

Project Title:	Site C Clean Energy Project		
SAP Project #:	YM-80004	Project Director:	[REDACTED]

Purpose of the Project:

The Site C Clean Energy Project (“Site C” or “the Project”) is being undertaken to meet two purposes:

- To cost-effectively meet BC Hydro’s forecast need for energy and capacity in alignment with the provincial policy objectives of the Clean Energy Act, and relevant B.C. Government policy statements, and
- To cost-effectively maximize the development of the hydroelectric potential of the Site C Flood reserve which was established in 1957.

This document lays out the objectives, scope, schedule, cost, safety, environment and quality expectations as well as the strategies, policies and procedures that have been developed and endorsed to achieve the Project goals.

Authorized Amount: \$8.335 billion (nominal)

Reserve, subject to Treasury Board Control \$440 million (nominal)

Last Unit In-Service Date: November 2024

Issued by: [REDACTED] Project Manager and Director Operations, Site C

Reviewed by: [REDACTED] Vice President and Project Director, Site C

Reviewed by: [REDACTED] Principal Engineer for Project Management

Reviewed by: [REDACTED] Deputy CEO

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1 Introduction

This Project Plan has been developed for the Implementation phase of the Site C Clean Energy Project (“Site C” or “the Project”). Site C is a third dam and hydroelectric generating station on the Peace River in northeast B.C. It is part of BC Hydro’s overall program to invest in and renew the province’s electricity system.

The Project would provide approximately 1,100 megawatts of capacity, and produce about 5,100 gigawatt hours of electricity each year – enough electricity to power the equivalent of about 450,000 homes per year in B.C.

High-level scope of the Project includes:

- Site preparation activities
- Construction and commissioning of an earthfill dam, reservoir, hydroelectric generating station, substation and transmission lines
- Implementation all of the authorized regulatory conditions including all the agreed mitigation and compensation requirements and benefit agreements
- Acquisition of the properties and rights necessary for construction and operation of all Site C assets
- Negotiation and conclusion of agreements with Aboriginal groups that meet goals and interests of the parties, and which fulfill Environmental Assessment process requirements
- Site reclamation, demobilization and project closure

In October 2014, the Project received the required federal and provincial Environmental Assessment Certificates, following a cooperative federal and provincial environmental assessment process by the Canadian Environmental Assessment Agency and the B.C. Environmental Assessment Office. The final investment decision by BC Hydro’s Board of Directors and the Shareholder was issued in December 2014.

The development of this Project Plan has been guided by BC Hydro’s Project and Portfolio Management (PPM) practices as well as a number of relevant documents referenced herein. The Plan covers Phase 5 Implementation.

2 Purpose of the Plan

The purpose of this Project Plan is to provide the Project Team with clear and consistent direction to meet the overall goals and objectives of the Project.

The Project Plan lays out the objectives, scope, schedule, cost, safety, environment and quality expectations as well as the strategies, policies and procedures that have been developed and endorsed to achieve them.

Related elements of this Project Plan will be updated on an annual basis as the Project progresses, to reflect adjustments to scope, schedule and budget as well as refinements to policies, procedures and strategies. This document is intended to be used as a dynamic document that will:

- set the course and direction for the activities of the Project Team;
- define the governance of the project; and
- provide ongoing direction for new and existing team members.

A number of documents, essential to the effective execution of the Project, have been developed and are attached to this Plan as appendices. These appendices have been developed such that they can also be used as separate stand-alone documents focusing on the issues and strategies that they address.

3 Project Objectives

The following table provides the Objectives of the Project as described in the Project Charter approved by the BC Hydro Board of Directors in June 2016:

Project Objectives	Description
Provide reliable capacity	<ul style="list-style-type: none"> • Maximize capacity available from Site C while meeting owner's requirements
Deliver low cost energy	<ul style="list-style-type: none"> • Maximize energy available from Site C while meeting owner's requirements • Minimize project unit energy cost (UEC) while meeting owner's requirements
Ensure a long term source of energy and capacity	<ul style="list-style-type: none"> • Maximize project life within owner's requirements • Retain public ownership of energy supply
Support Clean Energy Objectives	<ul style="list-style-type: none"> • Maintain BC generation as $\geq 93\%$ clean • Low life-cycle GHG emissions from project • Aids in integration of other intermittent renewable resources • Contribute to BC's self-sufficiency goals
Public and worker safety	<ul style="list-style-type: none"> • Achieve zero fatalities and zero serious injuries • Include safety in the design of all project components • Meet or exceed BC Hydro's worker safety standards • Integrate job-safety planning into day-to-day work for all project activities
Ensure that the Crown's duty to	<ul style="list-style-type: none"> • Consult Aboriginal groups with a focus on impact assessment, mitigation, and where applicable, accommodation

Project Objectives	Description
consult Aboriginal groups is met	<ul style="list-style-type: none"> Identify opportunities for Aboriginal participation in the project
Environmental Leadership	<ul style="list-style-type: none"> Meet or exceed environmental requirements defined by legislation, regulation and government directives
Optimize existing BC Hydro assets on Peace River system	<ul style="list-style-type: none"> Increase value of Williston Reservoir storage and regulation Maintain operational and maintenance flexibility at existing BC Hydro generation facilities on the Peace River
Follow best practice in public process	<ul style="list-style-type: none"> Undertake thorough, best practice consultation with the public, communities and stakeholders Employ a best practices standard in working with private property owners to minimize disruption, to ensure input is thoroughly considered in project planning
Provide lasting economic and social benefits for northern communities, Aboriginal groups and the province	<ul style="list-style-type: none"> Create construction-related jobs and business opportunities Consult and work with communities about regional benefits such as upgrades to infrastructure including roads, bridges and parks Work with Aboriginal communities to identify and create opportunities for skills training, jobs and economic development

Refer to Appendix A for the Statement of Objectives.

4 Scope

All work required to achieve the objectives as defined in the Project Charter and Statement of Objectives have been captured in the Work Breakdown Structure (WBS). The work is broken down sufficiently to create work packages with defined deliverables, scope descriptions, activities and budget cost items to manage the work effectively and address project risks.

The scope of the Project is summarized below:

Site Preparation Activities:

- Clearing of the Dam site area
- Construction of access roads and a temporary construction bridge across the Peace River near the dam site
- Upgrades to Ministry of Transportation & Infrastructure roads (OFR, 240, 269 and 271 Roads)
- Construction, operation and decommissioning of a worker accommodation camp
- Installation of construction power and telecommunications

Construct and Commission:

- An earthfill dam, approximately 1,050 metres long and 60 metres high;
- A buttress of roller-compacted concrete to support the valley wall, provide the foundation for the concrete structures and form the south abutment of the earthfill dam;
- Two 10.8 metre diameter diversion tunnels and associated intake and outlet structures;
- Slope stabilization of the north bank above the dam site;
- A 1,100-megawatt hydroelectric generating station with six generating units and associated intake structures, penstocks and spillways;
- Spillway capacity of 16,500 m³/s at Maximum Flood Level 466.3 m
- An 83-kilometre-long reservoir with a maximum surface area of 9,330 ha;
- Maximum normal operating level of 461.8m
- Minimum normal operating level of 460.0m
- Erosion protection at Hudson's Hope and locations adjacent to Highway 29 as required;
- Realignment of six sections of Highway 29 over a total distance of approximately 30 kilometres;
- Construct the Site C South Bank Substation;
- Two 75-kilometre 500kV transmission lines to connect the new Site C substation to BC Hydro's existing Peace Canyon switchgear building including clearing and access;
- Three 1-kilometre 500kV transmission lines to connect Site C Substation to Site C Powerhouse;
- Expansion of the Peace Canyon Gas Insulated Switchgear;
- Upgrades at various stations; and
- Reservoir utilities relocation including transmission and distribution lines.

General Management:

- Implement all engineering, design, procurement, environmental, regulatory and permitting and construction activities as detailed in the general management work packages.

Mitigation and Compensation:

Address Environmental Assessment Conditions(EAC) and Canadian Environmental Assessment Agency (CEAA) conditions, and as applicable permits and authorisations, and includes the following work packages:

- Implement all of the authorized regulatory conditions including all the agreed mitigation and compensation requirements and benefit agreements.
- Fish and Fish Habitat, including construction of temporary and permanent fish passage facilities, habitat mitigation programs and follow-up monitoring

- Vegetation and Wildlife, including habitat mitigation and compensation, retention of conservation lands, and follow-up monitoring
- Community Benefits and Community Issues, including measures to address community issues and create lasting benefits
- Social and Land Programs, including measures to address transportation and community infrastructure, recreation and reservoir boat launches, and agriculture
- Physical Environment Monitoring, including water quality, groundwater quality, air quality, noise, climate, and greenhouse gas emissions reporting during construction
- Heritage, including mitigation of paleontological, archaeological and historical sites, and provision of compensation funds to support local museums

General Rights, Taxes and Grants:

- Acquire the properties and rights necessary for construction and operation of all Site C assets

Aboriginal Relations:

- Consult with Aboriginal groups consistent with the honour of the Crown; and
- Negotiate and conclude agreements with Aboriginal groups that meet goals and interests of the parties, and which fulfill Environmental Assessment process requirements

Site Reclamation, Demobilization and Project Closure

- In accordance with the Construction Environmental Management Plan, restore and revegetate disturbed construction areas to a safe and environmentally acceptable condition as appropriate to the Project's temporary and permanent land use objectives
- Prepare project deliverables for acceptance by Generation and Transmission, Distribution & Customer Service in accordance with Generation Operating Order 1G-30 (Plant) and System Operating Order 1T-35 (Switchyard)
- Testing and commissioning
- Verify deficiencies are completed
- Perform Completion
- Prepare and issue Project Completion Report
- Perform project documentation closeout filing
- Complete all financial account transfers and closeout of project accounts

Refer to Figure 1 Work Breakdown Structure and Appendix B for the Work Package Agreements.

