

Site C Clean Energy Project

Quarterly Progress Report No. 35

F2025 Second Quarter

July 1, 2024 to September 30, 2024

PUBLIC

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1 Executive Summary

2 1.1 Overview and General Project Status

3 Site C is the third dam and hydroelectric generating station on the Peace River in
4 northeastern British Columbia (B.C.). Once complete, Site C will provide
5 1,100 megawatts of capacity, and produce about 5,100 gigawatt hours of energy
6 per year – enough to power the equivalent of 450,000 homes or 1.7 million electric
7 vehicles per year in B.C.

8 **Figure 1 The Site C Dam Site (as seen in**
9 **September 2024).**



10 Construction on Site C began on July 27, 2015.

11 Quarterly Progress Report No. 35 covers the period July 1 to September 30, 2024
12 (the reporting period).

13 As of September 30, 2024, the Site C Project (the Project) is approximately
14 88% complete. BC Hydro remains on track to complete the Project within the budget

1 (\$16 billion) and schedule (final unit in-service date of November 2025), which were
2 approved in 2021.

3 The overall Project health status has changed from “amber” to “green” due to the
4 substantial progress made during the quarter that allowed several large Project
5 milestones to be achieved immediately subsequent to the reporting period. However,
6 a number of potential risks remain, as outlined in this report.

7 BC Hydro continues to work collaboratively with the Project Assurance Board,
8 special advisor Peter Milburn, Ernst & Young Canada, the Technical Advisory Board,
9 and independent international dam experts to actively manage ongoing Project risks.
10 The Technical Advisory Board and independent international dam experts continue
11 to review and confirm that the Project designs are appropriate, safe and serviceable
12 over the long operating life of Site C.

13 The following sections discuss highlights from the reporting period and some of the
14 current risks facing the Project.

15 **1.2 Post-Reporting Period Update**

16 Subsequent to the reporting period, on October 27, 2024, in advance of its approved
17 December 2024 in-service date, the first of six generating units on the Site C project
18 came into operation, following the required testing and commissioning processes.

19 The Site C Project remains on track to have all six generating units in-service by the
20 approved final unit in-service date in November 2025. Wet commissioning of the
21 second generating unit is underway.

22 On October 1, the reservoir filling hold period began. During this period, the reservoir
23 elevation was held within a 1.5 metre range (452.5 metres to 454 metres elevation
24 above sea level) for 14 days. During the reservoir filling hold period, the structural
25 performance of the dam site water-retaining structures, including the earthfill dam,
26 the roller-compacted concrete buttresses, the approach channel and the dam

1 abutments are assessed under stable conditions. Prior to and during the reservoir
2 filling hold period, the dam site water-retaining structures were performing as
3 expected, and the Technical Advisory Board and the Engineering Design Team
4 supported the continued filling of the reservoir after the reservoir filling hold period.

5 BC Hydro completed the filling of the Site C reservoir on November 7, 2024. The
6 reservoir has now reached its normal operating range of 460 metres to 461.8 metres
7 elevation above sea level.

8 Finally, all of the transmission line installation work between the southbank
9 substation to the powerhouse was completed in October 2024. One of the three
10 lines is energized; the remaining two lines will come into service according to the
11 Project schedule.

12 **1.3 Construction Progress**

13 Work on the Site C Project continues to advance consistent with the approved
14 schedule. Reservoir filling is underway and is proceeding as planned. The Project
15 remains on-track to have all six generating units in-service by the approved final
16 unit in-service date of November 2025.

17 Reservoir filling was approved and commenced as planned on August 25. In
18 advance of the start of reservoir filling, all required regulatory, construction and
19 commissioning activities were completed. Diversion tunnel 1 was closed on
20 August 28, diversion tunnel 2 was closed on September 4, and water is now being
21 safely passed downstream through the spillway (and, since October 27, through the
22 first generating unit).

23 During the reporting period, wet commissioning of the first unit continued as
24 planned.

25 The monitoring of the slopes around the reservoir also commenced at the start of
26 reservoir filling and to date, all reservoir slopes are performing as expected. As the

1 reservoir is filling, it was anticipated that small movements would occur in the slopes
2 around the reservoir, including the appearance of tension cracks and shallow slides
3 along and above the reservoir shoreline. These areas are all previously known,
4 located within the defined impact lines, and are being monitored.

5 Reservoir debris continues to accumulate in the dam forebay and is being safely
6 directed away from the approach channel by the permanent dual-purpose debris
7 management / dam safety and shear booms. Debris removal commenced
8 September 7 and will continue concurrent with reservoir filling. As of early October,
9 more than 85,000 cubic metres of debris has been removed from the reservoir and
10 has been stockpiled near the dam site. Potential uses for the stockpiled debris are
11 being assessed and include using it for the remaining dam site reclamation activities,
12 burning, mulching or hauling offsite for use by others.

13 The operations and maintenance of the right bank drainage tunnel and left bank
14 drainage adit continued during the reporting period. The remaining work required in
15 the right bank drainage tunnel and left bank drainage adit includes structural
16 enhancements to the shotcrete and rock bolt linings of the tunnels, and the
17 installation of the permanent portal structures and electrical and mechanical
18 systems.

19 The reclamation work for Area A and Area E of the dam site was on-going during the
20 reporting period. The remaining reclamation will be performed by
21 First Nations-designated businesses as material stockpiles and construction
22 equipment are removed. Reclamation is expected to continue until 2026.

23 During the reporting period, construction continued to progress on the generating
24 station and spillways civil works, cranes and hydromechanical equipment.

25 The penstock upper flexible couplings (penstock sections that allow the penstocks to
26 expand and contract) were redesigned to fully meet BC Hydro's specifications. The

1 installation of the redesigned upper flexible couplings began in February 2024.
2 Subsequent to the reporting period, the installation of the last of the six redesigned
3 flexible couplings was completed in October, and minimal leakage was detected in
4 the flexible couplers for the two penstocks (penstocks 1 and 2) that have currently
5 been filled with water. This minor leakage was anticipated during the reservoir filling
6 period (resulting in added water pressure on the couplers) as well as during the
7 onset of colder temperatures. Adjustments can be made to the seals in the flexible
8 couplers to address any future leakage issues, if required.

9 The final commissioning is progressing for the six intake gates on permanent power
10 and permanent controls, consistent with the approved schedule. Commissioning of
11 intake gates 1 and 2 was completed in advance of the commencement of reservoir
12 filling in late August, with the remaining intake gates scheduled to be commissioned
13 following reservoir filling, in advance of wet testing of their associated generating
14 units.

15 The final commissioning is progressing for the three spillway operating gates on
16 permanent power and permanent controls, consistent with the approved schedule.
17 To support reservoir filling in late August, the three spillway operating gates are
18 safely being operated, as planned, on construction power with temporary controls,
19 while the commissioning of the permanent systems progresses.

20 The commissioning of the hydraulic systems for the spillway low-level operating
21 gates 1 to 4 was completed on temporary power and temporary controls in fall 2023;
22 commissioning of the hydraulic systems for low-level operating gates 5 and 6 on
23 temporary power and temporary controls was completed in the spring 2024. Final
24 commissioning is progressing for the six spillway low-level operating gates on
25 permanent power and permanent controls and is scheduled to be completed
26 consistent with the approved schedule. To support reservoir filling in late August,
27 low-level operating gates 1 to 4 are safely being operated, as planned, on

1 construction power with temporary controls while the commissioning of the
2 permanent systems progresses. The operation of low-level operating gates 5 and 6
3 on construction power with temporary controls was not required to support reservoir
4 filling.

5 The balance of plant mechanical and electrical work continues to progress in the
6 powerhouse. The mechanical contractor has completed the final work on the unit 1
7 to unit 4 common systems and is in the process of transferring the completed work,
8 including the required documentation, over to BC Hydro. The main focus of work for
9 the mechanical contractor is completing the powerhouse systems including domestic
10 water, heating piping and wastewater. The electrical contractor continues the
11 installation of the electrical station service in the powerhouse, intakes, and spillways.
12 In addition, the contractor has completed the four sections of isolated phase bus that
13 connect the generators for unit 1 to unit 4 to the main step-up transformers. All of the
14 work related to connecting the main step-up transformers to the BC Hydro
15 transmission system is complete. The contractor is in the process of completing the
16 sections of isolated phase bus for units 5 and 6. The architectural work in the
17 operations building is nearing completion and the heating, ventilation and air
18 conditioning work continues. The installation of the fire protection is also continuing.

19 The commissioning of the permanent upstream fishway continues.

20 The first of three transmission lines between the powerhouse and the Site C
21 substation was completed and energized in August 2024. The construction of the
22 remaining two transmission lines is expected to be completed in October 2024;
23 these lines are scheduled to be energized in late 2024 and early 2025 respectively,
24 in coordination with the commissioning and energization of the generator step-up
25 transformers for the remaining generating units.

26 Away from the dam site, reclamation work at Portage Mountain Quarry resumed in
27 June and is on track to be completed in fall 2024.

1 In Hudson’s Hope, construction on the D.A. Thomas Road upgrading resumed in
2 May 2024 and is expected to be complete in 2025.

3 Work on the Hudson’s Hope recreation site resumed in May 2024 and is expected to
4 be complete in 2025. The gangway and float installation will occur after reservoir
5 filling and when the reservoir has been deemed safe for boaters.

6 **1.4 Look Ahead – October 2024 to March 2025**

7 The focus of the activities on the Project for the remainder of 2024 and into 2025 is
8 primarily on the safe completion of the remaining major milestones.

9 Work continues to advance on the Project consistent with the approved schedule.

10 The time available to complete the remaining scopes of work is expected to be
11 sufficient for the Project to meet the Project’s approved schedule.

12 All six of Site C’s generating units are on track to be in-service by November 2025.

13 Unit 1 (first power) went into service on October 27, 2024, in advance of its
14 approved December 2024 in-service date. The other five units are scheduled to be
15 brought into service sequentially and according to the approved schedule as follows:
16 unit 2 (February 2025), unit 3 (May 2025), unit 4 (July 2025), unit 5 (September
17 2025), and unit 6 (November 2025).

18 **1.5 Safety Performance**

19 During the reporting period, the Project saw a further reduction in workforce
20 numbers as more work fronts reached completion, with most ongoing activities now
21 concentrated around the powerhouse. Safety performance metrics have improved
22 compared to the same period in 2023, showing improvements in lost time injury
23 frequency, all-injury frequency, and serious incident frequency.

24 Between July to September 2024, WorkSafeBC conducted nine regulatory
25 inspections and issued six regulatory orders to the Project. Seven of the nine

1 inspections were ‘clean sheets’ with no orders. One inspection was part of an
2 industry-wide initiative to prevent ladder-related falls and resulted in multiple orders
3 related to improper ladder use and scaffolding safety at the Project. Following a
4 serious injury incident during the installation of some stair components in penstock 6
5 and a worker injuring two of their fingers, some additional orders were issued to
6 ensure compliance with manufacturer guidelines and safe work practices.

7 **1.6 District of Hudson’s Hope Well Water System**

8 In fall 2022, the District initiated a three-phase plan to switch its raw water source
9 from a well water system to the Peace River. In early 2023, BC Hydro and the
10 District of Hudson’s Hope finalized an agreement that provided funding to support
11 the initial two phases of this plan. The District has installed a temporary surface
12 water intake along with upgrades to the treatment facility and is providing the
13 community with potable water. In September 2024, BC Hydro submitted a revised
14 proposal to the District, which included a commitment to complete the permanent
15 water treatment system and fund the rental of a water clarifier until the permanent
16 clarifier is operational. Subsequent to the reporting period, the District accepted
17 BC Hydro’s proposal in principle and both parties continue to negotiate terms of a
18 final agreement.

19 **1.7 Upholding Commitments to the Environment, Indigenous** 20 **Nations and Local Communities**

21 BC Hydro continued to secure the appropriate permits, authorizations and leaves to
22 commence construction required for the Project. As of September 30, 2024, 650 of
23 the estimated 675 provincial and federal permits and authorizations have been
24 received, including all required regulatory approvals to commence reservoir fill and
25 unit 1 operations.

1 Work advanced in the areas of environmental monitoring and assessment, as well
2 as in the Project's fish and wildlife habitat, vegetation management and heritage
3 programs.

4 The temporary fish passage facility operated through the reporting period but was
5 permanently shut down on September 15 due to the commencement of the tunnel
6 outlet cofferdam construction. Between October 1, 2020, and September 15, 2024,
7 the temporary fish passage facility passed 46,737 fish from 21 species.

8 During the reporting period, the permanent fish passage facility began a combined
9 commissioning and biological operations phase and started to be used to pass fish.

10 Environmental compliance on the Project remains high.

11 *Indigenous Engagement*

12 During the reporting period, BC Hydro continued to engage with Indigenous Nations
13 on Project activities and milestones through regular Project update meetings and
14 other venues.

15 The Site C Environmental Forum is a mechanism where BC Hydro shares,
16 discusses and collaborates on environmental aspects of the Site C Project with the
17 11 Indigenous Nations and two Métis organizations impacted by the Project. On
18 July 31, the 37th Environmental Forum was held. In total, 11 representatives
19 attended from 7 Indigenous Nations. The topics included reservoir filling, cultural
20 monitoring, slope and shoreline monitoring and the overall approach for wildlife in
21 distress.

22 BC Hydro continues to advance economic opportunities for Indigenous Nations
23 through capacity building and procurement opportunities. Approximately \$798 million
24 in Site C directed procurement opportunities have been awarded to companies
25 designated by Indigenous Nations since the beginning of the Project, pursuant to

1 BC Hydro's Indigenous Procurement Policy. Information on BC Hydro's Indigenous
2 Procurement Policy can be found on the BC Hydro website at the following link:
3 <https://www.bchydro.com/work-with-us/suppliers/indigenous-procurement.html>.

4 Indigenous procurement is tracked as a performance metric in BC Hydro's [Service](#)
5 [Plan](#), with an overall target of reaching \$1.625 billion in directed Indigenous
6 procurement opportunities between 2014/15 and 2026/27. This goal supports
7 BC Hydro's ongoing reconciliation initiatives by providing opportunities for
8 Indigenous Nations to share in the benefits of the work that BC Hydro does to build,
9 operate, and maintain its system.

