is to support labour stability on the site through communication, consultation, coordination and cooperation among contractors on the project.	→

Risk Event / Description	Risk and Response Summary	Trend in Risk Exposure[12]
Geotechnical risks	Key geotechnical risks include unexpected shears encountered during construction; deeper than expected relaxation joints; bedding planes worse than expected; larger than expected deterioration of shale bedrock once exposed during construction; and Rock Rebound/Swell. Current strategies to mitigate geotechnical risks include: Transfer some degree of ground condition risks to the Contractor; Design contracts which allow the contractor to respond to unexpected ground conditions (potentially through pre-agreed pricing); and Conduct field-scale trials to determine the response when shale bedrock is exposed to the elements. Events associated with this risk have occurred on the North Bank gulley crossing, where unexpected slope failure occurred. BC Hydro has been working with the contractor to provide an engineered solution, and expects to address this issue within available funds. Once the Main Civil Works contract is beginning excavation BC Hydro will have additional information about this risk.	→
Construction cost – labour	Potential cost increases could arise if there is competition with other projects for labour resources, labour instability, or changing workforce demographics. BC Hydro is partially mitigating this risk through regional job fairs to increase local participation and investments in skills training ($1.5 million invested to date). This risk is also partially mitigated by consideration of labour stability during contractor selection. BC Hydro has now awarded the Main Civil Works contract, which fixes labour rates for the first two years. BC Hydro has also awarded the contract for the Turbines & Generators, which fixes labour costs for manufacturing activities. Labour costs under these contracts are consistent with BC Hydro estimating expectations. Based on current market conditions in the infrastructure and energy sector BC Hydro believes that the risk of unexpectedly high labour prices has decreased since the Final Investment Decision. There remains the potential for market conditions to shift in the future and this risk to increase.	→

Risk Event / Description	Risk and Response Summary	Trend in Risk Exposure[12]
Construction cost – commodities and equipment	Potential cost increases could arise if market prices for key commodities and equipment increase, or if overall market activity results in higher contractor profit margins. BC Hydro has completed procurement for several contracts associated with early works, Worker Accommodation, Main Civil Works and Turbines and Generators and it does not see early indications on market price pressures at this point. More information will be available upon conclusion of other major contracts such as Generating Stations and Spillways. BC Hydro retains exposure to fuel prices (generally diesel), which have decreased compared to prices in the budget. Fuel prices may increase in the future due to global market forces. BC Hydro will consider the potential to hedge these prices, where appropriate. Based on current market conditions in the infrastructure and energy sector BC Hydro believes that the risk of unexpectedly high market prices has decreased since the Final Investment Decision. There remains the potential for market conditions to shift in the future and this risk to increase.	→
Construction execution.	Contractors may be unable to execute successfully on scope of contract with resulting costs to BC Hydro. Mitigation is via: Robust procurement processes to determine whether contractors have the capability to undertake their scope of work; A cross-functional construction readiness review to confirm contractor and BC Hydro readiness before authorizing the start on any specific scope of work; and BC Hydro increased on site supervision to address recent environmental compliance issues. BC Hydro step-in rights under contracts to allow for correction in the case of contractor failure.	→

Risk Event / Description	Risk and Response Summary	Trend in Risk Exposure[12]
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 capital costs are based on foreign currency. The Canadian dollar has weakened significantly compared to the US 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 US dollar.	→
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. In addition to portfolio adjustments that are currently being implemented whereby BC Hydro is reducing its exposure to variable rate debt and increasing its issuance of fixed rate debt, a strategy was developed to hedge approximately 50 per cent of BC Hydro's future forecasted borrowing requirements from F2017 to F2024 through the use of derivative contracts. An application to the Commission for a new Debt Hedging Regulatory Account that will capture the gains and losses related to the hedging of future debt issuance was approved by the British Columbia Utilities Commission in March 2016. BC Hydro has begun implementation of this hedging program and expects interest rate risk to decline over time.	↓
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.	→

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Appendix A

Site Photographs

Figure A-1 Aggregate Sourcing on the South Bank (Duz Cho)

Figure A-2 Temporary Transmission Substation

Figure A-3 Left Bank Excavation viewed from Right Bank

Figure A-4 L3 Gully Fill in Progress (Morgan Construction)

Figure A-5 Viewing westbound along River Road near Final Grade (Morgan Construction)

Figure A-6 Right Bank Viewed from Septimus Road

Figure A-7 Preparation of Roller-Compacted Concrete Batch Plant Foundations (Peace River Hydro Partners)

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Appendix B

Summary of Individual Contracts Exceeding $10 million

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Appendix C

Project Progression

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Appendix D

Detailed Project Expenditures

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Appendix E

Workforce Overview

Table E-1 Current Site C Jobs Snapshot (April to June 2016)

	April 2016		May 2016		June 2016	
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 Contractors (including some subcontractors) and Environmental Contractors* Excludes work performed outside of B.C. (e.g., Manufacturing)	655	925	893	1,146	1,136	1,416
Engineers and Project Team**	302	323	330	401	358	389
TOTAL	**957 (77%)**	**1,248**	**1,223 (79%)**	**1,547**	**1,494 (83%)**	**1,805**

The table above is based on data that contractors have submitted to BC Hydro and is subject to change. Data that is not received by Project deadline may not be included in the above numbers.