5 Schedule

A detailed cost- and internal resource-loaded schedule has been developed for the Implementation phase of the Project. The schedule structure is based on the Work Breakdown Structure (WBS) and integrates scope and cost with activities and charge codes. The construction portion of the schedule has been developed based on the project design with estimated construction durations and sequencing. All key activities and milestones from supporting functions have also been included in the schedule to form an integrated schedule.

The approved Final Investment Decision (FID) schedule is described below. The Project has advanced implementation phase activities to mitigate schedule risk. Refer to Appendix C for the detailed Project Schedule.

FID Date	Description	Milestone Code
October 2020	5L5 500kV Transmission Line In-Service	1.01
November 2020	Site C Substation In-Service	1.01
July 2023	5L6 500kV Transmission Line In-Service	1.01
December 2023	Unit #1 In-Service	1.01
February 2024	Unit #2 In-Service	1.01
May 2024	Unit #3 In-Service	1.01
July 2024	Unit #4 In-Service	1.01
September 2024	Unit #5 In-Service	1.01
November 2024	Unit #6 In-Service	1.01

Schedule Management

Monthly schedule progressions will be performed on all activities and work packages. The progression cycle includes updating the schedule progress and actual costs of the work packages, and reviewing and monitoring the remaining durations and costs with the work package managers. Corrective actions will be taken by the work package managers where necessary. Updates to the schedule baseline will be completed in accordance with the change control procedure. Refer to Appendix I for the Project Change Control Plan.

The regular cycle of progression and reporting provides visibility into project health and enables monitoring of key milestones, timely change management, and provision of accurate forecasts.

Refer to Appendix D for the Schedule Management Plan.

6 Cost

BC Hydro is committed to delivering the Site C Clean Energy project within the expected project cost and Authorized Amount of \$8.335 billion in loaded, nominal dollars. There is an additional reserve held by Treasury Board of \$440 million.

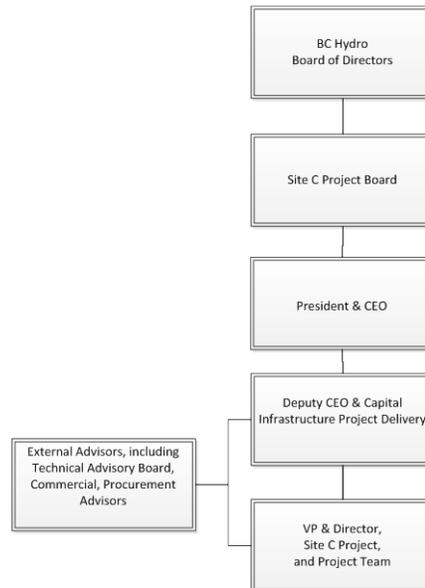
Refer to Appendix G for the Cost Estimate.

Refer to Appendix H for the Cost Management Plan.

Refer to Appendix AE for the Contingency Management Plan.

7 Governance

The mechanism used to ensure that the Project implements and respects BC Hydro's corporate policies is through the Project's governance structure.



BC Hydro Board

Responsibilities:

1. Overall approval and oversight on project goals, scope, budget and schedule;
2. Approval of any significant changes to budget, scope and schedule;
3. Approval on contract awards over \$50 million;
4. Approval of any draws on Board reserve;
5. Approval of quarterly and annual project progress reports; and
6. Make recommendations to government to access the Project Reserve overseen by Treasury Board.

Site C Project Board (Sub-Committee of Board of Directors)

Responsibilities:

1. Function at a strategic level to provide guidance and oversight to Site C Project staff and to the CEO on project strategy as well as on goals, scope, budget, schedule, environmental, regulatory, First Nations, procurement model and other issues as required; and
2. Helps to ensure appropriate notification to Government is undertaken.
3. Reviews and provides advice to the Board and Management, including indication of the Project Board's satisfaction and recommendations with respect to:
 - a. Quarterly Reports, Annual Reports (including updated Management Plans), Project Communications Plan and Delegation Matrix;
 - b. Requests for Board contingencies; and
 - c. Requests to access the Project reserve overseen by Treasury Board; and
4. Reviews and provides advice to Management as needed regarding exception reporting and Monthly Project Progress Report (for internal use at BC Hydro) that includes progress on major work packages, milestones, schedules, project budget, issue management and specific risk and mitigation actions.

Composition

Chair: BC Hydro Director
Members: Two to four BC Hydro Directors
Ex-officio: BC Hydro Board Chair, former Executive Vice President of Site C, one individual appointed by the Minister of Energy
Notes: Membership on the Site C Project Board may be altered from time to time.
The Corporate Secretary of BC Hydro will serve as secretary to the Project Board.
The CEO of BC Hydro shall be invited to all meetings unless the meeting is in-camera.
Advisors: As deemed appropriate by the Site C Project Board

Executive Oversight

Responsibilities:

Advise VP & Director Site C Project regarding the project and integration with other BC Hydro operations and considerations.

Composition:

Chair: CEO
Members: BC Hydro Deputy CEO, CFO and SVP Generation

Technical Advisory Board

Responsibilities:

1. Global panel of engineering and construction experts appointed by the Board to advise the VP and Director of the Site C Project, the Deputy CEO and the Project Board regarding the engineering and technical decisions related to project design consistent with best practices and current international guidelines.
2. Provide technical review of key design milestones and ongoing external advice to supplement existing engineering and design and procurement expertise.
3. Report out to the Project Board and Management following each meeting and provide a report of key findings and recommendations;
4. Prepare and submit Technical Reports as required to Management and the Board; and
5. Conduct a periodic review of the construction budget estimate.

Composition:

International panel of experts in the development of major hydro-electric projects (Canada, Brazil, Sweden and Germany). Members as of March 2016 include:

Chair:

Members:



The project team has a structure similar to other major capital project organizations with BC Hydro, with some exceptions in order to support ongoing procurement processes and overall project size and scope. The project will be governed by a direct reporting relationship to the Deputy CEO, the CEO and the Site C Project Board within the approved scope, budget and schedule. Functionally, the project delivery team will be led by the Project Manager and Director of Operations and report to the VP and Director of Site C.

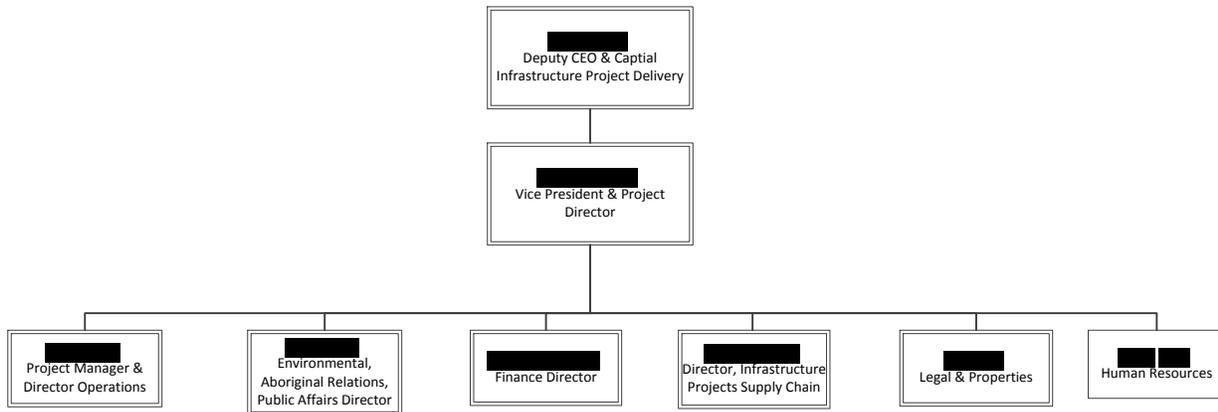
The Site C Project is subject to BC Hydro’s Policies and Practices including the Financial Approval Authority Policy.

External and internal advisors (e.g. BC Hydro principal engineers) will be made available to the project to address specific commercial and technical issues as may arise during the course of the project.