10 Indigenous procurement on the Site C Project has been a strong contributor to
11 BC Hydro meeting and exceeding its cumulative Service Plan target for this metric.
12 Working on Site C has helped businesses designated by Indigenous Nations to build
13 and grow their reputations, expand the scale of their operations, and to develop new
14 expertise to compete in the regional economy.

15 In September 2024, 127 Indigenous people were working on the Site C Project,
16 which represents approximately 5% of the total workforce.

17 BC Hydro continued to work with Indigenous Nations on the development of the
18 future cultural centre. The cultural centre project is an important accommodation for
19 the cultural impacts of Site C. The facility will showcase local Indigenous culture and
20 history in the region, and store and display many of the artifacts uncovered during
21 the construction of Site C. During the reporting period, BC Hydro hosted one
22 workshop to discuss the details of the cultural centre building design with
23 participating Nations and hosted two First Nation community meetings /
24 presentations.

1 *Local Communities*

2 BC Hydro continues to advance commitments within five community agreements:
3 the District of Chetwynd (2013), the District of Taylor (2014), the City of
4 Fort St. John (2016), the District of Hudson’s Hope (2017), and the Peace River
5 Regional District (2024).

6 The Regional Community Liaison Committee, which is comprised of local elected
7 officials and local Indigenous communities, most recently met for its regularly
8 scheduled meeting on June 5. With the endorsement of the Regional Community
9 Liaison Committee members, the frequency of the meetings has been reduced from
10 quarterly to semi-annually for 2024.

11 Eight local governments and four local First Nations communities (McLeod Lake
12 Indian Band, Doig River First Nation, Saulteau First Nations, and Blueberry River
13 First Nations) as well as the two MLAs for Peace River North and Peace River
14 South, are invited to participate as committee members. Representatives from the
15 Project’s major contractors may also attend the meetings as invited guests.

16 **1.8 Project Status Dashboard for the Quarter**

17 BC Hydro, with oversight from the Project Assurance Board, is focused on
18 completing the Site C Project within the 2021 approved budget of \$16 billion and the
19 final unit in-service date in November 2025, without compromising on safety, scope
20 and quality. To report on Project status, BC Hydro uses a dashboard system where
21 key Site C Project areas are classified as red (at risk), amber (moderate issues) or
22 green (on target).

23 The Project Status Dashboard as of September 30, 2024, is provided in [Table 1](#).

24 Since the previous quarter (as of June 30, 2024), the status of the performance
25 indicators for overall project health, scope, schedule, and cost have changed from
26 “amber” to “green” due to the substantial construction and commissioning progress

1 made during the quarter that allowed several large Project milestones to be
2 achieved immediately subsequent to the reporting period.

3 **Table 1 Project Status Dashboard**
4 ● On Target ● Moderate Issues ● At Risk

Status as of:		September 30, 2024
Overall Project Health	●	<p>The overall Project health status changed from “amber” to “green.”</p> <p>Subsequent to the reporting period, on October 27, 2024, the first generating unit came into service, in advance of its approved December 2024 in-service date, and began providing electricity to BC Hydro customers. In addition to achieving the first power milestone, BC Hydro completed the filling of the Site C reservoir on November 7, 2024. The reservoir has now reached its normal operating range of 460 metres to 461.8 metres elevation above sea level.</p> <p>The Project is approximately 88% complete and work continues to advance; however, there are still potential risks remaining. BC Hydro continues to review, assess, mitigate, manage, and monitor potential risks to the Project.</p>
Safety	●	<p>Safety status remains “amber.”</p> <p>During the reporting period, the Project saw a further reduction in the workforce as more work fronts reached completion, with most ongoing activities now concentrated around the powerhouse. Safety performance metrics have improved compared to the same period in 2023, showing improvements in lost time injury frequency, all-injury frequency, and serious incident frequency.</p> <p>Between July to September 2024, WorkSafeBC conducted nine regulatory inspections and issued six regulatory orders to the Project. Seven of the nine inspections were “clean sheets” with no orders. One inspection was part of an industry-wide initiative to prevent ladder-related falls and resulted in multiple orders related to improper ladder use and scaffolding safety at the Project. Following a serious injury incident during the installation of some stair components in penstock 6 and a worker injuring two of their fingers, some additional orders were issued to ensure compliance with manufacturer guidelines and safe work practices.</p>
Scope	●	<p>Scope status changed from “amber” to “green.”</p> <p>All major scopes of work for the Project have now been defined, and the Project is approximately 88% complete. The Project team continues to work to define the relatively small remaining scopes of work on the Project.</p>

Status as of:	September 30, 2024	
Schedule	●	<p>Schedule status changed from “amber” to “green.”</p> <p>The Project remains on schedule to have all six generating units in-service by November 2025 and achieve the approved Project schedule. The Project is approximately 88% complete.</p> <p>Reservoir filling started on August 25 and was completed subsequent to the reporting period on November 7, 2024.</p> <p>Subsequent to the reporting period, on October 27, 2024, the first generating unit came into service, in advance of its approved December 2024 in-service date, and began providing electricity to BC Hydro customers. Wet commissioning of the second generating unit is underway.</p> <p>There continues to be uncertainty related to achieving the contractual schedules, and there are potential risks that could adversely affect these schedules.</p>
Cost	●	<p>Cost status changed from “amber” to “green.”</p> <p>The Project remains on target to be completed within the budget of \$16 billion, which was approved in 2021. However, a number of cost risks remain, as described in this report.</p> <p>As of September 30, 2024, the life-to-date actual costs are \$13.9 billion, which results in an estimated \$2.1 billion of remaining costs based on the forecast of \$16 billion.</p>
Quality	●	<p>The quality status for the Project remains “green,” indicating that the work generally conforms to the requirements of the drawings and specifications. When a quality issue is identified during the course of construction, BC Hydro and its contractors work to rectify the issue to ensure that the quality of the completed work achieves the quality specifications.</p> <p>The Technical Advisory Board and independent international dam experts continue to review and confirm that the Project designs are appropriate, safe and serviceable over the long operating life of Site C.</p>
Regulatory, Permits and Tenures	●	<p>The regulatory, permits and tenures status remains “green.”</p> <p>As of September 30, 2024, 650 permits have been issued. All permits and approvals for construction of the Project have been issued and continue to be renewed as needed for demobilization, reclamation works and operations.</p> <p>On October 7, the Office of the Water Comptroller issued the Leave to Commence Operation for the Generating Units. The Leave to Commence Operation for the Permanent Upstream Fishway is expected to be issued in spring 2025.</p>
Environment	●	<p>The environment status remains “green.”</p> <p>BC Hydro continues to develop final treatment plans for potentially acid-generating sites that will not be addressed through dam construction or the creation of the reservoir.</p>
Procurement	●	<p>The procurement status remains “amber”.</p> <p>The majority of the Project’s commercial agreements are in place; however, there are a few remaining commercial agreements for Project completion scopes of work such as diversion tunnel backfill, additional structural work in the right bank drainage tunnel, roads and site reclamation.</p>

Status as of:		September 30, 2024
Indigenous Relations	●	<p>The Indigenous Relations status remains “amber.”</p> <p>BC Hydro has a mandate from the Government of British Columbia to reach Project or impact benefit agreements with the 10 Indigenous groups that are most impacted by Site C. Eight of 10 agreements are fully executed and in implementation. BC Hydro has a standing offer to negotiate with the remaining two First Nations that have not signed agreements related to the Site C Project. BC Hydro also maintains a working relationship with those Nations through ongoing consultations and engagement.</p>
Stakeholder Engagement	●	<p>The stakeholder engagement status remains “green.”</p> <p>BC Hydro continues to work with the communities, regional district and stakeholder groups on the implementation of various community agreements.</p>

1 **1.9 Significant Project Updates for the Quarter**

2 Significant Project updates that occurred between July 1 to September 30, 2024,
3 include the following:

4 **July 2024**

- 5 • The sixth and final upper flexible coupler was successfully lifted into place in the
6 unit 6 penstock.

7 **August 2024**

- 8 • The first 500kV transmission line between the Site C substation and the Site C
9 powerhouse (line 5L15) was successfully energized.
- 10 • Reservoir filling was approved and commenced.
- 11 • Closure of diversion tunnel 1.

12 **September 2024**

- 13 • Closure of diversion tunnel 2.
- 14 • Reservoir hold period of two weeks occurred.
- 15 • Testing and commissioning for generating units 1 and 2 continued.

1 Refer to [Appendix A](#) for Site Construction photos from the reporting period and refer
2 to [Appendix B](#) for a list of work completed since the Project commenced in 2015.

3 **2 Safety and Security**

4 During the reporting period, the Project saw a further reduction in workforce
5 numbers as additional work fronts reached completion. Most of the ongoing work is
6 now focused in and around the powerhouse. Compared to the same period in 2023,
7 the Project's safety performance metrics have improved, including improvements in
8 lost time injury frequency, all-injury frequency, and serious incident frequency.

9 **2.1 Work Protection Practices (WPP) Audit**

10 A Worker Protection Practices audit was conducted from July 2 to July 4, 2024, by
11 an internal audit team, resulting in a 72.8% score. No major non-conformances were
12 identified. The audit team acknowledged several strengths, including exceptional
13 implementation of hazardous testing barriers; appropriate work planning decisions;
14 strong knowledge, experience and performance from those electrical workers with
15 the highest responsibility related to safety protection; and improvements in
16 documentation and coordination. Opportunities for improvement were also identified
17 in the hazardous testing procedures under group lockout, the isolation request
18 documentation, group lockout applications, personal lock labeling, and the clarity of
19 roles and responsibilities. The audit team particularly noted the high quality of the
20 coordination each morning before the start of work, the Commissioning Joint
21 Committee, and the Site Safety Coordination meetings, while highlighting the need
22 for improved information flow due to the sequenced worker start times.

23 **2.2 WorkSafeBC Contractor Penalty**

24 WorkSafeBC conducted a site inspection in February 2024, focusing on confined
25 space and welding processes at the unit 4 scroll case and coupler within the
26 powerhouse. During this inspection, they issued 14 orders to the turbines and

1 generators contractor and six additional orders to BC Hydro. These orders
2 addressed confined space entry, ventilation, exposure monitoring, exposure control
3 plans, noise exposure, and contractor responsibilities. As a result, WorkSafeBC
4 imposed a \$31,598 penalty on the turbines and generators contractor. BC Hydro is
5 currently awaiting a decision from WorkSafeBC regarding its due diligence
6 submission related to the six orders issued to BC Hydro.

7 **2.3 Preparation for Unit 1 Energization**

8 In preparation for unit 1 energization, BC Hydro implemented several safety
9 initiatives including updating the site's fire-resistant (**FR**) clothing requirements to
10 align with BC Hydro's personal protective equipment standards and revising some
11 critical emergency response documentation. The emergency response updates
12 encompassed the Emergency Action Plan, the Powerhouse and Intake Evacuation
13 Plans, and the Fire Safety Management Plan. Additionally, BC Hydro renewed its
14 agreement with Fort St. John for fire response and rescue services and updated the
15 Project's local operating order for fire protection. These measures reflect a
16 systematic approach to ensuring safety readiness as electrical equipment in the
17 powerhouse is energized.

18 **2.4 Summary of Safety Performance Metrics**

19 From July 2015 through September 2024, more than 62.9 million work hours have
20 been completed across the Project, with no fatalities and one permanent partial
21 disabling injury in August 2017.¹

22 During this reporting period, one serious lost time injury and three serious safety
23 incidents were recorded. In addition, there were 73 non-serious incidents recorded.

¹ In August 2017, a Site C worker injured their arm in a lost time injury incident related to a 7.5-foot fall from the back of a flatbed truck. In June 2018, the worker received a permanent partial disability award from WorkSafeBC. BC Hydro reclassified this incident as a permanent disabling injury after receiving the update on the WorkSafeBC award in June 2018. The incident is identified as a serious injury in the BC Hydro Incident Management System.

1 Of these 73 incidents, 28 incidents were classified as near misses, with the potential
2 for causing harm, 39 incidents involved injuries that required first aid, and six
3 incidents required medical treatment.

4 A near miss is defined as an incident that could have resulted in an injury but did not
5 because of effective hazard barriers or the person was out of harm's way/missed.

6 BC Hydro considers near miss reporting as indicative of an effective and transparent
7 safety culture and strongly encourages all contractors and employees to report near
8 misses.

9 [Table 2](#) reflects the safety performance results for the Project, including all
10 contractors and all sub-projects.

11 **Table 2 Summary of Site C Safety Metrics**

	Reported July 1, 2024 to September 30, 2024 ²	Reported Since Inception (July 27, 2015 to September 30, 2024) ²
Fatality ³	0	0
Permanently Disabling Injury ⁴	0	1
Serious Incidents ⁵	4	212
Lost Time Injuries ⁶	1	50
All-Injury Incidents ⁷ (Lost Time Injuries ⁶ and Medical Attention Requiring Treatment ⁸)	8	390

² Numbers are subject to change due to timing of when data is retrieved and when the injury is categorized.

³ Excludes any non-occupational incidents.

⁴ A permanently disabling injury is one in which someone suffers a probable permanent disability.

⁵ Serious incidents are any injury or near miss with a potential for a fatality or serious injury.

⁶ Lost time injuries are those where a worker (employee or contractor) misses their next shift (or any subsequent shift) due to a work-related injury/illness. If a worker only misses work on the day of the injury, it is not considered a lost time injury.

⁷ All-injury incidents include all work-related medical attention requiring treatment, lost time injuries, and fatalities.

⁸ Medical attention requiring treatment is where a medical practitioner has rendered services beyond the level defined as “diagnostic or first aid” and the worker (employee or contractor) was not absent from work after the day of the injury. Services beyond diagnostic/first aid include (but are not limited to) receiving stitches, a prescription, or any treatment plan such as physiotherapy or chiropractic.

2.5 Safety Performance Frequency Metrics

To assess safety performance over time, the Project considers key safety metrics in the context of the total amount of hours worked (frequency), which corrects for the volume of work. [Table 3](#) summarizes these key safety metrics by quarter, for a rolling 12-month average.