* Employment numbers are indicative only as they do not capture indirect or induced employment. The Construction and Environmental Contractors numbers excludes work performed outside of B.C. (e.g., manufacturing), but includes work performed on Site C dam site, transmission corridor, reservoir clearing area, public roadwork and office staff in the Peace River Regional District.

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

During the months of April and May 2016, there were no workers from the Construction and Environmental Contractors working under the federal Temporary Foreign Worker Program. However, there were approximately 10-11 management and professional employees working under the federal International Mobility Program.

Table E-2 Preliminary Site C Apprentices Snapshot (April to June 2016)

Month	Number of Apprentices
April 2016	117
May 2016	107
June 2016	61

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

Table E-3 Current Site C Job Classification System

Carpenters	Construction Managers/ Supervisors	Crane Operator	Electricians	Health Care Workers
Heavy Duty Mechanics	Heavy Equipment Operators	Housing Staff	Inspectors	Kitchen Staff
Labourers	Office Staff	Pipefitters	Plumbers	Security Guards
Surveyors	Truck Drivers			

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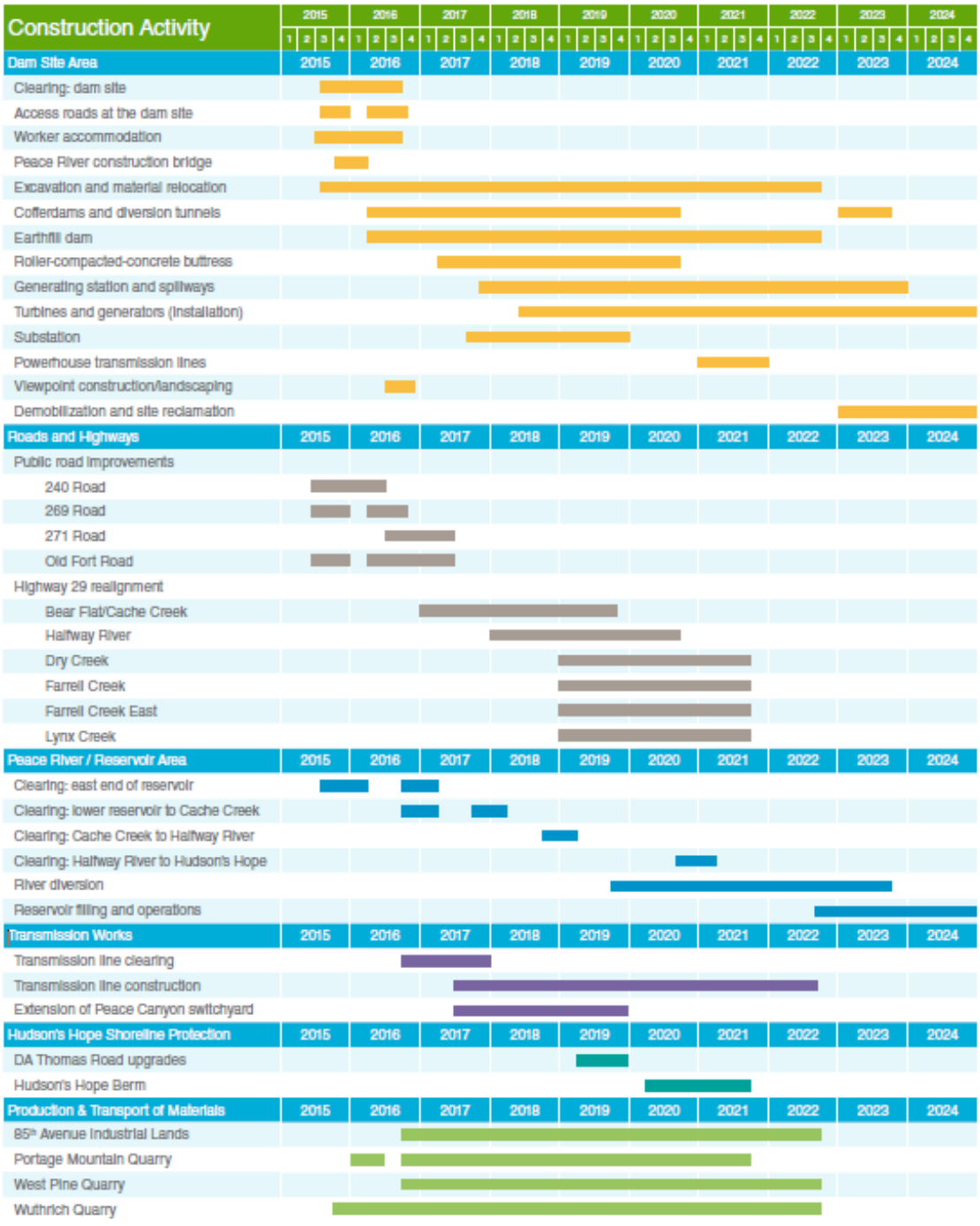
Appendix F

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