7.1 Site C Team Structure and Individual Accountabilities

Effective governance relies on differentiated accountabilities to ensure appropriate decision making, oversight and escalation paths. The Site C Project Team is organized as follows:

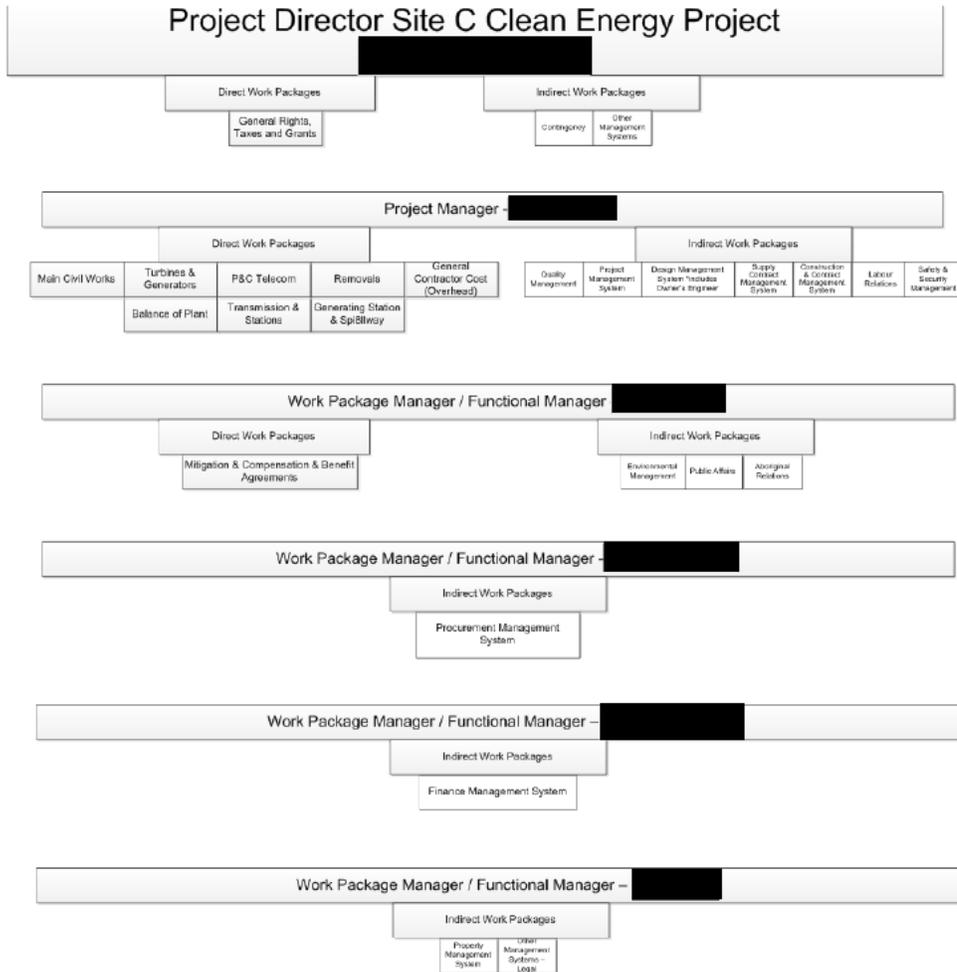
Site C Functional Organizational Chart



The Site C Project is managed under the standard BC Hydro Project & Portfolio Management Practices, Procedures and Processes with additional requirements due to the size and complexity of the project.

Site C Leadership Team Accountabilities

To effectively manage the project given its overall size and scope, accountabilities have been delegated through the assignment of work packages. The following chart displays the work package accountabilities of the Site C Leadership Team. Formal delegations are documented in letters of delegation which are located on the PPM Workspace.



Project & Portfolio Management Roles

Work Package Manager

The [Work Package Manager \(WPM\) role](#) is responsible for the planning and delivery of the Work Package within the approved scope, cost and schedule as detailed in the Work Package Agreement. This includes planning, resourcing, monitoring & controlling and communications & reporting. Specifically:

- Working with the Project Manager and Scheduler to decompose the scope of the Work Package and to develop the Work Package schedule
- Working with the Functional Manager to determine the availability of required resources
- Working with the Project Manager to finalize the scope, cost and schedule of the Work Package and develop the Work Package Agreement
- Analyzing the progress of the Work Package and preparing monthly progress information, including the schedule and cost variance explanations
- Working with the Project Manager and the project team to support corrective actions and contribute to the overall success of the project
- Approve Work Package Agreements

Functional Manager

The [Functional Manager's](#) responsibilities include:

- Working with Project Managers to assign Work Package Managers from their functional team
- Working closely with Work Package Managers to ensure that the appropriate resources are assigned to project activities (Activity)
- Working closely with resource planning to analyze and address resource imbalances in the near and long term
- Securing contractor resources as needed and as indicated in the portfolio resource plan
- Overseeing the performance of the work carried out by their team resources

Project Manager

The key responsibilities of the [Project Manager role](#) are:

- Managing the planning and execution of the Project activities (Activity), and ensuring that the objectives of the project are achieved
- Collecting the project's background information and requirements, and defining the project objectives
- Working with the initiating organization to prepare User Requirements
- Working with the functional organization to set up the project team
- Working with each team member to elaborate detailed work packages to achieve the user requirements

- Closely monitoring and analyzing the project status and performance throughout the Lifecycle of the project, and taking corrective action when required
- Approve Work Package Agreements

Project Director

The Project Director role is accountable to manage the delivery of the project and to ensure that the intended benefits of are realized. The Project Director provides direction and guidance, consistent with the objectives and strategies developed for the project.

In general, the Project Director is responsible for:

- Providing project level oversight and reporting
- Providing centralized and coordinated management of the project to achieve the project's intended strategic outcomes
- Executing the project in the most efficient and effective way
- Ensuring that any potential synergy benefits are realized
- Managing performance of the end-to-end project delivery
- Monitoring project and work performance, and directing any required corrective action

The following describes the functional accountabilities for each member of the Site C Leadership Team. For a detailed breakdown of accountabilities, please refer to the RACI Chart in Appendix AG.

Vice President and Project Director

- Overall project management and execution
 - Strategic direction and decision-making to address emerging risks and issues
 - Establish scopes of work and project accountabilities
- Team Operations
 - Staffing & Resourcing
 - Employee Engagement
- Functional area org change
- Project Integration

Project Manager and Director Operations

- Project management of infrastructure and assets (scope, schedule, cost)
- Estimating
- Contractor Schedule Integration
- Design/Engineering

- Quality Management
- Contract Management
- Construction Management
- Submittal Management
- Document Controls & Management
- Labour Relations
- Safety & Security Management
- Project Integration

Environmental, Aboriginal Relations & Public Affairs Director

- Project management of mitigation and compensation
- Aboriginal relations and benefit agreements
- Environmental risk management
- Permitting
- Public affairs and community relations
 - Government
 - Public, Community & Media
 - Communications
 - Issues Management
- Project Integration

Finance Director

- Cost Management
- Project Controls
- Scheduling
- Reporting
- Financial Modelling
- Risk Management
- Technology
- Due Diligence
- Cash Flow & Debt Management
- Business Planning
- Project Integration

Director, Infrastructure Projects Supply Chain

- Work package management of procurement
- Project Integration
- Aboriginal Procurement strategy and execution

Legal and Properties

- Work package management of properties acquisition
- Legal
- FOIPPA
- Project Integration

7.2 Items to be escalated to Vice President and Project Director

All items for escalation to Vice President and Project Director should be escalated under the appropriate authority – FAAP authority, PPM accountability, letters of delegation, etc.

Project Delivery and Operations

- Level 1 and 2 Safety incidents
- Imminent emergency situation
- Work package and project level changes (scope, schedule, cost)
- Design change
- Contracts
 - Notices of claim
 - Stop work notices
 - Non-compliance records
 - Breach of contract
- User Requirements change
- Fundamental change to Site C Project functional strategies and plans

Environmental, Aboriginal Relations & Public Affairs

- Level 1 Environmental incidents
- Notification of permits received
- Potential negative impact to regulatory compliance or BC Hydro reputation
- Potential media scrutiny
- Potential significant impact to stakeholders and/or First Nations (i.e. impacts previous commitments, requires further consultation, requires changes to public messaging)
- Permit change
- Regulatory non-compliances
- Communications from regulatory agencies
- Work package and project level changes (scope, schedule, cost)
- Media enquiries

- Government requests
- Responses to items raised by CEO, Deputy CEO or Board
- Responses to external stakeholder groups and/or First Nations
- Responses to BCUC or similar agency requesting information
- Functional external reports (eg. environmental reports, commitments, AR, public affairs).
- Fundamental change to Site C Project functional strategies and plans

Finance and Project Controls

- Work package and project level changes (scope, schedule, cost)
- Project performance Reports (eg. Board, Government, Executive, BCUC)
- Risk Mitigation Plans for risks touching more than one functional area and risk level 9.5 and above
- Fundamental change to Site C Project functional strategies and plans

Procurement

- Consulting / Service Contracts > \$15K
- Major procurement contracting plans
- First Nations Direct Award Strategies
- Fundamental change to Site C Project functional strategies and plans

Legal & Properties

- Notice of legal challenge/litigation
- Decision on court case
- Property owner disputes
- FOI requests
- Fundamental change to Site C Project functional strategies and plans

Human Resources

- All vacancy requests
-

7.3 Team Accountabilities

Although the leadership team members have differentiated accountabilities, they collectively have accountability to lead project integration and team operations.