Table 3 Summary of Safety Performance Frequency Metrics (2023 vs 2024)

	January – December 2023 (Rolling 12-Month Average)				January – December 2024 (Rolling 12-Month Average)			
	Q1 Jan-Mar	Q2 Apr-Jun	Q3 Jul-Sep	Q4 Oct-Dec	Q1 Jan-Mar	Q2 Apr-Jun	Q3 Jul-Sep	Q4 Oct-Dec
Serious Incident Frequency	1.24	1.13	1.01	0.97	0.78	0.72	0.43	n/a
Lost Time Injury Frequency	0.17	0.16	0.12	0.12	0.05	0.03	0.04	n/a
All Injury Frequency	1.18	1.11	1.18	1.21	1.05	1.11	0.82	n/a

During this reporting period, the serious incident frequency improved and was 0.43 compared to 1.01 for the same period in 2023. Lost time injury frequency also improved significantly to 0.04 from 0.12, and the all-injury frequency improved to 0.82 from 1.18.

The improvements in incident frequencies are partly due to a significant reduction in high-risk construction activities. However, BC Hydro has also observed an increase in non-compliance issues, particularly in Worker Protection Practices (**WPP**) good catches and near misses, indicating potential areas for increased focus on procedural compliance and safety monitoring.

Refer to [Appendix C, Figure C-1](#) for a graphic summary of Site C safety performance metrics, including both BC Hydro employees and Project contractors.

2.6 Regulatory Inspections and Orders

WorkSafeBC, under the authority of the *Worker’s Compensation Act*, is the primary regulator with jurisdiction over safety for the Project. WorkSafeBC oversees worker safety (employee and contractor) for the Project, both on and off the dam site. The Ministry of Energy, Mines and Low Carbon Innovation is the regulatory authority for worker safety on any work fronts subject to the *Mines Act*, including West Pine Quarry, Portage Mountain Quarry, and Area E.

As shown in [Table 4](#), from July to September 2024, WorkSafeBC conducted nine regulatory inspections and issued six regulatory orders to the Project. Of the nine WorkSafeBC inspection reports, seven were ‘clean sheets’ with no orders. One of the inspections was part of an industry-wide WorkSafeBC initiative to prevent ladder-related falls and resulted in multiple orders related to improper ladder use and scaffolding safety at the Project. Following a serious injury incident during the installation of some stair components in penstock 6 and a worker injuring two of their fingers, some additional orders were issued to ensure compliance with manufacturer guidelines and safe work practices.

There were no regulatory inspections conducted by the Ministry of Energy, Mines and Low Carbon Innovation during this reporting period.

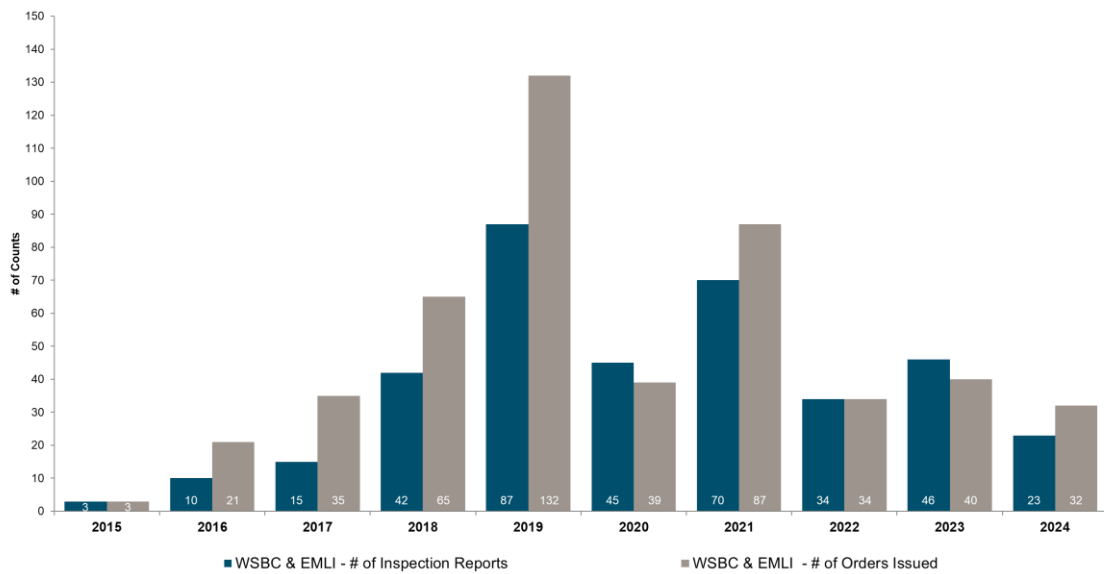
Table 4 Safety Regulatory Inspections and Orders (WorkSafeBC and Ministry of Energy, Mines and Low Carbon Innovation combined)

	Reported July 1 to September 30, 2024 ⁹	Reported Since Inception (July 27, 2015 to September 30, 2024) ⁹
Regulatory Inspections	9	375
Regulatory Orders	6	488

⁹ Numbers are subject to change due to timing of when data is retrieved and when the injury is categorized.

1 [Figure 2](#) shows the number of regulatory inspections and orders issued for the
 2 Project since 2015.
 3 Refer to [Appendix C, Table C-1](#) for a summarized listing of the regulatory inspection
 4 reports.

5 **Figure 2** WorkSafeBC and Ministry of Energy,
 6 Mines and Low Carbon Innovation (EMLI)
 7 Regulatory Inspections and Orders,
 8 July 2015 to September 2024



9 **3 Construction, Engineering, Quality Management,**
 10 **Commissioning and Assets In Service**

11 **3.1 Construction**

12 Work on the Site C Project continues to advance consistent with the approved
 13 schedule. Reservoir filling started on August 25 and is proceeding as planned. The
 14 Project remains on-track to have all six generating units in-service by the approved
 15 final unit in-service date of November 2025. However, there continues to be
 16 uncertainty related to achieving the contractual schedules, and there are identified
 17 risks that could adversely affect these schedules.

1 During the reporting period, wet commissioning of the first generating unit continued
2 as planned. Subsequent to the reporting period, on October 27, the first generating
3 unit came into service, in advance of its approved December 2025 in-service date
4 and began providing electricity to BC Hydro customers. Wet commissioning of the
5 second generating unit is underway.

6 **3.1.1 Reservoir Filling**

7 Reservoir filling was approved and commenced as planned on August 25. In
8 advance of the start of reservoir filling, all required regulatory, construction and
9 commissioning activities were completed. Diversion tunnel 1 was closed on August
10 28, diversion tunnel 2 was closed on September 4, and water is now being safely
11 passed downstream through the spillway.

12 Subsequent to the reporting period, on October 1, the reservoir filling hold period
13 began. During this period, the reservoir elevation is held within a 1.5 metre range
14 (452.5 metres to 454 metres) for 14 days. During the reservoir filling hold period, the
15 structural performance of the dam site water retaining structures, including the
16 earthfill dam, the roller-compacted concrete buttresses, the approach channel and
17 the dam abutments are assessed under stable conditions. Prior to and during the
18 reservoir filling hold period, the dam site water retaining structures were performing
19 as expected, and the Technical Advisory Board and the Engineering Design Team
20 supported the continued filling of the reservoir after the reservoir filling hold period.
21 The reservoir is forecasted to continue to fill at a rate of approximately 0.3 metres
22 per day, reaching the normal reservoir operating range of 460 metres to
23 461.8 metres by mid-November.

24 The monitoring of the slopes around the reservoir also commenced at the start of
25 reservoir filling and to date, all reservoir slopes are performing as expected. As the
26 reservoir is filling, it was anticipated that small movements would occur in the slopes
27 around the reservoir, including the appearance of tension cracks and shallow slides

1 along and above the reservoir shoreline. For example, small movements in the
2 slopes near the Moberly confluence and downstream of the historic Attachie slide
3 have occurred. In addition, a new area of instability was noted downslope of a
4 BC Hydro property near Farrell Creek and communications with the residents is
5 underway to remind them to avoid the slopes. These areas are all previously known,
6 located within the defined impact lines, and are being monitored.

7 Reservoir debris continues to accumulate in the dam forebay and is being safely
8 directed away from the approach channel by the permanent dual-purpose debris
9 management / dam safety and shear booms. Debris removal commenced
10 September 7 and will continue concurrent with reservoir filling. As of early October,
11 more than 85,000 cubic metres of debris has been removed from the reservoir and
12 has been stockpiled near the dam site. Potential uses for the stockpiled debris are
13 being assessed and include using it for the remaining dam site reclamation activities,
14 burning, mulching or hauling offsite for use by others.

15 Subsequent to the reporting period, BC Hydro completed the filling of the Site C
16 reservoir on November 7, 2024. The reservoir has now reached its normal operating
17 range of 460 metres to 461.8 metres elevation above sea level.

18 **3.1.2 Main Civil Works**

19 During the reporting period, construction activities took place on the right bank and
20 earthfill dam as described below.

21 *Approach Channel*

22 The approach channel, which directs water into the generating units and the
23 spillways, is now complete.

1 *Right Bank Drainage Tunnel and Left Bank Drainage Adit*

2 The operations and maintenance of the right bank drainage tunnel and left bank
3 drainage adit continued during the reporting period. The remaining work required in
4 the right bank drainage tunnel and left bank drainage adit includes structural
5 enhancements to the shotcrete and rock bolt linings of the tunnels, and the
6 installation of the permanent portal structures and electrical and mechanical
7 systems.

8 *Earthfill Dam*

9 The construction of the earthfill dam is complete, with the exception of some final
10 instrumentation that is being installed and the completion of an earthfill bench on the
11 downstream side of the dam near the powerhouse.

12 *Conveyor Belt System*

13 The decommissioning and reclamation of the conveyor belt system that transported
14 glacial till to the earthfill dam is complete. The remediation of the 85th Avenue
15 Industrial Lands is in progress.

16 *Area A and Area E Reclamation*

17 The reclamation work for Area A and Area E of the dam site was on-going during the
18 reporting period. The remaining reclamation will be performed by First Nations-
19 designated businesses as material stockpiles and construction equipment are
20 removed. Reclamation is expected to continue until 2026.

21 **3.1.3 Generating Station and Spillways**

22 During the reporting period, construction progressed on the generating station and
23 spillways civil works, cranes and hydromechanical equipment as described in the
24 following sections.

1 *Generating Station and Spillways Civil Works*

2 The generating station and spillways civil works contract includes the delivery of civil
3 works associated with the powerhouse, intakes, penstocks and spillways.

4 All concrete placements for the powerhouse, intakes and spillways were complete
5 as of March 2024.

6 *Penstocks*

7 The penstock upper flexible couplings (penstock sections that allow the penstocks to
8 expand and contract) were redesigned to fully meet BC Hydro's specifications. The
9 installation of the redesigned upper flexible couplings began in February 2024.

10 Subsequent to the reporting period, the installation of the last of the six redesigned
11 flexible couplings was completed in October, and minimal leakage was detected in
12 the flexible couplers for the two penstocks (penstocks 1 and 2) that have currently
13 been filled with water. This minor leakage was anticipated during the reservoir filling
14 period (resulting in added water pressure on the couplers) as well as during the
15 onset of colder temperatures. Adjustments can be made to the seals in the flexible
16 couplers to address any future leakage issues, if required.

17 *Hydromechanical Equipment*

18 The final commissioning is progressing for the six intake gates on permanent power
19 and permanent controls, consistent with the approved schedule. Commissioning of
20 Intake gates 1 and 2 was completed in advance of the commencement of reservoir
21 filling in late August, with the remaining intake gates scheduled to be commissioned
22 following reservoir filling, in advance of wet testing of their associated generating
23 units.

24 The final commissioning is progressing for the three spillway operating gates on
25 permanent power and permanent controls, consistent with the approved schedule.

1 To support reservoir filling in late August, the three spillway operating gates are
2 safely being operated, as planned, on construction power with temporary controls,
3 while the commissioning of the permanent systems progresses.

4 The commissioning of the hydraulic systems for the spillway low-level operating
5 gates 1 to 4 was completed on temporary power and temporary controls in fall 2023;
6 commissioning of the hydraulic systems for low-level operating gates 5 and 6 on
7 temporary power and temporary controls was completed in the spring 2024. Final
8 commissioning is progressing for the six spillway low-level operating gates on
9 permanent power and permanent controls and is scheduled to be completed
10 consistent with the approved schedule. To support reservoir filling in late August,
11 low-level operating gates 1 to 4 are safely being operated, as planned, on
12 construction power with temporary controls while the commissioning of the
13 permanent systems progresses. The operation of low-level operating gates 5 and 6
14 on construction power with temporary controls was not required to support reservoir
15 filling.

16 **3.1.4 Right Bank Foundation Enhancements**

17 All of the planned work for stabilizing the bedrock foundations for the dam,
18 powerhouse and spillways has been completed as of the end of March 2024, except
19 for a couple of minor deficiencies such as minor riprap placements on the
20 embankment of the tailrace above the water line that were not required to be
21 completed prior to reservoir fill. Construction of the remaining work will commence in
22 the fall of 2024 and is scheduled for completion in the summer of 2025.

23 **3.1.5 Balance of Plant**

24 The balance of plant contracts are split between three contractors and include the
25 following scopes of work: (1) mechanical; (2) electrical (includes architectural,
26 heating, ventilation, and air conditioning, and fire detection and protection work); and
27 (3) permanent upstream fishway and other out structures.

1 The mechanical and electrical work continues to progress in the powerhouse.

2 The mechanical contractor has completed the final work on the unit 1 to unit 4
3 common systems and is in the process of transferring the completed work, including
4 the required documentation, over to BC Hydro. The main focus of work for the
5 mechanical contractor is completing the powerhouse systems including domestic
6 water, heating piping and wastewater.

7 The electrical contractor continues the installation of the electrical station service in
8 the powerhouse, intakes, and spillways. In addition, the contractor has completed
9 the four sections of isolated phase bus that connect the generators for unit 1 to
10 unit 4 to the main step-up transformers. All of the work related to connecting the
11 main step-up transformers to the BC Hydro transmission system is complete. The
12 contractor is in the process of completing the sections of isolated phase bus for units
13 5 and 6. At the spillway and headworks, the main electrical systems are complete
14 and the contractor is completing the remaining minor heating, ventilation, air
15 conditioning, fire protection and architectural scopes of work.