Site C Leadership Team

Responsibilities

The Leadership Team has two streams of responsibilities:

1. Project Integration and Strategy

- Oversight and governance of Site C project execution
- Approve functional strategies / approaches
- Monitor that execution of project is aligned with functional strategies
- Complete Leadership Progression (i.e., review of WPM progression outcomes and identification of areas of concern that need to be resolved by FMs/PMs and WPMs)
- Manage integration and escalated issues, risks, decisions (see Appendix A for Leadership Team Escalation Criteria)

- Including major budget, scope, resourcing, and schedule decisions
- Including external stakeholder management (First Nations, Government, Board, Media)
- Remove integration-related or escalated barriers and obstacles
- Release of contingency
- Approve Work Package and Project Level Changes
- Liaise with BCH Governance
- Define and monitor project success measures

2. Team Operations

- HR related issues, employee engagement, staffing, performance management, organization structure, roles & responsibilities, facilities, team initiatives (like PPM on-boarding)
- Provide visible, cascading sponsorship for project processes, practices, culture
- Provide leadership communication to team
- Define and monitor team success measures

Members

- The membership of the Site C Leadership Team includes:
 - VP and Project Director
 - Project Manager and Director of Operations
 - Environmental, Aboriginal Relations, Public Affairs Director
 - Director, Site C Finance
 - Director, Site C Procurement
 - Legal & Properties Lead
- Leadership Team accountabilities are expected to account for 50% of leader's time
- In addition to the Site C Leadership Team, the following team members attending Site C Leadership Team Meetings:
 - Site C Human Resources Business Partner
 - Planning and Integration Lead
 - Project Director Administrative Assistant

Meetings

- Weekly leadership meetings with standing agenda items for each stream: Project Integration & Operations.
 - Daily Check-In Meetings
 - Awareness and alignment on hot issues
 - Project Integration Standing Agenda Items
 - Key Decisions / Issues / Updates
 - Review Governance Management System
 - Public Affairs Issues Calendar (Monthly)

- Roundtable
 - Team Operations Standing Agenda Items:
 - VP Update
 - Initiative Updates
 - Vacancy Requests
 - Dashboard & Management Reporting Review (Monthly)
 - Employee Engagement (Monthly)
 - Roundtable
 - Knowledge Sharing (Bi-Weekly)
- Facilitated by Planning and Integration Lead
- Managed Action Items and Meeting Minutes
- Leaders commit to attending and remaining for the duration with rare exception
- Meeting materials issued in advance

7.4 Site C Leadership Team Escalation Criteria

This section describes the criteria for bringing items to the Site C Leadership Team (SCLT) for 1) Information, 2) Consultation, or 3) Decision/Approval. The Site C RACIs provide guidance on areas of Inform vs Consult. Decisions and approvals will be driven by project deliverables and escalations potentially triggered by financial, regulatory, BC Hydro reputation, safety, project integration and First Nations impacts.

Escalation Criteria

Escalation Type	Item	Escalation Criteria	Example	Escalation Process
Inform	Hot Issues / Incidents	<ul style="list-style-type: none"> • Level 1 and 2 Safety incidents • Level 1 Environmental incidents • Imminent emergency situation 		<ul style="list-style-type: none"> • Immediate email to [REDACTED] • Follow IMS / Duty Coordinator process
	Key Updates	<ul style="list-style-type: none"> • Permits received • Notice of legal challenge/litigation • Decision on court case 		SCLT Escalation Process
Consult	Project Issues	<ul style="list-style-type: none"> • Potential negative impact to regulatory compliance or BC Hydro reputation • Potential media scrutiny • Potential significant impact to stakeholders and/or First Nations (i.e. impacts previous commitments, requires further consultation, requires changes to public messaging) • Property owner disputes 		SCLT Escalation Process
Decision / Approval	Recommended Project Change	Per Change Control Procedure, Contingency Management Procedure, Design Change Procedure, and Contract Contingency Management	<ul style="list-style-type: none"> • Work package and project level changes (scope, schedule, cost) • Design change 	SCLT Escalation Process

		Procedure / Delegation, Design Management Plan	<ul style="list-style-type: none"> Contract change Permit change User Requirements change 	
	External Correspondence	<ul style="list-style-type: none"> Media enquiries Government requests Responses to items raised by CEO, Deputy CEO or Board Responses to external stakeholder groups and/or First Nations Responses to BCUC or similar agency requesting information FOI requests 		Applicable functional lead <i>PLUS</i> Copy to / approval by [REDACTED]
	Reports	<ul style="list-style-type: none"> Project performance Reports (eg. Board, Government, Executive, BCUC) Functional external reports (eg. environmental reports, commitments, AR, public affairs). 		<ul style="list-style-type: none"> Project Performance: [REDACTED] Functional: Functional Lead and [REDACTED]
	Procurement & Contract	<i>Per Procurement Procedure and FAAP approvals</i>	<ul style="list-style-type: none"> Consulting / Service Contracts Major procurement contracting plans First Nations Direct Award Strategies 	Consulting / Service Contracts to functional lead, [REDACTED]. Everything else: SCLT Escalation Process
	Risk Mitigation Plans	<i>Per Risk Management Plan - Risk Level 9.5 and above</i>		SCLT Escalation Process
	HR	<ul style="list-style-type: none"> All vacancy requests Functional area org change 		SCLT Escalation Process
	Functional Strategies and Plans	Fundamental change to Site C Project functional strategies and plans	E.g. Aboriginal Engagement Plan, Change Control Procedure, etc.	SCLT Escalation Process

7.5 Site C Leadership Team Escalation Process

Items for Information

Description: Project information brought forward to keep leadership apprised but doesn't require input, decision or approval.

Process:

- Team Lead enters item into Governance Management Tool with link to "For Information Briefing Note" (if applicable).
- The item won't be a separate meeting agenda item but may be discussed during the meeting as part of Governance Management System Log Review or Roundtable.
- The leadership team may request the Team Lead and appropriate Team Members attend the SCLT meeting to provide more discussion.
- Outcomes are documented in the SCLT Meeting Minutes.

Items for Consultation

Description: Project information brought forward to request input from the leadership team but doesn't require a decision or approval.

Process:

- Team Lead enters item into Governance Management Tool with link to “For Consultation Briefing Note” that provides background, context and specifics on what input they require. The briefing note will be included as part of the SCLT Meeting Package reviewed prior to meeting.
- The item will be a separate agenda item.
- The Team Lead and appropriate Team Members attend the SCLT meeting to provide more discussion.
- Outcomes are documented in the SCLT Meeting Minutes.

Items for Decision

Description: Project information brought forward to request a specific decision. Where the decision is required at governance levels above SCLT, this step will prepare SCLT to seek that decision/approval.

Process:

- Team members update the Site C Governance Management Tool on Sharepoint with decisions/approvals that will be required during the project, including approval level, predicted timing.
 - Items are validated by the appropriate Project Manager.
- Using the Governance Management System, the Planning and Integration Lead prepares the SCLT Decision Plan that is part of the SCLT Meeting Package.
 - The SCLT Decision Plan includes all decisions/approvals required at the SCLT level and above.
- At least one week prior to the Decision or Approval date, Team Lead prepares the “Decision/Approval Briefing Note” that provides background, context, options and recommendation. The briefing note will be included in the SCLT Meeting Package reviewed prior to meeting.
- The Team Lead and appropriate Team Members attend the SCLT meeting to provide more discussion.
- Outcomes are documented in the SCLT Meeting Minutes. Additionally, the SCLT Governance Management System will be updated by the Planning and Integration Lead with the Decision/Approval Briefing Note and outcome.
- Project Manager incorporates the decision impact into the project re: cost, scope, resources and any required change notices. Project Manager also communicates the decision to team members.

Items for Approval

Description: Project information brought forward to request a specific approval at governance levels above SCLT.

Process:

- Team members update the Site C Governance Management Tool on Sharepoint with approvals that will be required during the project, including approval level, predicted timing.
 - Items are validated by the appropriate Project Manager.
 - Items include Due Diligence Review provided by Finance team.
- Using the Governance Management System, the Planning and Integration Lead prepares the SCLT Decision Plan that is part of the SCLT Meeting Package.
 - The SCLT Decision Plan includes all approvals required at the SCLT level and above.
- At least one week prior to the Decision or Approval date, Team Lead prepares the “Decision/Approval Briefing Note” that provides background, context, options and recommendation. The briefing note will be included in the SCLT Meeting Package reviewed prior to meeting.
- The Team Lead and appropriate Team Members attend the SCLT meeting to provide more discussion.
- Outcomes are documented in the SCLT Meeting Minutes. Additionally, the SCLT Governance Management System will be updated by the Planning and Integration Lead with the Decision/Approval Briefing Note and outcome.
- Project Manager incorporates the decision impact into the project re: cost, scope, resources and any required change notices. Project Manager also communicates the decision to team members.

Escalation Process Templates/Tools

- SCLT Meeting Package (includes Agenda, previous Meeting Minutes, Decision Plan, SCLT Weekly Status Report, briefing notes, Change Notices)
- SCLT Briefing Note: For Information, Consultation or Decision template
- SCLT Decision Plan
- SCLT [Governance Management System](#) (on Sharepoint)

7.6 Site C Project Governance Management System

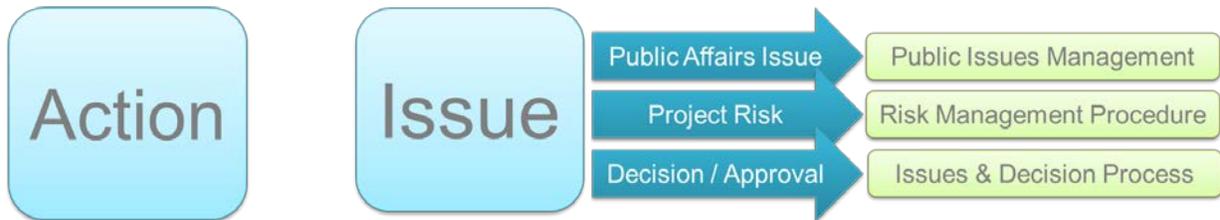
Introduction

The purpose of the Site C Project Governance Management System is to enable effective issues, decisions and approvals management as well as create a repository for these items. The process and tool provides project team members with a structured method for consulting, informing and bringing decisions forward to the Site C Leadership Team (SCLT). It provides SCLT with a structured framework and schedule for pending decisions and approvals as well as central access to briefing information. Finally, it creates an auditable trail of decision making and issues management, a key requirement of the Site C project.

System

The Governance Management System is built on the list functionality of the SharePoint technology platform. Lists are a feature that enable teams to gather, track, and share information by using a web browser. The functionality includes versioning and version-history storage, for deeper analysis of workgroup projects and common work tasks. Lists are rich and flexible and have many built-in features that provide a robust way to store, share, and work with data.

The Governance Management System is designed to track and manage Issues, Public Affairs Issues, Decisions, Approvals and Actions. An **issue** is defined as an *active issue that is communicated regularly* between the Site C Leadership Team, the Deputy CEO and the CEO’s office. A **Public Affairs Issue** is something that *poses a reputational risk to the project or company*, caused by a point of discussion or dispute; or a gap between stakeholder expectations and an organization’s policies, performance, or public comments. An **action** is defined as *an action item documented in the monthly Accountability meeting or Leadership Team meeting*. A **decision** *an item that requires a decision from the Site C Leadership Team* and an **approval** is defined as *an item that requires approval by the Deputy CEO, CEO, Site C Project Board of BC Hydro Board of Directors*. Issues can take one of three paths as indicated in the graphic below.

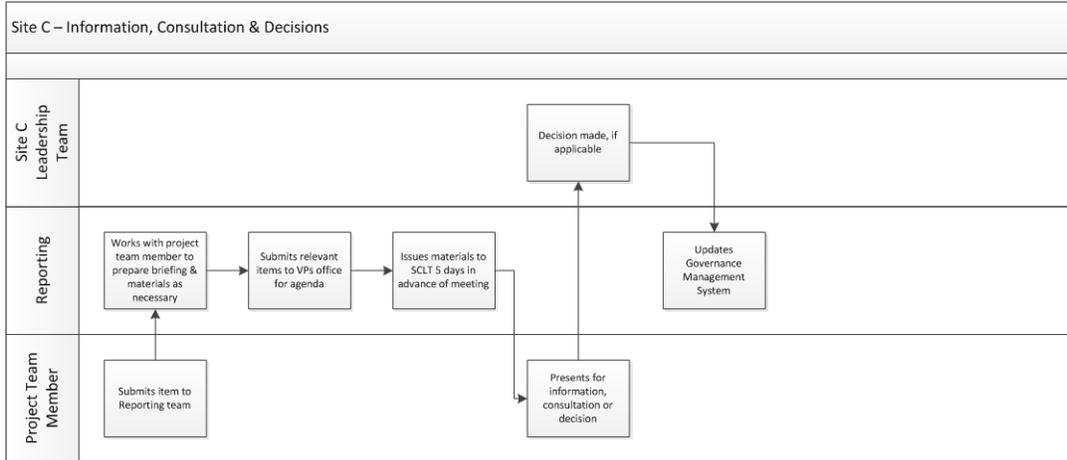


Roles & Responsibilities

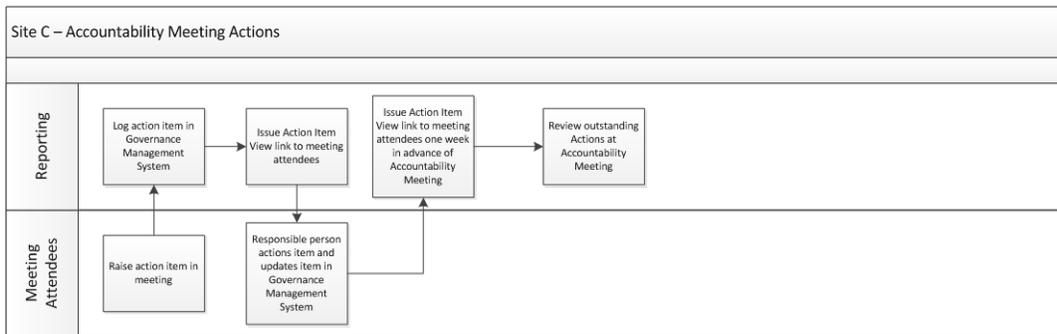
The Reporting Team Lead is accountable for managing and administering the Site C Project Governance Management System. The Assigned To person is responsible to lead resolution of the Action, Decision, Approval or Issue. The Public Affairs Manager is accountable for taking issues from the Site C Project Governance Management System through their Public Affairs Issues Management process and the Risk Manager is responsible for taking risks arising from issues through the Project Risk Management process.

Process

Project Issues & Decisions



Actions



Views

Views in SharePoint Lists enable unique filtering of data points. The following views are set up in the Governance Management System to support the processes.

View	Definition	Purpose
Accountability Action Items	Item Type = Action Status = Active	Review of all unresolved action items from Accountability meeting
Active Issues	Item Type = Issue Status = Active	Review of all unresolved issues that have been entered into the tool
Pending Approvals	Item Type = Approval Status = Active	Forward look of pending approvals for Deputy CEO, CEO & Board of Directors, submitted to office weekly
Pending Decisions	Item Type = Decision Status = Active	Forward look of pending decisions that will be brought to Site C Leadership Team meeting
Pending Information	Item Type = Information Status = Active	Forward look of pending information items that will be brought to Site C Leadership Team meeting
Pending Consultation	Item Type = Information Status = Active	Forward look of pending consultation items that will be brought to Site C Leadership Team meeting
Resolved Issues	Item Type = Issue Status = Resolved	Record of resolved issues
Weekly Tracker	Item Type = Weekly Tracker	For export to Word for Vice President to update and issue to Deputy CEO and CEO

8 Organization

Refer to Figure 2 for the Project Team Organization Chart.

9 Procurement Approach

The procurement approach for Site C includes a number of large contracts for major project components, as well as multiple smaller contracts for supporting activities and ancillary works. It is expected that additional small and medium-sized contracts will be identified as the design work and project planning progresses. The procurement approach was approved by the BC Hydro Board of Directors in June 2012, updated in September 2015.

The procurement approach was developed based on the project's preliminary design, risk management strategy, expected construction sequencing and schedule, and assumptions about market conditions. These assumptions will be refined as the project moves closer to and into construction and additional opportunities to encourage the participation of regional and First Nations contractors are identified. Refer to Appendix J for the Procurement Plan and Procurement Options Report.