16 The architectural work in the operations building is nearing completion and the
17 heating, ventilation and air conditioning work continues. The installation of the fire
18 protection is also continuing.

19 The commissioning of the permanent upstream fishway continues.

20 The walls, roof and doors have now been installed in the emergency response
21 building, which is located in the powerhouse yard adjacent to the penstock for
22 generating unit 1. Remaining works includes primarily interior finishes such as
23 framing, lighting and mechanical systems.

1 **3.1.6 Turbines and Generators**

2 The scope of work for turbines and generators includes the complete design, supply,
3 installation, testing and commissioning of six turbines, generators, governors and
4 exciters.

5 During the reporting period, the contractor continued working on all six turbine and
6 generator units, including the wet commissioning of the first unit. Subsequent to the
7 reporting period, on October 27, 2024, the first generating unit came into service, in
8 advance of its approved December 2024 in-service date, and began providing
9 electricity to BC Hydro customers. Wet commissioning of the second generating unit
10 is underway.

11 The contractor has completed the modifications of the lower couplings between the
12 penstocks and the turbine scroll cases to a half-welded design. The lower
13 couplings for units 1, 2 and 3 have been successfully tested.

14 The third generating unit is scheduled to be ready for the start of wet commissioning
15 in late 2024. The turbines and generators for units 4, 5 and 6 are scheduled to be
16 ready for wet commissioning by early to mid-2025.

17 **3.1.7 Transmission**

18 The first of three transmission lines between the powerhouse and the Site C
19 substation was completed and energized in August 2024. The construction of the
20 remaining two transmission lines is expected to be completed in October 2024, and
21 are scheduled to be energized in late 2024 and early 2025 respectively, in
22 coordination with the commissioning and energization of the generator step-up
23 transformers for the remaining generating units.

1 **3.1.8 Highway 29 and Hudson’s Hope Shoreline Protection Berm**

2 The construction of the approximately 30 kilometres of highway and five new bridges
3 along Highway 29 is complete. All of the decommissioning work on Highway 29 has
4 also been completed.

5 **Portage Mountain Quarry**

6 The reclamation of the Portage Mountain Quarry started in August 2023 and the first
7 phase of reclamation was completed in December 2023. Phase two of the
8 reclamation work resumed in June and is on track to be completed in fall 2024.

9 **Hudson’s Hope Shoreline Protection Berm**

10 The shoreline protection berm near Hudson’s Hope was completed in
11 November 2022.

12 Construction on the D.A. Thomas Road upgrading resumed in May 2024 and is
13 expected to be complete in 2025.

14 Work on the Hudson’s Hope recreation site resumed in May 2024 and is expected to
15 be complete in 2025. The gangway and float installation will occur after reservoir
16 filling and when the reservoir has been deemed safe for boaters.

17 **Halfway River East Boat Launch**

18 The final work to complete the intersection paving was completed in July 2024. The
19 finishing work and gangway installation will occur after reservoir filling and when the
20 reservoir has been deemed safe for boaters.

21 **3.1.9 Reservoir**

22 All work under the reservoir subproject has been completed and the contracts have
23 been closed out.

1 **3.1.10 Site Operations and Infrastructure**

2 The site operations and infrastructure section of this report includes updates for the
3 reporting period on the construction and operations of the worker accommodation
4 and the temporary debris management structures. Information related to debris
5 management on the reservoir is included in section [3.1.1](#).

6 *Worker Accommodation*

7 During the reporting period, the worker accommodation facility housed an average of
8 886 workers each day, and the room utilization was at 50% for this period.

9 The camp expansion dorms (the overflow camp dorms consisting of 600 rooms)
10 have been decommissioned and removed from site.

11 BC Hydro continues to explore options to decommission the remaining worker
12 accommodation camp facilities once they are no longer required for the Project,
13 including discussions with potential buyers of the dormitories to align with work
14 completions.

15 *Temporary Debris Management Systems*

16 During the reporting period, and up to the time when the diversion tunnel(s) were
17 closed, the temporary debris management systems were being used to protect the
18 diversion tunnels from debris. After the closure of the diversion tunnels, both the
19 Moberly River boom and the Peace River boom were disconnected and utilized
20 respectively as a mobile boom and a shear boom to facilitate debris collection and
21 removal associated with the influx of debris that occurred with reservoir filling. The
22 Moberly pile structure was inundated, as planned, and lies below the safe boating
23 limit of the reservoir. Through September and early October, more than 85,000 cubic
24 metres of woody debris was collected in the permanent debris management
25 infrastructure and removed and stockpiled near the dam site.

1 **3.2 Engineering**

2 The Site C engineering team is responsible for defining the Project's design
3 requirements, preparing the Project designs and contract specifications, and
4 ensuring the safety and quality of the assets. The team consists of in-house design
5 specialists from BC Hydro and a range of external consultants from engineering
6 firms who are responsible for the various design components.

7 **3.2.1 Main Civil Works**

8 With the reservoir retaining structures complete, reservoir fill began on
9 August 25, 2024, with the preconditioning of the Site C reservoir and the closure of
10 the first diversion tunnel gate on August 28. In early September, the reservoir
11 elevation had increased to the point where water began to pass through the
12 approach channel and spillway. Once the minimum flows were being discharged
13 through the spillway, the second diversion tunnel gate was closed on September 4.

14 The closure of the second diversion tunnel gate marked the end of service for the
15 diversion tunnels on the Site C Project, and all water is now being routed through the
16 approach channel to the spillways and/or powerhouse. Between the start of reservoir
17 fill on August 25 and September 30, the elevation of the reservoir increased by
18 35 metres from an elevation of 418 metres to 453 metres above sea level.

19 Instrumentation monitoring and surveillance inspections during the reservoir filling
20 period have indicated positive results with respect to the dam and the water retaining
21 structures overall.

22 **3.2.2 Right Bank Foundation Enhancements**

23 During the reporting period, value engineering activities associated with the
24 enhanced backfill, located adjacent to the temporary bedrock excavation next to the
25 auxiliary spillway, was completed. This work included the optimization of the backfill
26 materials and the construction sequence.

1 BC Hydro continued to engage the independent international dam experts, Technical
2 Advisory Board and other subject matter experts to provide oversight of activities
3 associated with the design of the foundation enhancements and construction of the
4 Project.

5 **3.2.3 Large Cranes, Hydromechanical, and Turbines and Generators**

6 During the reporting period, the focus continued to be on supporting equipment
7 installation and commissioning activities at site, resolving open nonconformities, and
8 reviewing final quality documentation and record drawings.

9 **3.2.4 Generating Station and Spillways, Balance of Plant, and Equipment** 10 **Supply**

11 During the reporting period, work focused on the production of record drawings for
12 the powerhouse, intakes, penstocks, and spillways. Also, various certificates of
13 compliance were prepared to support reservoir fill. The monitoring of assets is
14 ongoing as reservoir fill continues.

15 The balance of plant scope of work continued with the preparation and issuance of
16 the issued-for-construction drawings as needed to support the integration design for
17 contractor-designed equipment for the balance of plant mechanical; electrical
18 (includes architectural, heating, ventilation, and air conditioning, and fire detection
19 and protection work); and the permanent upstream fishway and other out structures
20 contract packages. The balance of plant team also continued to support the
21 construction and commissioning activities for these contracts, including the review of
22 the technical submittals and contractor design drawings, field reviews, and technical
23 support to the commissioning team. The balance of plant team also had technical
24 specialists support the contractor's site acceptance testing of the permanent
25 upstream fishway.

26 Engineering support to construction for the BC Hydro designed protection and
27 controls and telecom systems continued and commissioning continued to ramp up

1 as equipment is installed and energized. With issued-for-construction drawings now
2 being provided by contractors for contractor designed, supplied, and installed
3 equipment, a major focus for the engineering team is integration and interface
4 design and support during integrated testing for BC Hydro protection and control
5 systems that interface with contractor-supplied equipment.

6 **3.2.5 Transmission**

7 Transmission Engineering continues to provide construction support for the
8 transmission lines that will connect the Site C substation to the Site C powerhouse.
9 Geotechnical engineering support is also being provided to determine potential
10 future maintenance requirements.

11 **3.2.6 Highway 29**

12 Record drawings and certificates of conformance were completed for the Cache
13 Creek and Lynx Creek highway segments, and this work continues on the Halfway
14 River segment.

15 Engineering support is also being provided for the design of turnarounds as part of
16 the landslide-generated wave response plan.

17 Small, non-structural surface cracks have been identified in the concrete decking of
18 the Halfway River and Cache Creek bridges. These cracks do not pose any safety
19 risks related to the structural integrity of the bridges but may required additional
20 maintenance or repair. The monitoring of these cracks was initiated to determine the
21 root cause and to potentially develop a solution to repair the cracks.

22 **3.2.7 Technical Advisory Board and Independent International Dam** 23 **Experts**

24 Video conference meetings continued to be held with the Technical Advisory Board
25 and the independent international dam experts during the reporting period.

3.3 Quality Management

BC Hydro continues to implement the Site C Quality Management Plan in order to achieve the quality objectives of the Project. During the reporting period, the Project team continued its activities to support the Project quality plan, including:

- Ongoing meetings with the quality management teams of key Site Contractors to address quality issues as they arise;
- Participating in witness points and hold points; and
- Continuing with monthly quality performance indicator assessments for each sub-project.

When a quality issue is identified during the course of construction, BC Hydro and its contractors continue to work to rectify the issue to ensure that the quality of the completed work achieves the quality specifications.

3.3.1 Quality Nonconformance Management

The identifying and reporting of nonconformances continues to be an important part of quality management on Site C.

[Table 5](#) summarizes quality nonconformity instances during the reporting period.

Table 5 Quality Management Nonconformity Report (NCRs) Metrics Reporting Period – July 2024 to September 2024

Contract	NCRs Reported July 1 to September 30, 2024	NCRs Closed July 1 to September 30	NCRs Reported as of September 30, 2024	NCRs Closed as of September 30, 2024	NCRs Open as of September 30, 2024
Turbines and Generators (total = manufacturing + installation)	77 (=0+77)	41 (=1+40)	1,566 (=655+911)	1,386 (=646+740)	180 (=9+171)
Generating Station and Spillways Civil Works	25	20	1,879	1,860	19

1 For the generating station and spillways civil works sub-project, as the main
2 construction activities are nearing completion, BC Hydro is focussing its efforts on
3 closing nonconformity reports, rectifying deficiencies, and collating quality
4 documentation to facilitate the handover of assets to the operations team.

5 For the turbines and generators contract, the quality of the assembly and installation
6 work at Site Continues to be good and the nonconformity related to the unauthorized
7 tack-welds on the units 1 to 5 rotor poles has been resolved. During the reporting
8 period, units 1 and 2 continued to proceed through the wet-commissioning process
9 and there are no significant installation quality issues to report on units 3 to 6.

10 For the mechanical balance of plant contract, there were no significant quality issues
11 during the reporting period.

12 With respect to the electrical balance of plant contract, for the nonconformity
13 identified in mid-June on the 600V switchgear circuit breaker stab-lok connections,
14 repairs on all of the critical switchgear in the powerhouse required to enable safe
15 commissioning of units 1 and 2 have been successfully completed and validated by
16 testing. Repairs on the switchgear in the spillway are planned to occur in autumn,
17 but the required repairs are not expected to materially affect any commissioning
18 work in the spillway and will not have any effect on the operation of the spillway
19 during reservoir filling.

20 **3.4 Commissioning**

21 A comprehensive commissioning plan for the Site C Project has been developed
22 and is being implemented as equipment is constructed and installed. The plan
23 includes a detailed schedule to sequence commissioning activities, including each
24 test, its duration, and the resources required. The commissioning process is
25 comprised of safely testing and proving intended function and integration of Site C
26 equipment with other systems.

1 The commissioning of the Site C assets follows a process that includes:
2 testing/pre-commissioning; dry commissioning (energization); wet commissioning
3 (offline); wet commissioning (online); then handover to BC Hydro Operations as the
4 final step.

5 The pre-commissioning testing includes offline testing of individual pieces of
6 equipment. Once the offline testing is completed, BC Hydro prepares and signs a
7 Commissioning Notice to Energize, which states that the asset is safe to connect to
8 the BC Hydro transmission grid and the online testing can commence. At the
9 conclusion of the online testing, the signing of a Commissioning Notice to Operate
10 formalizes the handover of the asset from the Project team to BC Hydro Operations.
11 The commissioning process undertaken for the earthfill dam and associated assets
12 will form part of the comprehensive dam safety and reservoir filling plan.

13 Once assets are placed in-service, BC Hydro Operations is responsible for the
14 long-term operations and maintenance of the equipment and assets.

15 The commissioning team began working on the detailed workplan for the dry and
16 wet commissioning over two years ago, and this commissioning workplan is based
17 on BC Hydro's decades of experience building hydroelectric generating stations and
18 operating the BC Hydro system, and on accepted industry standards.

19 **3.5 Assets In Service**

20 Before all major pieces of equipment and assets are placed into service on the
21 Project, inspecting, testing, and commissioning activities are completed to ensure
22 that all components are fit for service and safe to transition to operations.

23 As of September 30, 2024, the following permanent assets have been placed into
24 operational service on the Project:

- 25 • Site C substation;

-
- 1 • 500 kV gas-insulated switchgear expansion at the Peace Canyon substation;
- 2 • Two new 500 kV transmission lines that connect the Site C substation to the
- 3 Peace Canyon substation; and
- 4 • One of three new 500 kV transmission lines that connect the Site C substation
- 5 to the Site C powerhouse.

6 Subsequent to the reporting period, on October 27, 2024, in advance of its approved

7 December 2024 in-service date, the first of six generating units on the Site C project

8 came into operation, following the required testing and commissioning processes.

9 Unit 1, and its related operational assets, will be added to this list in Quarterly

10 Progress Report No. 36.

11 **4 Project Schedule**

12 **4.1 Project In-Service Dates**

13 The Project remains on-track to have all six generating units in-service by the

14 approved final unit in-service date of November 2025.