The objectives of the procurement approach are to meet the project objectives:

Site Preparation Contracts

Component	Procurement Model
Site Preparation Clearing	Multiple Design-Bid-Build contracts
Site Preparation	Predominantly Design-Bid-Build contracts

Generating Facilities

Component	Procurement Model
Main Civil Works	Design-Bid-Build
Generating Station and Spillways Civil Works	Design-Bid-Build
Hydro-Mechanical Equipment	Supply Contract
Powerhouse Bridge Crane	Supply Contract
Three or more Powertrain Balance of Plant Equipment Supply Contracts	Supply Contracts
Completion Contract (Powertrain Balance of Plant Equipment Installation)	Install Contract
One or more Protection and Control Supply Contracts	Various
Turbines and Generators	Design-Build
Supporting Activities	Direct or sub-contract

Supporting Works

Component	Procurement Model
Construction Power and Telecom	Design-Bid-Build
Worker Accommodations	Design-Build-Finance-Operate-Maintain
Reservoir Clearing	Multiple Design-Bid-Build contracts
Public Road Infrastructure	Design-Bid-Build in partnership with BC Ministry of Transportation and Infrastructure (MOTI)
500 kV Transmission Lines	Design-Bid-Build
Site C South Bank Substation	Design-Bid-Build
Peace Canyon 500 kV GIS	Design-Build
Supporting Activities	Direct or sub-contract

10 Project Management

The project management approach for Site C Implementation phase is generally aligned with BC Hydro's PPM systems, practices and procedures. Key elements of the project management approach include:

- The development of the project Work Breakdown Structure (WBS) for the Implementation phase of the Project;
- The creation of a resource loaded Implementation phase schedule that integrates scope and cost;
- Monthly progression and updating of work packages to provide visibility of project health and to enable monitoring of key milestones, timely change management, and provision of accurate forecasts, and
- An integrated set of tools that enable effective cost management, forecasting, tracking and reporting on a monthly cycle

PPM is a set of tools and processes that are designed to be flexible and scaleable; given the size and complexity of the Project, some adjustments to existing PPM processes were appropriate. Where changes to PPM exist, the relevant plans contained in this Project Plan describe those variations.

11 Design

BC Hydro carried out significant site investigations and design for the Project from 1975 to 1983. In 1988, a public procurement process was completed for Site C. A partnership comprised of Kohn Crippen Berger (KCBL) and a predecessor of SNC Lavalin (SLI) was

awarded the work in October 1988 and work progressed to 1991. This involved a transfer of design knowledge from BC Hydro to the KCBL/SNC team. In 2007, BC Hydro reassembled a technical team (the “Integrated Engineering Team”, or IET) to deliver design services for the Project. Klohn Crippen Berger and SNC Lavalin were retained to join BC Hydro personnel to make up the IET. These consultants were retained because they have senior Professional Engineers who have the required expertise as well as historical knowledge and design experience of the Project. In addition, these consulting firms have teams of professionals with the capability to provide the required services. BC Hydro has provided maintenance and operations technical resources and designers to the IET in order to embed end user knowledge into the IET.

An Engineering Design Services Agreement (EDSA) was signed in June 2011 with Klohn Crippen Berger Ltd (KCBL) and SNC Lavalin Inc (SNC). The agreement between these parties and BC Hydro was intended to cover all design phases of the project through construction to operations. This agreement creates an IET to advance the design of the Site C Clean Energy Project. The design services agreement covers the scope of the core facilities which are outlined in the work authorizations and include the water-retaining structures, water conveyance structures, generating station and associated works. The design services agreement also covers design integration requirements for the Project.

The scope of the consultant services under this agreement is outlined in Work Authorizations and includes:

- Responsibilities for design services, coordination, integration and administration.
- Design and specification for the Main Civil Works Contract including technical support during construction (Professional of Record)
- Design and specification for the Generating Station and Spillway Contracts (Professional of Record)

Secondment provisions are outlined to cover BC Hydro resources working on components that are the professional responsibility of KCBL/SNC.

Designs for various other project elements are conducted either by other consultants or as part of Design-Build contracts such as Turbine and Generators. The EDSA outlines the requirements for co-ordination and integration of the design regardless of whether the design is undertaken by the KCBL/SNC, a subcontractor, BCHydro or a third party. The KCBL/SNC team is led by the Design Manager (EDSA).

Background – Professional Accountability for Design

Professional accountability for the design of specific components rests with the designer of the component. Major design areas are as follows:

- Main Civil Works contract (dam, diversion tunnels, RCC buttress and earthworks);
- Fish passage;
- Generating Station and Spillway (GSS) contract (generating station, spillway, power intakes, civil structures);
- Contractor designs (e.g. cofferdams);

- Hydro-mechanical systems contracts;
- Turbine and generators contract;
- Completions contract;
- High and medium voltage equipment contracts;
- Protection and control systems;
- Transmission, Substation and Peace Canyon;
- Telecommunications;
- Roads; and
- Camp and infrastructure.

Integration within these component areas is led by an assigned Design Lead who is the coordinating Professional of Record for the component.

The Design Manager (EDSA) is accountable for all required coordination and integration of the various elements or components of the Project to the extent necessary that:

- all elements or components of the design are compatible and not in conflict;
- there are no missing material components of the design; and
- all interactions between design components will not counteract or adversely impair the intent of the User Requirements.

The Owner Engineer Manager monitors, reviews and accepts, where required, the design coordination activities.

BC Hydro User Requirements are provided to the Design Manager by the Owner's Engineer Manager.

Design Review Processes

Each component of the design has associated work plans including checking and reviewing and quality practices in conformance with APEGBC professional practices.

The Site C Clean Energy Project utilises additional reviews, as follows:

a) Technical Advisory Board

Members are globally recognized for technical knowledge and experience with the design of hydroelectric projects around the world. The Technical Advisory Board is organized by the Owner's Engineer Manager. Members and terms of reference for the Technical Advisory Board are accepted by the Vice President & Project Director.

The Technical Advisory Board generally reports out to the Vice President & Project Director, but may also report out to BC Hydro's Executive Team, the BC Hydro Project Board, or others as may be deemed necessary by the Vice President & Project Director.

The Owner's Engineer Manager shall co-ordinate the Technical Advisory Board reviews.

b) Independent Senior Review (ISR)

The Independent Senior Review (ISR) Team is composed of engineers experienced in design, specifications and where appropriate operations for hydroelectric projects. Membership and terms of reference for ISR is recommended by the Owner's Engineer Manager and accepted by Site C's Project Manager & Director Operations and by BC Hydro's General Manager, Generation and Transmission Engineering. The ISR Team composition is generally a balance of internal and external highly experienced resources. The ISR Team is required for the following design areas:

- Main Civil Works
- Generation Station and Spillway
- Incorporation of Turbine & Generator design in generating station

These reviews are in alignment with the BC Hydro practice of using Principal Engineering Review.

Transmission Engineering will utilize existing standards and where standards do not exist, Principal Engineer review will be completed.

c) Specialist Reviews

Specialist reviews by design or construction specialists are implemented at appropriate points in the design process and completed by one or more individuals. These specialists may be retained by BC Hydro or the consultants. As outlined in the EDSA, BC Hydro's Owner's Engineer Manager may direct the Design Manager to retain specialist technical reviews as required to review, accept or define User Requirements.

d) Owner Reviews

The Owner's Engineer Manager facilitates review of Project designs by BC Hydro through the User Requirements process. These design reviews are conducted in order to confirm adherence of the design to BC Hydro's User Requirements, and embed Owner review and feedback directly into the design process.

No such collaboration or acceptance by BC Hydro of the design relieves the designer of the component for the responsibility of the design, nor does it relieve the Design Manager of the responsibility for acceptable component interaction.

In addition, monthly technical update meetings are to be held with the following groups within BC Hydro to keep them informed of the project status and for input on keys risks to the project. These meeting are to include:

- the Project Initiator
- Generation Operations
- Asset Management
- Project Management
- Dam Safety
- Generation Resource Management

The objectives of the design approach are to ensure that all components of the project are designed and constructed to meet the Project Objectives and User Requirements. The

project design incorporates redundant systems that reduce risk and facilitate safe, cost effective and reliable operation of the facility throughout its long operating life.

User Requirements

A User Requirements process is in place for the project team to track and control the technical requirements of the designed facilities. The Project has currently developed two levels of User Requirements. Level 1 User Requirements provide high-level objectives that establish project scope, while Level 2 User Requirements provide additional detail required for final design and to reflect operational requirements.

User Requirements consider the entire life-cycle of the project facility, and may define a fundamental design, risk tolerance, or end-user requirement for the Project as a whole or for a certain aspect of the Project. Permanent Project structures and systems are considered as part of the User Requirements process. Temporary structures and systems may be considered as part of the process if associated risks to BC Hydro are judged to be high enough that definition of BC Hydro's requirements is warranted.

Transmission facilities and systems will follow the BC Hydro PPM User Requirement process and template, which are included in Appendix K.

Refer to the Process and List of approved User Requirements (Appendix K), Design Documents (Appendix L), Safety by Design Hazard Logs (Appendix M), and Design Management Plan (Appendix N).

12 Construction Management

BC Hydro's Construction Manager will be accountable for all matters associated with the on-site implementation of assigned construction contracts associated with BC Hydro assets and upgrades to public roads, and act as Hydro's Representative in accordance with contract General Conditions.

The Construction Manager will lead the onsite team. The Transmission Construction Management team, resourced from Capital Infrastructure Project Delivery, will report through the Site C Construction Manager. The objectives of the Construction Management approach are:

1. To ensure site safety is managed in accordance with WorkSafeBC Regulations, Occupational Safety and Health Standards, and BC Hydro's Safety Practice Regulations (SPR).
2. To ensure contractors comply with BC Hydro's Construction Environmental Management Plan (CEMP).
3. To ensure work is completed in conformance with specifications and demonstrate through inspection of the work that materials, workmanship and performance of the installed equipment are in conformance with the specifications and suitable for their intended use.
4. To ensure contracts are managed in accordance with their respective Terms and Conditions and meet the contracted specifications.

5. To ensure processes and procedures are in place to ensure that scope, schedule, and costs of the Project are managed effectively and efficiently.
6. To develop detailed testing and commissioning plans.

Refer to Appendix O for the Construction Management Plan.

13 Safety Considerations

The objective of the Construction Safety Management Plan is to ensure that the Project meets BC Hydro safety standards. BC Hydro will act as a responsible owner, and designate Prime Contractors in all work areas who will maintain safety on the site, ensure compliance with WorkSafeBC Regulations, and coordinate activities so that risks to workers and members of the public are effectively managed and controlled. BC Hydro will inform the designated Prime Contractors of any known hazards on the site. BC Hydro will monitor the activities of Prime Contractors to ensure that they are meeting all of their safety obligations.

Designated Prime Contractors will:

- Agree to maintain a safe site and coordinate worksite safety, as a condition of contract award.
- Develop a site-specific safety program and plan that addresses all identified, assessed and anticipated hazards, and includes risk assessment and management of unforeseen hazards.
- Take responsibility for safety for all persons who are within their construction site
- Do everything practicable to ensure compliance with safety standards by all workers on the site.
- Secure the site and alert the public to the dangers so that there is no inadvertent contact between workers, equipment, and members of the public.

In limited instances, BC Hydro may opt to retain Prime Contractor status, such as when multiple contract personnel are working in the same physical area at once. At some point, BC Hydro will become Prime Contractor for the generating station.

The Construction Safety Management Plan includes the following component plans:

- Emergency Response Plan
- Emergency Services Plan
- Fire Hazard and Abatement Plan
- Human-Wildlife Conflict Management Plan
- Public Safety Management Plan
- Traffic Management Plan
- Worker Safety and Health Management Plan

Refer to Appendix P for the Construction Safety Management Plan.

Refer to Appendix AB for the Site C Emergency Action Plan.

Refer to Appendix AF for the Emergency Planning Guide Peace Region.

14 Security Considerations

Refer to Appendix AA for the Security Plan.

15 Quality Management

The objective of the Project Quality Plan is to ensure that the Project meets or exceeds BC Hydro quality standards. To achieve the quality requirements, the Project will deliver on the following:

- Control and document the quality of the Owner's engineering design, and
- Assure the quality of the assets delivered and constructed by the Contractors.

The Project quality objectives can be achieved by:

- Owner's competent engineering design and specification;
- Competent contractors, subcontractors, and suppliers;
- Contractor's effective quality planning, adequate resources and oversight of the Subcontractors;
- Quality oversight by BC Hydro through engineering review, quality audit and quality surveillance.

The Quality Management Team are responsible for establishing and maintaining an effective and efficient quality management program including:

- Developing, reviewing or consulting on quality management requirements specified in RFQs, RFPs and RFTs according to the Project Procurement Plan;
- Developing, maintaining and implementing, as applicable, an overall Project-level Quality Plan and contract-level Quality Plans;
- Monitoring, measuring and reporting on the quality of the project deliverables;
- Conducting internal quality audits to make sure the Project Quality Plan is implemented and effective;
- Conducting external quality audits to make sure contractors' Quality Plans are established, implemented and effective; and
- Assessing quality risks from equipment delivery and conduct equipment quality surveillance.

The IET is responsible for quality of the engineering work within the scope of IET, and design co-ordination and integration and quality assurance for other engineering work for the Project, with oversight by the Owner's Engineer Team.

The Construction Management Team, including site resident engineering, is responsible for site quality surveillance of the site work.

Quality management for the Highway 29 and other off-damsite roads will be in accordance with MOTI's normal internal practices and procedures to review the quality of design and construction.

Refer to Appendix Q for the Project Quality Plan.

16 Environmental Considerations

The objective of the Construction Environmental Management Plan (CEMP) is to manage potential adverse effects of the Project on the environment during the construction phase in accordance with regulatory and non-regulatory requirements related to:

- Air;
- Surface and groundwater;
- Sediment and soil;
- Fish and wildlife;
- Vegetation; and
- Heritage resources (archaeological, historical and palaeontological).

The CEMP will ensure compliance with:

- Conditions and Assurances included in the EAC, or a decision under Section 54 of the Canadian Environmental Assessment Act (CEAA);
- Mitigation measures and compensation as described in the Environmental Impact Statement (EIS);
- Permits, authorizations and approvals from regulatory agencies; and
- Any other legal requirements.

To achieve its purpose, the CEMP:

- Outlines BC Hydro's regulatory and non-regulatory requirements and management goals for managing effects on the environment; and
- Provides the basis for the development of the Environmental Protection Plans (EPPs) that will be prepared by Contractors prior to the commencement of construction activities.

It will be the responsibility of each Contractor to prepare a site-, activity-, or Project-specific EPP for their work, detailing how they will avoid or mitigate impacts to the environment as described in this CEMP. The EPPs must be comprehensive and provide prescriptive details for how construction activities will be undertaken to comply with the CEMP and applicable Regulatory and Non-Regulatory Requirements. The CEMP applies to all construction activities undertaken as part of the Project.

This document has been prepared in accordance with Section 35 Summary of Environmental Management Plans of the EIS.

Refer to Appendix R for the Construction Environmental Management Plan.

17 Regulatory and Permitting

In October 2014, the Project received the required federal and provincial Environmental Assessment Certificates, following a cooperative federal and provincial environmental assessment process by the Canadian Environmental Assessment Agency and the B.C. Environmental Assessment Office.

Compliance Management and Reporting

The conditions on Environmental Assessment Certificate (EAC), the federal Decision Statement, the provincial and federal permits and authorizations, and other commitments made by BC Hydro will be reflected in contract documents or other arrangements made by BC Hydro.

Compliance with the EAC and Federal Decision Statement, and permit/authorization conditions will be measured and then communicated and reported to regulators, contractors, and other stakeholders if required. The Regulatory Team manages compliance with these conditions using a compliance database and submits deliverables to regulatory agencies, Aboriginal groups and others, as required.

Federal and Provincial Permits and Authorizations

The permits required for construction activities are divided into separate applications based on the nature of the works, geographical location, and the construction schedule. Permits for site preparatory works were issued in June 2015. Other permit applications were submitted for review in September and November 2015 and will be issued for works to commence in spring/summer 2016. The subsequent sets of permit applications are currently being determined and will be submitted and revised as needed.

Fisheries Act and *Navigation Protection Act* authorizations for site preparatory works were issued in September 2015.

The Regulatory and Permitting Team manages the provincial and federal permit applications and authorization processes to meet construction requirements and provides regulatory support to fulfill water license requirements.

Heritage Conservation Act Permit Requirements

Heritage sites on non-federal lands in British Columbia are administered by the BC Archaeology Branch and the BC Heritage Branch, in accordance with the BC Heritage Conservation Act (HCA). The BC Archaeology Branch is the agency responsible for administering the HCA and for maintaining the Provincial Heritage Register. The BC Heritage Branch exercises regulatory authority under the HCA regarding the protection and alteration of designated (i.e., protected) historical heritage sites. Section 13 of the HCA specifies that an individual (or corporation) must not “damage, excavate, dig in or alter, or remove any heritage object” from a heritage site, except in accordance with a permit issued by the Minister pursuant to Sections 12 and 14. The HCA confers automatic protection upon heritage sites that pre-date 1846, or undated sites that

could pre-date 1846, regardless of whether they are recorded in the Provincial Heritage Register, whether they are located on Crown Land or private property, and whether they are in a disturbed or intact context. Section 9 (2)(c) of the HCA allows protection of historical heritage sites under the BC Local Government Act or the Vancouver Charter. Post-1846 historical heritage sites can be protected by Ministerial Order, Designation by an Order-in-Council, or a municipal by-law, but most post-1846 historical sites are not protected in British Columbia.

The requirements and procedures for heritage resource studies undertaken for development projects are described in the British Columbia Archaeological Impact Assessment Guidelines (BC Archaeology Branch 1998), and procedures for respectful handling of found human remains that are protected under the HCA are provided in the Policy on Found Human Remains (BC Archaeology Branch 1999).

Heritage Inventory, Systematic Data Recovery and Site Alteration Permits

Prior to undertaking land-altering work within an identified archaeological site, a HCA S.12 Alteration Permit must be in place. A HCA S.12 permit can be applied for after BC Archaeology Branch receipt and approval of an interim report on the findings (see Section 4.2.1), or, where an archaeological site has been designated for systematic data recovery (see Section 4.2.2), a HCA S.12 permit will be applied for after the systematic data recovery is complete and the BC Archaeology Branch has received and approved an interim report on the findings. Alteration permits may include general or site-specific conditions for the management of sites covered by the Alteration Permit.