15 [Table 6](#) shows the status of key Project milestones in relation to the approved final

16 unit in-service date in November 2025.

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Table 6 In-Service Dates

Description	In-Service Dates based on Approved Budget and Schedule (June 2021) ¹⁰	Status
5L5 500 kV Transmission Line	October 2020	Complete
Site C Substation	October 2020	Complete
5L6 500 kV Transmission Line	July 2023	Complete
Unit 1 (first power)	December 2024	Complete (October 27, 2024)
Unit 2	February 2025	On Track
Unit 3	May 2025	On Track
Unit 4	July 2025	On Track
Unit 5	September 2025	On Track
Unit 6	November 2025	On Track

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5 Project Governance, Costs and Financing, and Risk

3

5.1 Project Governance

4

During the reporting period, activities supporting Project governance included:

5

- The BC Hydro Board of Directors continued to meet on a monthly basis to provide governance, financial approvals of committed contracts over \$75 million (and their related changes), and received updates on Project progress and key remaining risks;

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- The Project Assurance Board continued to meet monthly to provide independent due diligence and oversight of the Site C Project to enable the Project to be fit for purpose and to be completed safely, on time and on budget;

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- The commercial sub-committee of the Project Assurance Board continued to meet monthly to provide oversight on claims management, commercial strategy and contractual negotiations;

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15

- The Technical Advisory Board continued to provide technical expertise and guidance to the Project Assurance Board and support to the Project team;

16

¹⁰ In-service dates based on Treasury Board's approval of the revised budget and schedule in June 2021.

-
- 1 • Ernst & Young Canada continued to provide independent oversight for the
2 Project, specifically with respect to risk management, which included reviewing
3 Project risks, the analysis of the Project costs, commercial management, and
4 schedule progress;
 - 5 • During the reporting period, BC Hydro and Ernst & Young Canada worked
6 closely and collaboratively to complete a cost risk analysis and schedule risk
7 analysis with an August 1, 2024, data date;
 - 8 • Special advisor Peter Milburn continues to work with the Project to ensure that
9 his recommendations, which have all been implemented, continue to be
10 sustained. Mr. Milburn worked closely with BC Hydro in advance of undertaking
11 the cost risk analysis and schedule risk analysis in August 2024.

12 **5.2 Project Budget Summary**

13 As of September 30, 2024, the life-to-date actual costs for the Project are
14 \$13.9 billion, which results in an estimated \$2.1 billion of remaining costs based on
15 the forecast of \$16 billion. The Project remains on track to be completed within the
16 budget of \$16 billion which was approved in 2021. BC Hydro, with oversight from the
17 Project Assurance Board, continues to actively manage the Project budget and
18 potential Project risks for the remaining work.

19 **5.3 Project Expenditure Summary**

20 [Table 7](#) includes a breakdown of the \$16 billion Project budget, approved in
21 June 2021, by key work area, life-to-date actual expenditures to
22 September 30, 2024, and the remaining budget.

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**Table 7 Project Budget by Key Work Area
 (\$ million)**

Description	Project Budget ¹¹	Actuals, Life-to-Date (as of September 30, 2024)	Remaining Budget (as of September 30, 2024)
Dam, Power Facilities and Associated Structures and Transmission ¹²	8,258	8,032	226
Off Dam Site Works, Direct Construction Supervision and Site Services ¹³	2,895	2,478	417
Total Direct Construction Cost	11,153	10,510	643
Indirect Costs ¹⁴	2,082	1,530	552
Total Construction and Indirect Costs	13,235	12,040	1,195
Interest During Construction and Contingency	2,765	1,887	878
Total	16,000	13,927	2,073

3 [Table 8](#) provides a summary of the approved total Project budget, the current
 4 forecasts, and related variances. The table also presents the cumulative plan and
 5 actual costs to September 30, 2024, and the related variances. The plan amount
 6 reflects the Project budget of \$16 billion approved in June 2021 and the related
 7 preliminary forecasted annual spend at that time.

¹¹ The total Project budget was approved in June 2021 by Treasury Board.

¹² Key items included are river diversion infrastructure, earthfill dam and related works, spillways, powerhouse, generation equipment and transmission and substation work.

¹³ Key items included are highway re-alignment and reservoir related work, direct construction supervision, and site services such as worker accommodation.

¹⁴ Key items included are mitigation and compensation programs, development and regulatory costs, project management, engineering and other support services such as Project controls, contracts management, environmental, and Indigenous relations.

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Table 8 **Total Project Budget Compared to Forecast to Completion and Life-to-Date Plan Compared to Actuals to September 30, 2024 (\$ million)**

Description	Total Project			Life-to-Date (LTD) to September 30, 2024		
	Budget	Forecast to Completion	Variance	Plan	Actual	Variance
Total Construction & Indirect Costs	13,235	13,235	0	12,406	12,040	366
Interest During Construction and contingency	2,765	2,765	0	2,293	1,887	406
Total	16,000	16,000	0	14,699	13,927	772

5 Details of the variances between life to date actual and plan are in [Appendix H](#).
6 [Table 9](#) provides a Fiscal 2024 summary, for the plan, actual cost and related
7 variance based on the 2023/24 to 2025/26 Service Plan.

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Table 9 **2024/25 to 2026/27 Service Plan Fiscal 2025 Plan Compared to Actuals (\$ million)**

Description	2024/25 to 2026/27 Service Plan, Fiscal 2025	Actuals, Fiscal 2025	Variance
Total Project	1,118	797	321

11 Details of the variances between actual and plan are in [Appendix H](#).

12 **5.4 Site C Project Financing**

13 Most of BC Hydro’s capital projects, including the Site C Project, are debt financed.
14 The Site C Project costs are included as part of BC Hydro’s overall borrowing and
15 included in the Government of B.C.’s budget and fiscal plan. The debt and related
16 interest costs are managed corporately by BC Hydro.

17 **5.5 Material Project Risks and Opportunities**

18 Material Project risks and opportunities are identified and reviewed by BC Hydro
19 management and the Project Assurance Board on an ongoing basis. Project risks
20 are uncertain events that, if they occur, could result in a negative impact or loss to a

1 project. Similarly, opportunities are uncertain events that, if they occur, could result
2 in a positive impact, or benefit, to a project.

3 As the Project progresses through implementation phase, the Project risks and
4 opportunities will continue to evolve.

5 The criteria for selecting which risks and opportunities to include in internal and
6 external reporting include both objective and subjective measures; these criteria
7 have been utilized to select the risks and opportunities included in this report.¹⁵

8 Refer to [Table 10](#) and [Table 11](#) for a list of the material Project risks and
9 opportunities as of September 30, 2024.

10 **Table 10 Material Project Risks**

Risk Description	Impact and Response Plan Summary
Safety incident resulting in a fatality or disabling injury	<p>Impact: Serious worker injury or fatality; Project delays and associated costs.</p> <p>Response: Continue to monitor safety performance through BC Hydro's field-based Safe Work Observations program and ongoing safety management and analytics; support continuous improvements to the Safe Work Observations program to reinforce safety behaviours in the field; continue to share safety learnings; work with Project contractors on more collaborative safety incident investigations and track/follow-up on corrective actions; work with WorkSafeBC and contractors on safety equipment and process audits and programs focused on high hazard work activities at site; conduct joint safety planning workshops for upcoming work scopes; and continue to include safety in BC Hydro and contractor onboarding orientations to promote and encourage a strong safety culture across the Project.</p>
Adits or right bank drainage tunnel may need additional structural support post reservoir filling	<p>Impact: Requirement for additional structural support, resulting in additional costs.</p> <p>Response: Design additional support as required and implement measures to address as-found conditions.</p>
First unit commissioning delay	<p>Impact: Delay to unit 1 in-service and potential additional costs.</p> <p>Response: A commissioning plan has been developed. The plan is being implemented with commissioning activities starting as early as possible.</p>

¹⁵ The risks and opportunities included in [Table 10](#) and [Table 11](#) are grouped thematically. The lists do not include risks and opportunities that are subject to confidentiality obligations or solicitor-client privilege, or that disclose commercially sensitive information relating to matters that are currently outstanding, including procurements and negotiations that are in progress at the time of this report, the disclosure of which would be harmful to BC Hydro's commercial interests.

Risk Description	Impact and Response Plan Summary
Generating station and spillways hydromechanical equipment supply specification is different from that of installer	<p>Impact: Rework, equipment damage, claims from sub-contractors.</p> <p>Response: BC Hydro will facilitate integration between the original equipment manufacturer and the installation contractor to resolve any differences.</p>
Risk of contractor claims	<p>Impact: Increased construction management and contract management effort required to respond to and investigate claims; settlement of claims may result in increased costs.</p> <p>Response: Ensure sufficient commercial management resources in place, proactively resolve claims as received, and ensure commercial management procedures are in place and are being followed.</p>
Project pays higher contractors' craft labour market increases	<p>Impact: Increased labour market pressures could result in industry benchmarks exceeding the contracted baseline, resulting in Project cost increases.</p> <p>Response: Follow the contractual provisions related to labour escalation rates.</p>
Additional coordination effort required between balance of plant (permanent upstream fishways and other out structures) and other contractors	<p>Impact: Additional interface works identified during wrap-up resulting in additional cost impacts.</p> <p>Response: Define, negotiate, and track performance of the additional wrap-up work.</p>
District of Hudson's Hope may seek further funding for water supply system to address deficiencies	<p>Impact: Additional contribution for the water supply system and potential reputational risk to BC Hydro.</p> <p>Response: BC Hydro has installed a water conveyance system into the shoreline protection berm to enable access by the District of Hudson's Hope. BC Hydro has offered project management and an increased contribution to the cost of the permanent replacement system.</p>
Increasing scope for the Indigenous cultural centre design work	<p>Impact: Redesign or additional design work results in higher cost estimates for the construction of the cultural centre.</p> <p>Response: Continue to engage with Indigenous Nations to obtain their input into the conceptual design. Prepare and evaluate cost estimates prior to construction.</p>
BC Hydro estimate for tunnel backfill may be below current market	<p>Impact: Estimates to be revised following a change in contractor, with potential cost increases due to changes in requirements, construction methodology and inflation.</p> <p>Response: Prepare a revised estimate based on current market conditions and proactively negotiate pricing with potential contractor.</p>
Additional regulatory conditions imposed prior to completion	<p>Impact: Project may be required to comply with additional conditions associated with reclaiming the land once temporary works have been completed or require permitting of some land for permanent non-farm use. Additional conditions may result in additional costs.</p> <p>Response: Proactively working with the Government and regulators to monitor and mitigate any additional requirements.</p>
Water management requires additional funds after contract obligation is completed	<p>Impact: Work progress impacted by failure to provide required care of water and/or by environmental regulatory enforcement.</p> <p>Response: Negotiate to extend services.</p>

1

Table 11 Material Project Opportunities

Opportunity Description	Impact and Response Plan Summary
Lower interest during construction due to timing of Project expenditures	Impact: Lower Project interest costs than the amount budgeted. Response: Monitor Project expenditure timing and manage expenditures effectively.

2

6 Key Procurement and Contract Developments

3

6.1 Key Procurements

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The vast majority of the major Site C contracts have been awarded. The remaining major procurements on the Project are summarized in [Table 12](#).

5

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Table 12 Remaining Major Project Procurements and their Planned Delivery Models

7

Component	Contract	Procurement Model	Anticipated Timing
Permanent Roads	Permanent road construction contract(s)	Design-Bid-Build	Procurement will start in 2025
Cultural Centre	Cultural centre design and construction contract	Design-Build	Procurement will start in 2025
Reclamation Program	Multiple contracts to be awarded over the next two years	Design-Bid-Build	<u>2025 season:</u> <ul style="list-style-type: none"> • Three seedling packages; procurement will start in fall 2024. • Two planting packages identified; procurement will start in fall 2024. • One physical works package identified; procurement will start in fall 2024. <u>2026 season:</u> <ul style="list-style-type: none"> • Three seedling packages; procurement will start in fall 2025. • Two planting packages identified; procurement will start in fall 2025. • One physical works package identified; procurement will start in fall 2025.

6.2 Major Construction Contracts Exceeding \$50 Million

Since inception of the Project, 14 major construction contracts have been awarded that exceed \$50 million in value, as shown in [Table 13](#). The contract values reflect the current value including executed approved changes to the end of the reporting period.

All construction contracts have been procured and awarded in accordance with BC Hydro procurement policies.

Table 13 Major Project Construction Contracts Awarded

Contract	Contract Value at September 30, 2024 ¹⁶ (\$ million)	Contract Execution Date
Site Preparation: North Bank	60	July 2015
Worker Accommodation	709	September 2015
Main Civil Works ¹⁷	3,364	December 2015
Turbines and Generators	620	March 2016
Transmission and Clearing	92	October 2016
Quarry and Clearing	174	February 2017
Generating Station and Spillways Civil Works ¹⁸	3,066	March 2018
Hydromechanical Equipment	80	April 2018
Transmission Line Construction	139	May 2018
Clearing and Aggregates	79	December 2018
Highway 29	379	October 2019
Balance of Plant Mechanical	100	July 2021
Balance of Plant Electrical (includes balance of plant architectural; heating, ventilation, and air conditioning; and fire detection and protection work)	321	September 2021
Balance of Plant Permanent Upstream Fishway and Other Out Structures	110	January 2022

¹⁶ Contract value reflects the current value including executed change orders to the end of the reporting period. Contract values are rounded to the nearest million.

¹⁷ Includes some of the scope of work for the right bank foundation enhancements.

¹⁸ Includes some of the scope of work for the right bank foundation enhancements.

1 **6.3 Contracts Exceeding \$10 Million**

2 For open contracts procured and awarded in excess of \$10 million, refer to
3 [Appendix F](#).

4 **6.4 Contract Management**

5 **6.4.1 Material Changes to the Major Contracts**

6 The main civil works contract is a unit price contract and, as such, variations in
7 quantities and design are expected over the term of the contract. Since contract
8 award in December 2015, the main civil works contract value has increased
9 by \$1.62 billion to reflect approved changes to September 30, 2024. These
10 approved changes include work for the right bank foundation enhancements. The
11 overall contract value has decreased this quarter as variations in quantities are
12 reconciled and finalized for completed scopes of work.

13 The generating station and spillways contract is also a unit price contract and, as
14 such, variations in quantities and design are expected over the term of the contract.
15 Since contract award in March 2018, the generating station and spillways contract
16 value has increased by \$1.46 billion to reflect approved changes to
17 September 30, 2024. These approved changes include work for the right bank
18 foundation enhancements and diversion tunnel backfilling.

19 The turbines and generators contract is a milestone based contract for the design,
20 supply, installation, testing and commissioning of six turbines, generators, governors
21 and exciters. Since the March 2016 contract award date, the contract has increased
22 by \$156.6 million to reflect approved changes to September 30, 2024, which
23 includes contract amendments in 2022 and 2024.

24 The balance of plant contracts are split between three contractors and include the
25 following scopes of work: (1) mechanical; (2) electrical (includes architectural,
26 heating, ventilation, and air conditioning, and fire detection and protection work); and

1 (3) permanent upstream fishway and other out structures. Since the contract award
2 dates in 2021 and 2022, the contract values have increased to reflect approved
3 changes to September 30, 2024 as follows: the mechanical contract has increased
4 by \$30.9 million, the electrical contract has increase by \$98.4 million, and the
5 permanent upstream fishway and other out structures has increased by
6 \$22.9 million.

7 **7 Indigenous Engagement**

8 Pursuant to the Environmental Assessment Certificate and Federal Decision
9 Statement, BC Hydro is required to engage with 13 Indigenous Nations with respect
10 to the construction stage of the Project. This consultation includes the provision of
11 information on construction activities, support for the permit review process, and
12 review and implementation of mitigation, monitoring and management plans, and
13 permit conditions.

14 During the reporting period, BC Hydro continued to engage with Indigenous Nations
15 on Project activities and milestones through regular Project update meetings and
16 other venues.

17 The Site C Environmental Forum is a mechanism where BC Hydro shares,
18 discusses and collaborates on environmental aspects of the Site C Project with the
19 11 Indigenous Nations and two Métis organizations impacted by the Project. On
20 July 31, the 37th Environmental Forum was held. In total, 11 representatives
21 attended from seven Indigenous Nations. The topics included reservoir filling,
22 cultural monitoring, slope and shoreline monitoring and the overall approach for
23 wildlife in distress.

24 **7.1 Indigenous Burials**

25 Indigenous representatives continue to participate in slope stability monitoring of the
26 two identified burial sites that are outside of the reservoir area, but within the stability

1 impact lines of the Site C reservoir. Monitoring of the two sites will continue and will
2 transition to be a part of BC Hydro's Reservoir Archaeology Monitoring Program.

3 **7.2 Indigenous Procurement, Training and Employment**

4 BC Hydro continues to advance economic opportunities for Indigenous Nations
5 through capacity building and procurement opportunities. Nearly \$800 million in
6 Site C directed procurement opportunities have been awarded to companies
7 designated by Indigenous Nations since the beginning of the Project, pursuant to
8 BC Hydro's Indigenous Procurement Policy. Information on BC Hydro's Indigenous
9 Procurement Policy can be found on the BC Hydro website at the following link:
10 <https://www.bchydro.com/work-with-us/suppliers/indigenous-procurement.html>.

11 Indigenous procurement is tracked as a performance metric in BC Hydro's [Service](#)
12 [Plan](#), with an overall target of reaching \$1.625 billion in directed Indigenous
13 procurement opportunities between 2014/15 and 2026/27. This goal supports
14 BC Hydro's ongoing reconciliation initiatives by providing opportunities for
15 Indigenous Nations to share in the benefits of the work that BC Hydro does to build,
16 operate, and maintain its system.

17 Indigenous procurement on the Site C Project has been a strong contributor to
18 BC Hydro meeting and exceeding its cumulative Service Plan target for this metric.
19 Working on Site C has helped businesses designated by Indigenous Nations to build
20 and grow their reputations, expand the scale of their operations, and develop new
21 expertise to compete in the regional economy.

22 In September 2024, 127 Indigenous people were working on the Site C Project,
23 which represents approximately 5% of the total workforce.

24 **7.3 Cultural Centre**

25 BC Hydro continued to work with Indigenous Nations on the development of the
26 future cultural centre. The cultural centre project is an important accommodation for

1 the cultural impacts of Site C. The facility will showcase local Indigenous culture and
 2 history in the region, and store and display many of the artifacts uncovered during
 3 the construction of Site C. During the reporting period, BC Hydro hosted one
 4 workshop to discuss the details of the cultural centre building design with
 5 participating Nations and hosted two First Nation community meetings /
 6 presentations.

7 **8 Litigation**

8 The details of open proceedings as of September 30, 2024, are summarized in
 9 [Table 14](#).

10 **Table 14 Litigation Status Summary**

Description		Date
B.C. Supreme Court: Treaty Infringement Claims		
West Moberly First Nations	Civil claim filed.	January 15, 2018
	Settlement of claims related to Site C.	June 24, 2022
B.C. Supreme Court: Civil Claims		
Building and Construction Trades Council	Civil claim filed. No steps have been taken in litigation that require a response from BC Hydro.	March 2, 2015
Michael Acko, etal (Residents of Old Fort community)	Civil claim filed.	January 18, 2021
	Response to claim filed.	September 8, 2021
Allianz Global Risks US Insurance Company, etal	Civil claims filed. Claims were filed by BC Hydro to preserve BC Hydro's rights to claim under Site C property insurance for losses related to left bank tension crack events and the rockfall event near a diversion tunnel inlet portal.	February 5, 2021 July 13, 2021
Vezer Industrial Professionals Canada Ltd.	Civil claim served. No steps have been taken in litigation that require a response from BC Hydro.	March 29, 2022
Armitage	Civil claim filed.	October 24, 2022
	Response to claim filed.	January 5, 2023
Impact Drywall Inc.	Civil claim served.	July 12, 2024
	No steps have been taken in litigation that require a response from BC Hydro.	

Description	Date
B.C. Supreme Court: Civil Claims – Expropriation Act	
Property owners	July 2019 to September 2024
Of 27 notices of claims filed to keep open each plaintiffs' rights to claim further compensation under the <i>Expropriation Act</i> , eight have been resolved during this period and 19 remain active. BC Hydro has filed responses to eight of the outstanding claims, and is preparing to file responses to the remainder.	

1 **9 Permits and Government Agency Approvals**

2 **9.1 Background**

3 The regulatory, permits and tenures performance indicator on the Project status
4 dashboard in section [1.8](#) remains “green.” As of September 30, 2024, 650 permits
5 have been issued. All permits and approvals for the construction of the Project have
6 been issued and continue to be renewed as needed for demobilization, reclamation
7 works and operations.

8 Subsequent to the reporting period, on October 7, the Office of the Water
9 Comptroller issued the Leave to Commence Operation for the Generating Units. The
10 Leave to Commence Operation for the Permanent Upstream Fishway is expected to
11 be issued in spring 2025.

12 Multiple conditions are attached to each permit or authorization, which cover
13 subjects such as air quality, water quality, fish and aquatics, wildlife, heritage, health
14 and safety, construction environmental management and Indigenous Nations
15 consultation. As of September 30, 2024, all required conditions and submissions
16 have been met in accordance with the schedule and requirements of the conditions.

17 **9.2 Federal Authorizations**

18 Site C requires federal authorizations under the *Fisheries Act* (issued by Fisheries
19 and Oceans Canada) and the *Canadian Navigable Waters Act* (formerly *Navigation*

1 *Protection Act*) (issued by Transport Canada). All major federal authorizations for the
2 construction and operation of the Site C dam and reservoir were received in
3 July 2016. One amendment to the federal *Fisheries Act* Authorization, regarding the
4 temporary placement of fill downstream of the earthfill dam, was issued in July 2022.

5 Additional *Canadian Navigable Waters Act* approvals and notifications for discrete
6 works in the reservoir (e.g., shoreline works, debris booms and Highway 29 bridges)
7 have been issued at the regional level. As of September 30, 2024, a total of
8 135 federal approvals and notifications have been issued and are actively being
9 managed.

10 **9.3 Provincial Permits**

11 Site C requires provincial permits primarily under the *Land Act*, *Water Sustainability*
12 *Act*, *Forest Act*, *Wildlife Act*, *Heritage Conservation Act*, and *Mines Act*. These
13 permits include investigative permits, licences to occupy land, water licence
14 approvals, leaves to commence construction and leaves to construct, and licences
15 to cut vegetation, among others.

16 As of September 30, 2024, 510 provincial permits have been obtained and are
17 actively being managed.

18 **9.4 Environmental Assessment Certificate**

19 Compliance with the Project conditions in the Environmental Assessment Certificate
20 is regularly monitored, and evidence is collected by various federal and provincial
21 regulatory agencies, the Independent Environmental Monitor, BC Hydro, and
22 contractors.

23 As with any large construction project, refinements to the design are expected. As of
24 September 30, 2024, BC Hydro has requested and received 11 amendments to the
25 Project's Environmental Assessment Certificate to reflect changes in the Project

1 design. The amendments have not resulted in any material impacts to the cost of the
2 Project.

3 BC Hydro remains in compliance with all requirements of the Environmental
4 Assessment Certificate amendments.

5 All amendments and amendment requests are posted on the Environmental
6 Assessment Office website.

7 **10 Environment**

8 **10.1 Mitigation, Monitoring and Management Plans**

9 As per the requirements of the Environmental Assessment Certificate and Federal
10 Decision Statement, all mitigation, monitoring and management plans and related
11 reports can be found on the Site C Project website at this link: [Environmental &
12 Socio-Economic Plans & Reports | Site C \(sitecproject.com\)](#).

13 **10.2 Project Environmental Compliance**

14 Environmental compliance on the Project remains high.

15 During the reporting period the Environmental Assessment Office initiated two
16 remote inspections on the Project. The focus of these inspections was on invasive
17 weed management, site reclamation and methylmercury monitoring. A final
18 inspection report for the first inspection focussing on invasive weed management
19 and site reclamation was received subsequent to the reporting period on
20 October 10, 2024 and it concluded the Project was in compliance with all
21 requirements. A final inspection report for the second remote inspection remains
22 outstanding.

1 **10.3 Potentially Acid-Generating Rock Management**

2 The Project's Construction Environmental Management Plan has a well established
3 potentially acid-generating rock management plan that employs a variety of
4 recognized techniques to identify, test, monitor and treat, if necessary, any
5 potentially acid-generating rock during construction. Any potentially acid-generating
6 rock sites located within the reservoir will be rendered inert once the reservoir is
7 filled. Any potentially acid-generating rock sites remaining outside the reservoir post
8 construction will be addressed through location specific prescriptions provided by
9 qualified environmental professionals.

10 The April 2022 Environmental Assessment Office order related to potentially
11 acid-generating rock exposures has necessitated revisions to the Construction
12 Environmental Management Plan. The revision process began in October 2022, and
13 included a consultation period, which was initiated in April 2023 and concluded in
14 October 2023 when BC Hydro published the revised plan on the Project website,
15 and notified regulators that the revised plan would be followed from that date
16 forward.

17 In parallel with these revisions, this order has accelerated the need to consider
18 potential mitigation options for potentially acid-generating rock exposures on the
19 dam site that will not be covered by the reservoir. For this, the Project is seeking
20 engineered options and cost estimates for a subset of the potentially acid-generating
21 rock exposures across the Project that will not be covered by the reservoir or that
22 have been identified in past Environmental Assessment Office inspection reports.
23 The Environmental Assessment Office continues to assure BC Hydro that it will not
24 pursue enforcement against the April 2022 order.

1 **10.4 Temporary and Permanent Fish Passage Facilities**

2 The temporary fish passage facility operated through the reporting period but was
3 permanently shut down on September 15 due to the commencement of the tunnel
4 outlet cofferdam construction.

5 Between October 1, 2020, and September 15, 2024, the temporary fish passage
6 facility passed 46,737 fish from 21 species.

7 During the reporting period, the permanent fish passage facility began a combined
8 commissioning and biological operations phase and started to be used to pass fish.

9 **10.5 Wetland Compensation Plan**

10 BC Hydro and the contractor continue to work on advancing wetland re-builds and
11 new construction options in the Peace Region. The main focus during the reporting
12 period was investigating potential wetland compensation sites and refining the
13 assessment of wetlands impacted by the Project.

14 **10.6 Greenhouse Gas Monitoring**

15 In October 2022, BC Hydro began collecting data to support a pre-reservoir fill
16 greenhouse gas (**GHG**) emission study. Three locations upstream of the dam site
17 were selected for terrestrial flux-chamber measurements, and soil organic carbon
18 and vegetation sampling. Monitoring at these three locations continued through the
19 reporting period.

20 **10.7 Agricultural Mitigation and Compensation Plan**

21 The BC Hydro Peace Agricultural Compensation Fund Annual General Meeting was
22 held on September 20, 2024. There was no new grant funding provided during this
23 reporting period. As of September 30, 2024, the fund had distributed nearly
24 \$3 million to 97 projects.

1 The five-year review of the BC Hydro Peace Agriculture Compensation Fund began
2 during the reporting period.

3 **11 Employment and Training Initiatives and Building**
4 **Capacity Initiatives**

5 **11.1 Labour**

6 Since the beginning of the Project, unions that have participated in the construction
7 of Site C are listed in [Table 15](#).

8 **Table 15 Participating Unions**

Union
Construction Maintenance and Allied Workers (CMAW)
Christian Labour Association of Canada (CLAC), Local 68
Canada West Construction Union (CWU)
Construction and Specialized Workers Union (CSWU), Local 1611
International Union of Operating Engineers (IUOE), Local 115
Millwrights Union, Local 2736
Ironworkers, Local 97
International Brotherhood of Electrical Workers (IBEW)
MoveUP, Local 378
Pile Drivers Union, Local 2404
Boilermakers, Lodge 359
United Association of Journeymen & Apprentices of the Plumbing & Pipefitting Industry of the U.S. & Canada, Local 170
Teamsters, Local 213

9 In addition, ten unions affiliated with the B.C. Building Trades are signatory to the
10 special project needs agreement for the installation of the turbines and generators.