Prior to the commencement of site preparation activities, the Heritage Specialist will submit a S.12 HCA Permit application to allow for site alteration, and will update the permit as required during Project construction and operations. In addition, to allow for completion of inventory, systematic data recovery, or other actions in response to a chance find during construction, an amendment to HCA S.14 (Heritage Investigation) permit 2014-0203 will be applied for. These permits will be amended as needed to address any new heritage requirements during construction.

Refer to Appendix S for the Regulatory and Permitting Management Plan and Heritage Resource Management Plan.

18 Properties

BC Hydro's approach to identifying the land and rights required for the Project is to strive to minimize the amount of land acquired for the Project while maximizing land use flexibility. In undertaking this approach BC Hydro would acquire limited land tenure, where possible, by way of permanent and temporary statutory rights of way, leases, licenses of occupation on Crown land, licenses on private land, and through land access permits. Where required, BC Hydro will acquire some land in fee simple.

The Site C properties team is responsible for the acquisition of land and rights required for the Project. This includes the acquisition of private land in fee simple where required, acquisition of permanent and temporary partial rights such as statutory rights of way, leases and licenses over private land and Crown land, and obtaining agreements, where required, with third party tenure holders and occupants of Crown land (e.g. trappers and guide outfitters).

Refer to Appendix T for the Properties Acquisition Plan.

19 Aboriginal Group Considerations

The Aboriginal Group Engagement Plan (the “Plan”) details the approach to consultation with Aboriginal groups during the implementation phase of the Site C Clean Energy Project. The objective of the Plan is to ensure BC Hydro will conduct consultation activities with Aboriginal groups, in accordance with the conditions set out in the Environmental Assessment Certificate and Federal Decision Statement (collectively the “Certification Conditions”) and the federal and provincial authorizations (e.g. permits, licenses, etc.). In addition, BC Hydro will continue to seek input from Aboriginal groups on key activities and initiatives including:

- Carrying out consultation;
- Implementing certification conditions, including mitigation, management and monitoring plans;
- Providing support to federal and provincial agencies during review of permits and other authorizations; and,
- Negotiating and delivering on accommodation, where appropriate.

Refer to Appendix U for the Aboriginal Group Engagement Plan.

20 Labour Relations

BC Hydro's Site C Clean Energy Project has adopted a labour approach for the construction phase of the Project that is intended to optimize access to skilled and experienced labour and qualified contractors, encourage labour stability and productivity, promote local and Aboriginal hiring, and support opportunities for skills training.

The Project will be a Managed Open Site which provides for an inclusive labour approach that allows for participation from all labour groups and contractors regardless of union affiliation or union status. This approach will enable contractors to maintain their existing bargaining relationships for work performed on the Site C Project. The Site C project will be a mixed site comprised of unionized and non-unionized workforces. Certain common labour terms and conditions will be defined in the commercial contract.

In order to promote positive relationships with employers, unions and workers on site and to effect a stable labour environment for the Project, a contractors' committee will be established. General Contractors awarded work on the site will be required to be members of this committee and required to participate in this committee for the duration of their contract.

Refer to Appendix V for the Labour Strategy Plan.

21 Risk Management Plan

A Risk Management Plan (RMP) has been developed for the Project and describes the approach to risk management for the Project. The approach will follow the same general practice as outlined by the BC Hydro Enterprise Risk Group and BC Hydro PPM practices. The objective of the RMP for the Project is to ensure appropriate and proactive responses are

planned in order to treat risks to project delivery and, where possible, eliminate, prevent and mitigate threats.

Risks associated with safety are only covered at a high level by this RMP. There is a separate Safety by Design process for detailed safety risks, including the creation of a Hazard Log.

Refer to Appendix W for the Risk Management Plan.

22 Public and Stakeholder Communications

During the construction phase, BC Hydro will inform the public and stakeholders about construction related activities and provide advance notice about specific activities, their expected duration and anticipated impacts. A variety of notification and community liaison tools will be used, such as mailings, email alerts, advertising, up-to-date website information and extensive media, stakeholder and community outreach to ensure a broad distribution of construction-related information.

Refer to Appendix X for the Construction Information and Notification Plan.

23 Reporting

Reporting for the implementation phase falls into four broad categories:

- Project Performance Reporting
- Construction and Contract Progress Reporting
- Environmental Compliance Reporting
- Project Governance Reporting

Project Performance Reporting

Reports will be developed to effectively communicate the overall project performance against plan. This will include cost and forecast, schedule performance, safety & security, labour, engineering design, environment, and risk identification and response strategies. The reports will also be used to highlight any emerging issues that may require action.

Typical report types that are expected to be used:

- Monthly Project Status Report;
- Monthly Schedule Milestone reports;
- Monthly cost and forecast summary reports.

Construction and Contract Progress Reporting

Reports will be developed to effectively communicate the progress of work for each active contract. The reports will be used to document the status of contractors work and serve as an indicator of any potential for schedule, cost, quality or claims risk.

Typical report types that are expected to be used:

- Contract Weekly Reports;
- Quality Audit Reports;
- Yearly Progress Report (by contract);
- Contract Completion Report (by contract).

Environmental Compliance Reporting

Defined lines of communication will be established in order to audit and report on compliance with the conditions of the Project. The lines of communication include:

- Communications with regulatory agencies
- Communications with the Independent Engineer (IE) and the Independent Environmental Monitor (IEM) retained by BC Hydro for construction of the Project
- Communications with contractors and contractors' environmental monitors; and
- Internal communications, including with the Vice-President and Project Director, Project Manager, Integrated Engineering Team (IET), Aboriginal Groups Engagement Team, Properties Team, Public Affairs Team, BC Hydro Board, and others, as required.

Communication materials will include compliance monitoring reports, emails, meeting minutes, or records of telephone conversations between BC Hydro and regulatory agencies, the IE, IEM, and/or internal partners. The Regulatory team will develop templates to guide input of content and formatting specifications for compliance reporting (e.g., templates for environmental monitor weekly reports, monthly compliance reports, environmental incident reports, environmental completion reports, and internal compliance reports). All compliance materials will be recorded and tracked in a Compliance Tracking Database.

Project Governance Reporting

The Project will provide regular and ad hoc reports, as required, to the BC Hydro Executive, the Project Board, BC Hydro Board of Directors, Minister of Energy and Mines, Treasury Board, and British Columbia Utilities Commission.

Reporting will include:

- A quarterly progress report, commencing Q2 of F2016.
- An annual report, including updated management plans and applicable technical reports.
- Exception reporting, as required.
- Requests for use of contingency and project reserve, as required.

Refer to Appendix AD for the Site C Governance Meetings and Reporting List.

Other reports described in BC Hydro corporate policies and procedures will also be prepared using standard BC Hydro tools and processes, as required (e.g. safety and environmental incident reports, financial reports, Board reports and status updates).

24 Documentation and Records Management

Document Management will follow the Document Management and Control Plan. This plan describes the processes and procedures through the lifecycle of a document including revisions, approvals and naming conventions and covers Document Management, which involves the storage and retrieval of documents and includes platforms and applications, filing system versions and metadata.

Refer to Appendix Y for the Document Management and Control Plan.

The management of records, including processes and procedures for filing, storage and disposition are covered in the Records Management Plan.

Refer to Appendix Z for the Records Management Plan

Glossary

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Figures

Figure 1 Work Breakdown Structure

Figure 2 Organization Chart

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Appendices

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Appendix A Statement of Objectives

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Appendix B Work Package Agreements

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Appendix C Project Schedule

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Appendix D Schedule Management Plan

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Appendix E Business Case

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Appendix F Expenditure Authorization Request

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Appendix G Cost Estimate

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Appendix H Cost Management Plan

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Appendix I Project Change Control Plan

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Appendix J Procurement Plan

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Appendix K Process and List of Approved User Requirements

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Appendix L Design Documents

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Appendix M Safety by Design Hazard Logs

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Appendix N Design Management Plan

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Appendix O Construction Management Plan

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Appendix P Construction Safety Management Plan

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Appendix Q Project Quality Plan

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Appendix R Construction Environmental Management Plan

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Appendix S Regulatory and Permitting Management Plan

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Appendix T Property Acquisition Plan

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Appendix U

Aboriginal Group Engagement Plan

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Appendix V Labour Strategy Plan

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Appendix W Risk Management Plan

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Appendix X Construction Information and Notification Plan

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Appendix Y Document Management and Control Plan

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Appendix Z Records Management Plan

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Appendix AA Security Plan

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Appendix AB Site C Emergency Action Plan

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Appendix AC Contract Administration Plan

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Appendix AD Governance Meetings and Reports

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Appendix AE Contingency Management Plan

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Appendix AF Emergency Planning Guide Peace Region

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Appendix AG RACI Charts

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