11 The Site C balance of plant contractors are signatory to a special project needs
12 agreement between the Construction Labour Relations Association and the
13 Bargaining Council of B.C. Building Trades Unions.

11.2 Employment

Contractors submit monthly workforce data electronically to BC Hydro. [Table 16](#) presents the monthly number of construction contractors, non-construction contractors, engineers, and Project team workers for this period.

As with any construction project, the number of workers – and the proportion from any particular location – will vary month-to-month and also reflects the seasonal nature of construction work.

Table 16 Site C Jobs Snapshot Reporting Period – July 2024 to September 2024

Month	Number of B.C. Primary Residents ¹⁹	Total Number of Workers ²⁰
July 2024	2,226	2,993
August 2024	2,104	2,766
September 2024	1,955	2,542

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

In September 2024, there were 2,542 total workers on the Site C Project. Residents of British Columbia made up 77% of the workforce (1,955), while 21% of the on-Site Contractor workforce (383 workers) lived in the Peace River Regional District. The on-Site Contractor workforce number also includes 16% women (282 workers) and 7% Indigenous (127 workers). There were 134 apprentices working on the Project, which is 17% of the apprenticeable trades within the construction and non-construction workforce. These workers were working for various contractors as apprentice carpenters, electricians, millwrights, ironworkers, mechanics, boilermakers and plumbers. Refer to [Appendix D](#) for an overview of the

¹⁹ Employment numbers provided by Site C contractors and consultants are subject to revision. Data not received by the Project deadline may not be included in the above numbers. Employment numbers are direct only and do not capture indirect or induced employment.

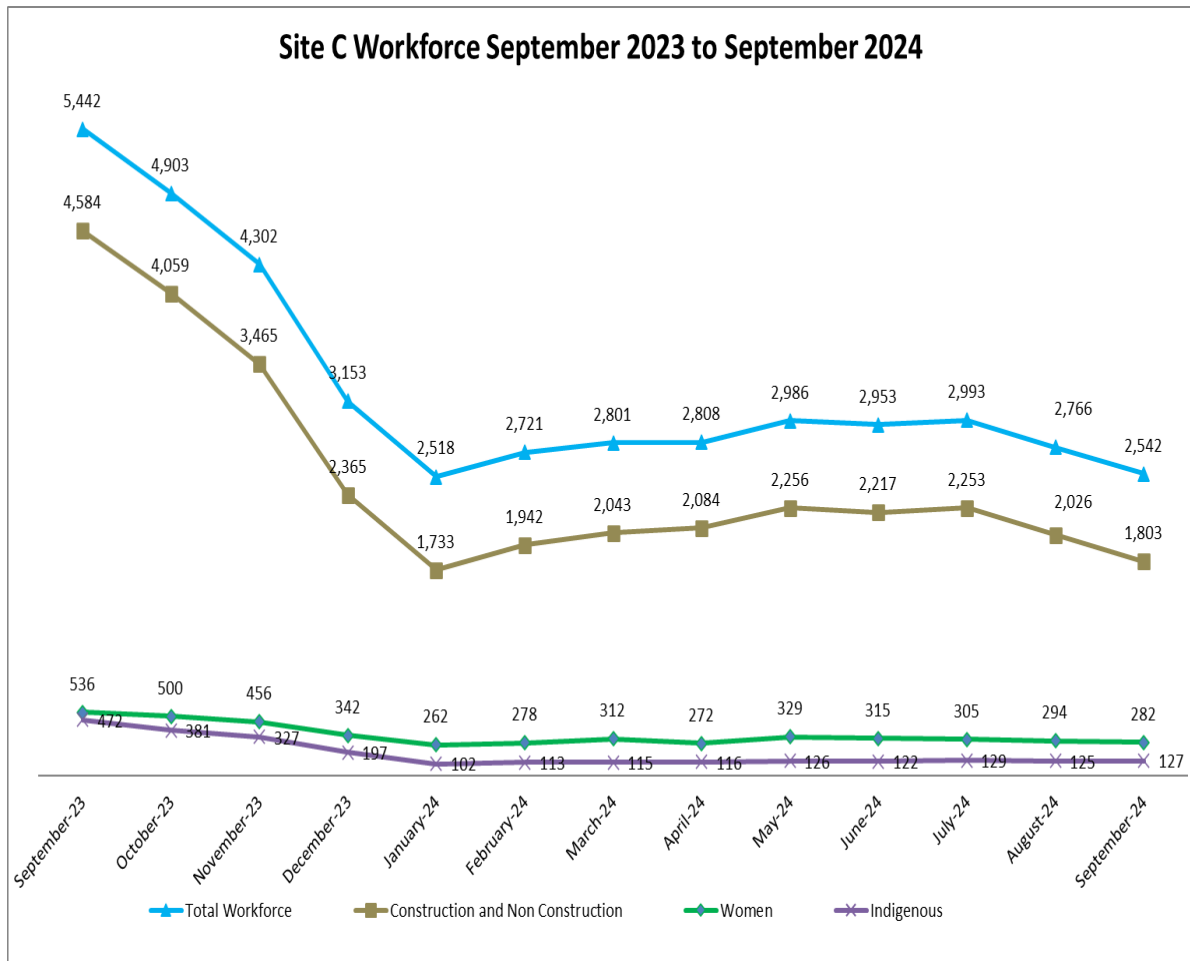
²⁰ Total workers include:

- Construction and non-construction contractors performing work on the Site C dam site, transmission corridor, reservoir clearing area, public roadwork, worker accommodation and services; and
- The Project team, which includes Engineers and BC Hydro construction management and other onsite and offsite personnel. An estimate is provided where possible if primary residence is not given.

1 current Site C workforce that includes the following information from July to
 2 September 2024: the Site C jobs snapshot ([Table D-1](#)), the Site C apprentices
 3 snapshot ([Table D-2](#)), the Site C job classification groupings ([Table D-3](#)), and the
 4 Indigenous inclusion snapshot ([Table D-4](#)).

5 [Figure 3](#) shows the monthly Site C workforce over the period from
 6 September 1, 2023, to September 30, 2024.

7 **Figure 3 Site C Workforce September 2023 to**
 8 **September 2024²¹**



²¹ The Indigenous workers and women workers numbers are a subset of the construction and non-construction contractors workforce number.

1 **11.3 Training and Capacity-Building Initiatives**

2 BC Hydro has included apprentice targets in the generating station and spillways
3 civil works contract, the transmission lines and the substation contracts, the balance
4 of plant contracts and the Highway 29 work procured by BC Hydro, as appropriate.

5 Northern Lights College Foundation continues to distribute the BC Hydro Trades and
6 Skilled Training Bursary Awards, established in 2013. As of September 30, 2024, a
7 total of 295 students had received bursaries, including 137 Indigenous students who
8 have benefitted from the bursary in programs such as electrical, welding, millwright,
9 cooking, social work, and many others.

10 *Joint BC Hydro and Contractor Site Training*

11 BC Hydro continues to implement the Builders Code. The Builders Code is a
12 standard code of conduct for workers on construction sites in B.C. that defines an
13 acceptable worksite as one that is safe and productive, where all workers work
14 without the stress or distraction caused by discrimination, bullying, hazing, or
15 harassment.

16 **11.4 Labour and Training Plan**

17 In accordance with an Environmental Assessment Certificate condition, a Labour
18 and Training Plan was developed and submitted to the Environmental Assessment
19 Office on June 5, 2015. This plan, as well as Environmental Assessment Certificate
20 Condition 45, include annual reporting requirements to support educational
21 institutions in planning their training programs to support potential workers in
22 obtaining Project jobs in the future. This report has been issued to the appropriate
23 training institutions in the northeast region annually since 2016. The latest report
24 was issued in August 2024.

12 Community Engagement and Communication

12.1 Local Government and Community Engagement Activities

BC Hydro continues to advance commitments within five community agreements: the District of Chetwynd (2013), the District of Taylor (2014), the City of Fort St. John (2016), the District of Hudson's Hope (2017), and the Peace River Regional District (2024). The community agreement between BC Hydro and the Peace River Regional District was finalized on May 8, 2024.

The Regional Community Liaison Committee, which is comprised of local elected officials and local First Nations communities, most recently met for its regularly scheduled meeting on June 5. With the endorsement of the Regional Community Liaison Committee members, the frequency of the meetings has been reduced from quarterly to semi-annually for 2024.

Eight local governments and four local First Nations communities (McLeod Lake Indian Band, Doig River First Nation, Saulteau First Nations, and Blueberry River First Nations) as well as the two MLAs for Peace River North and Peace River South, are invited to participate as committee members. Representatives from the Project's major contractors may also attend the meetings as invited guests.

12.1.1 District of Hudson's Hope Well Water System

In fall 2022, the District initiated a three-phase plan to switch its raw water source from a well water system to the Peace River. In early 2023, BC Hydro and the District of Hudson's Hope finalized an agreement that provided funding to support the initial two phases of this plan. The District has installed a temporary surface water intake along with upgrades to the treatment facility and is providing the community with potable water. In September 2024, BC Hydro submitted a revised proposal to the District, which included a commitment to complete the permanent water treatment system and fund the rental of a water clarifier until the permanent clarifier is operational. Subsequent to the reporting period, the District accepted

1 BC Hydro's proposal in principle and both parties continue to negotiate terms of a
2 final agreement.

3 **12.1.2 Generate Opportunities Fund**

4 In 2016, BC Hydro launched the Generate Opportunities Fund (**GO Fund**) to support
5 Peace Region non-profit organizations. The GO Fund is being distributed to
6 organizations that provide services to vulnerable populations including children,
7 families and seniors.

8 The GO Fund is administered by Northern Development Initiative Trust on behalf of
9 BC Hydro. During this reporting period, BC Hydro distributed approximately
10 \$44,000 to six non-profit organizations in the Peace Region and as of
11 September 30, 2024, 106 projects had received approximately \$922,000 since the
12 fund was launched.

13 More information about the GO Fund can be found at the following link: [Generate](#)
14 [Opportunities \(GO\) Fund | Site C \(sitecproject.com\)](#).

15 **12.1.3 Community Relations and Construction Communications**

16 BC Hydro continued to implement its construction communications program
17 throughout the reporting period. The program includes updating and maintaining the
18 Project website (www.sitecproject.com) with current information, photos and videos
19 of construction activities, as well as providing information to local and regional
20 stakeholders as required.

21 *Community Engagement*

22 During the reporting period, Site C Community Relations continued to respond to
23 media and public inquiries about the timing for reservoir fill. The next Regional
24 Community Liaison Committee meeting is set for November 27, 2024.

1 *Business Liaison and Outreach*

2 No procurement notifications were sent out during the reporting period.

3 *Construction Bulletins*

4 Bi-weekly construction bulletins are posted on the Project website and sent by email
5 to a web-subscriber list. There were six construction bulletins and two updates
6 specific to reservoir filling issued this reporting period.

7 *Public Enquiries*

8 In total, BC Hydro received 63 public enquiries between July 1 to
9 September 30, 2024. [Table 17](#) shows the breakdown of some of the most common
10 enquiry types.

11 In total, BC Hydro has received more than 14,700 enquiries since August 2015.

12 **Table 17 Public Enquiries Breakdown by Topic**

Enquiry Type ²²	July 1 to September 30, 2024
Employment Opportunities	10
Business Opportunities	2
General Information	32
Construction Impacts ²³	2
Other ²⁴	17

²² This table is a sample of enquiry types and does not include all enquiry types received. Some enquiries that were received cover more than one topic.

²³ The nature of the construction impact enquiries are primarily related to air quality and dust, traffic and road conditions, and safety.

²⁴ "Other" accounts for enquiries related to a variety of other topics, such as wildlife and beavers, river closure, and tour requests.

1 **12.2 Human Health**

2 **12.2.1 Health Care Services Plan and Emergency Service Plan**

3 The on-site health clinic provides workers with access to primary and preventative
4 health care and work-related injury evaluation and treatment services and is
5 currently open seven days a week, 24 hours a day. Since opening the health clinic,
6 there have been more than 52,600 patient interactions. During the reporting period,
7 there were 591 patient interactions, of which 126 were occupational and
8 465 non-occupational. Several preventive health themes were provided to workers
9 during the reporting period, including information on awareness around hepatitis,
10 ergonomics, dental health and the cardiovascular system.

11 **12.3 Property Acquisitions**

12 Property acquisitions required for the Project are now complete.

13 In cases where BC Hydro acquired or expropriated land or rights for the Project
14 under the *Expropriation Act*, notices of claim have been filed by owners to keep
15 open their rights to claim further compensation under the *Expropriation Act* as noted
16 in section [8](#) of this report.

17 **13 Plans During Next Six Months**

18 [Table 18](#) shows the key milestones for the Project over the next six months, from
19 October 2024 to March 2025, including the commissioning of the first four units on
20 the Site C Project and the remaining two transmission lines between the Site C
21 substation and the powerhouse.

22 Plan dates will be adjusted as contract changes are approved to amend milestone
23 dates. BC Hydro remains on track to achieve the approved final unit in-service date
24 of November 2025.

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**Table 18 Key Milestones for Activities Planned
During the Next Six Months
(October 2024 to March 2025)**

Milestone	Performance Measurement Baseline (June 2021)	Plan Date (Control Date ²⁵)	Forecast ²⁶	Status ²⁷ (Measured by Month)
Turbines and Generators				
Unit 1 – In-Service Date	December 2024	December 2024	October 2024	Complete (October 27, 2024)
Unit 2 – In-Service Date	February 2025	February 2025	February 2025	On Track
Unit 3 – Ready to Turn	October 2023	October 2024	November 2024	Late
Unit 3 – In-Service Date	May 2025	May 2025	May 2025	On Track
Unit 4 – Ready to Turn	December 2023	January 2025	January 2025	On Track
Unit 4 – In-Service Date	July 2025	July 2025	July 2025	On Track
Transmission				
5L16 In-Service Date	July 2023	July 2023	November 2024	Late
5L17 In-Service Date	July 2023	July 2023	December 2024	Late

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14 Impacts on Other BC Hydro Operations

During the reporting period, the operation of system storage at Williston Reservoir (including G.M. Shrum and Peace Canyon generating stations) was planned to meet flow releases necessary for the Site C Project, and this operation continues.

Reservoir filling was initiated within the reporting period, which involved releases from Peace Canyon Generating Station. Once the diversion tunnels were closed during the initial phases of reservoir filling, the releases from Site C are now controlled with the spillway. The Site C Project team continues to work closely with

²⁵ As of September 30, 2024, control dates reflect plan, adjusted for approved contract changes to milestone dates. Many of the plan dates included in the table were established to support the possibility that reservoir filling could start in late fall 2023, one year earlier than the approved schedule.

²⁶ As of September 30, 2024, with the decision in November 2023 to stay on track with the approved Project schedule with reservoir filling in fall 2024, the forecast dates have been updated to reflect the schedule with reservoir filling in fall 2024, and as a result, may show as late.

²⁷ As of September 30, 2024.

- 1 BC Hydro Operations on Site C spillway operation, and the commissioning of the
- 2 generating units.

Site C Clean Energy Project

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Appendix A

Site Photographs

Figure A-1 The placement of concrete lock-blocks to construct the left bank drainage wall. Each concrete block weighs 2,000 kg | July 2024



Figure A-2 The main step-up transformer bays are in groups of three with one spare unit. The bay houses the three step-up transformers that are connected to generating units 1 and 2, and these transformers are connected to the transmission grid. The second set of three step-up transformers are installed and being commissioned | July 2024



Figure A-3 Formwork and reinforcing steel are in place on the concrete slab to construct the emergency response (ERT) team building | July 2024



Figure A-4 The left bank drainage structure includes a rip rap lined channel that directs the flow of water through the box culvert. Fifteen layers of lock-blocks will complete the drainage structure to direct water into the reservoir and away from the dam | July 2024



Figure A-5 Concrete finishing work being completed on the door sill of the second spillway operating gate. The spillway gates are lifted by hoist cables and pivot on axis points | July 2024



Figure A-6 The Site C dam site | August 2024



Figure A-7 Site C dam site, on the day reservoir filling was initiated | August 25, 2024



Figure A-8 Water flows through the Site C spillways during the reservoir filling process | September 3, 2024



Figure A-9 The removal of wood debris during reservoir filling. This wood debris was collected to a debris removal location near the dam site, and then removed from the reservoir and stockpiled for future use | September 2024



Figure A-10 The dam site and the collection and removal of wood debris during reservoir filling | September 29, 2024



Figure A-11 Dam site | September 29, 2024



Site C Clean Energy Project

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Appendix B

**Work Completed Since Project Commencement
in 2015**

1 Construction began on July 27, 2015, and is ongoing. Since the commencement of
2 construction, the following work has been completed up to the end of the reporting
3 period:

- 4 • Site preparation, including onsite access roads;
- 5 • Clearing of the left and right banks at the dam site and clearing of the lower
6 reservoir area;
- 7 • Construction of the worker accommodation lodge and Peace River construction
8 bridge;
- 9 • Powerhouse excavation, and the placement of 650,000 cubic metres of
10 roller-compacted concrete in the powerhouse buttress;
- 11 • Spillways excavation, and the placement of 600,000 cubic metres of
12 roller-compacted concrete in the spillways buttress;
- 13 • Construction of dam site access public roads;
- 14 • Construction of the Site C viewpoint;
- 15 • Construction of 50 affordable housing units in Fort St. John;
- 16 • Fish habitat enhancements downstream of the dam site;
- 17 • Excavation of the diversion tunnel inlet (upstream) and outlet (downstream)
18 portals, allowing for the commencement of diversion tunnel excavations;
- 19 • Excavation of the right bank drainage tunnel, which will be used to monitor and
20 drain the water from within the foundation under the powerhouse, spillways and
21 dam buttresses and will be connected to services within the powerhouse;

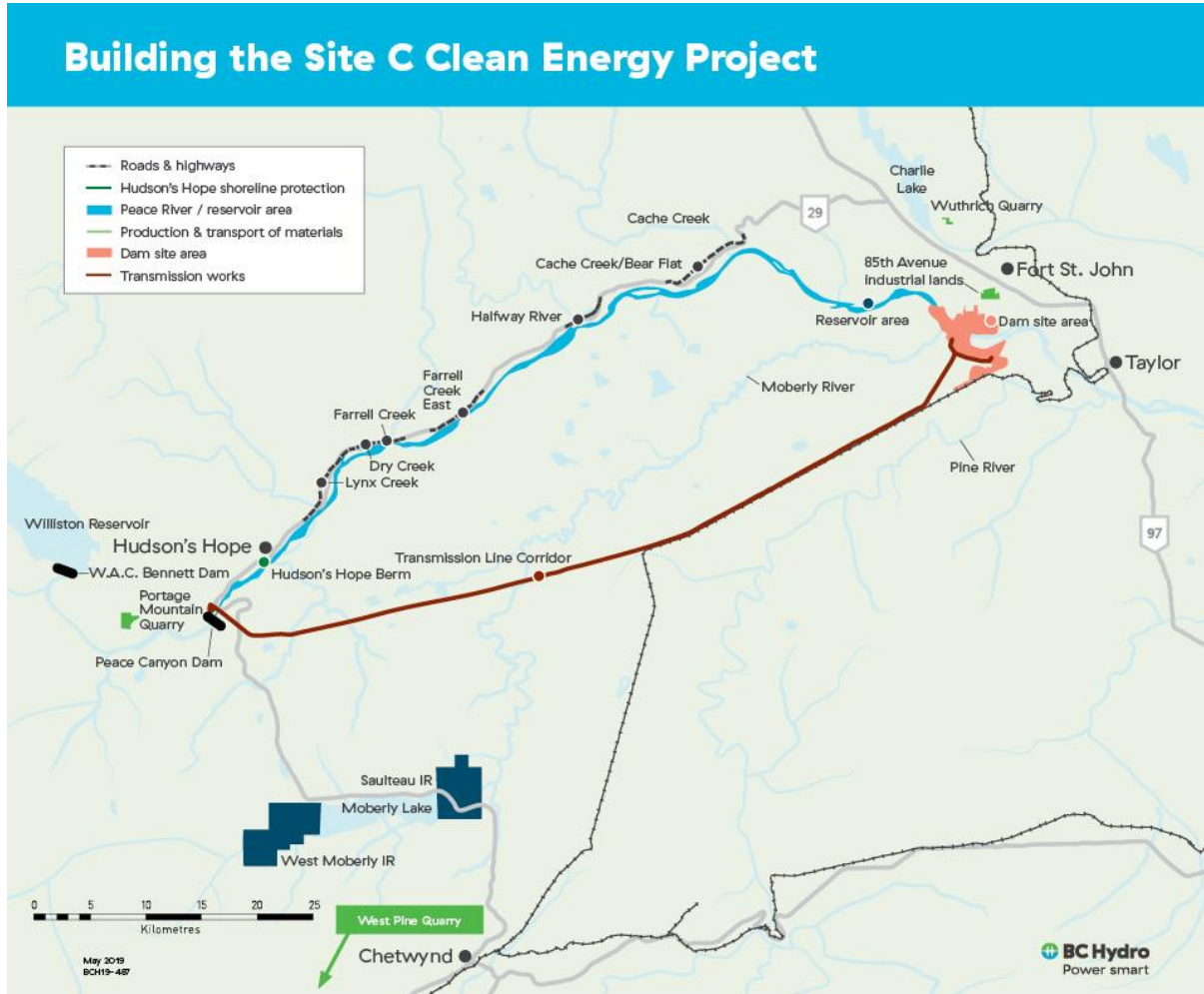
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- 1 • Completion of two river diversion tunnels, which are used to reroute a short
2 section of the Peace River to allow for the construction of the main earthfill
3 dam;
 - 4 • Completion of the upstream and downstream cofferdams;
 - 5 • Construction and commissioning of the temporary fish passage facility;
 - 6 • Diversion of the Peace River around the Site C construction site;
 - 7 • Completion of the Peace Canyon 500 kV gas-insulated switchgear expansion to
8 enable connection of Site C to the BC Hydro electrical system;
 - 9 • Completion of the Site C substation and the first of two new 500 kV
10 transmission lines that connect Site C to the Peace Canyon generating station;
 - 11 • Completion of the finishing concrete work inside the 454-metre-long left bank
12 drainage adit;
 - 13 • Earthfill dam excavation, and the placement of 450,000 cubic metres of
14 roller-compacted concrete in the dam and core buttress, marking the
15 completion of the Project's overall roller-compacted concrete placement
16 program. In total, nearly 1.7 million cubic metres of roller-compacted concrete
17 was placed since 2017;
 - 18 • Completion of the steel super-structure for the powerhouse;
 - 19 • Completion of the second of two new 500 kV transmission lines that connect
20 Site C to the Peace Canyon generating station;
 - 21 • Completion of the bridges at Dry Creek, Lynx Creek, Farrell Creek, Halfway
22 River, and Cache Creek as part of the Highway 29 realignment;
 - 23 • Completion of the shoreline protection berm at Hudson's Hope;
 - 24 • Completion of the Maurice Creek spawning shoals;

-
- 1 • Completion of the headworks gantry crane;
 - 2 • Completion of the concrete work for the intakes;
 - 3 • Completion of the 96 steel piles in the spillway and downstream of the
 - 4 powerhouse, as part of the right bank foundation enhancements;
 - 5 • Completion of the concrete pile caps in the powerhouse tailrace excavation;
 - 6 • Completion of the Highway 29 realignment;
 - 7 • Decommissioning of the old sections of Highway 29 that were realigned;
 - 8 • Completion of the earthfill dam to the elevation required to enable reservoir
 - 9 filling;
 - 10 • Completion of the tunnel conversion process, which involved installing four
 - 11 large rings inside one of the two tunnels that are diverting the Peace River
 - 12 around the dam site, to restrict the flow of water through the tunnel;
 - 13 • The removal of the right bank cofferdam and the placement of riprap in the
 - 14 tailrace channel;
 - 15 • The completion of the approach channel, including the enhancements that were
 - 16 part of the right bank foundation enhancements. These enhancements included
 - 17 bedrock surface excavations and cleaning, the installation of waterproofing
 - 18 lining materials, grouting, and reinforced concrete and granular fill placements;
 - 19 • The final placements of riprap in the approach channel;
 - 20 • Completion of all concrete placements in the powerhouse;
 - 21 • The installation of all six turbine runners;
 - 22 • Assembly and installation of the three transmission towers on top of the intake
 - 23 structures for the transmission lines that connect the Site C substation to the
 - 24 powerhouse;

-
- 1 • Completion of the coatings for the penstocks;
 - 2 • Substantial completion of the construction of the earthfill dam including the final
 - 3 work on the toe of the dam, road construction, and the installation of the duct
 - 4 banks for lighting and instrumentation;
 - 5 • Construction of the permanent fishway;
 - 6 • Safely and successfully lifting the sixth and final upper flexible coupler into
 - 7 place in the unit 6 penstock;
 - 8 • The first 500kV transmission line between the Site C substation and the Site C
 - 9 powerhouse was successfully energized;
 - 10 • The approval and commencement of reservoir filling. In advance of the start of
 - 11 reservoir filling, all required regulatory, construction and commissioning
 - 12 activities were completed; and
 - 13 • Closure of both diversion tunnels 1 and 2.

14 [Figure B-1](#) shows the location of the key Site C components that are being
15 constructed.

1 **Figure B-1 Site C Project Components**



Site C Clean Energy Project

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Appendix C

Safety

1 Safety Incidents

2 From July 1 to September 30, 2024, three serious safety incidents and one serious
3 lost time injury were recorded. In addition, there were eight all-injury incidents
4 requiring medical treatment.

5 *Serious Safety Incidents:*

- 6 1. A serious near miss occurred when a contractor's truck caught fire. The fire
7 started when a loose metal container inside the truck fell onto a battery
8 terminal. This contact created an electrical arc, which ignited the flammable
9 liquid within the container. The fire then quickly spread to other combustible
10 materials in the truck. Workers used fire extinguishers to suppress the flames
11 and the Fort St. John Fire Department was called to fully extinguish the fire.
- 12 2. A serious incident occurred when a worker drove an aerial work platform (**AWP**)
13 over the berm in the approach channel without crane assistance. The AWP lost
14 control and slid 40 feet down the slope. No serious injuries occurred.
- 15 3. A serious lost time injury resulted from an incident where one worker assaulted
16 a fellow worker in a contractor's lunch trailer. The injured worker received
17 immediate medical treatment and was transported to the hospital.
- 18 4. A serious injury incident occurred during the installation of stairs in penstock 6.
19 A worker observed a section of the stairs that had buckled and risen post-
20 installation. While attempting to flatten it, the worker slipped and fell, extending
21 their hand to break the fall. The upper segment of the stairs shifted and crushed
22 two fingers. The worker severed one fingertip.

23 *All Injury Incidents (includes all work-related medical attention requiring treatment*
24 *incidents, lost time injuries, and fatalities):*

- 25 1. A worker strained their ankle while weighing sandbags in the laydown area.

-
- 1 2. A worker cut their hand with a utility knife while removing a rubber baseboard.
 - 2 3. A worker pinched and fractured their fingertip while using a torque wrench.
 - 3 4. A worker pinched and fractured their fingertip while using a manual torque
 - 4 wrench.
 - 5 5. A worker sustained a laceration on their wrist while offloading material from a
 - 6 delivery truck.
 - 7 6. A worker assaulted a fellow worker in a contractor's lunch trailer. The injured
 - 8 worker received immediate medical treatment and was transported to the
 - 9 hospital.
 - 10 7. While removing a roll of tape from a shelf, a worker didn't notice a smaller roll of
 - 11 tape on top. The smaller roll fell 1.5 feet and hit the worker's mouth. The worker
 - 12 suffered a loose tooth, which was extracted.
 - 13 8. During the installation of stairs in penstock 6, a worker observed a section of
 - 14 the stairs that had buckled and risen post-installation. While attempting to
 - 15 flatten it, the worker slipped and fell, extending their hand to break the fall. The
 - 16 upper segment of the stairs shifted and crushed two fingers. The worker
 - 17 severed one fingertip.

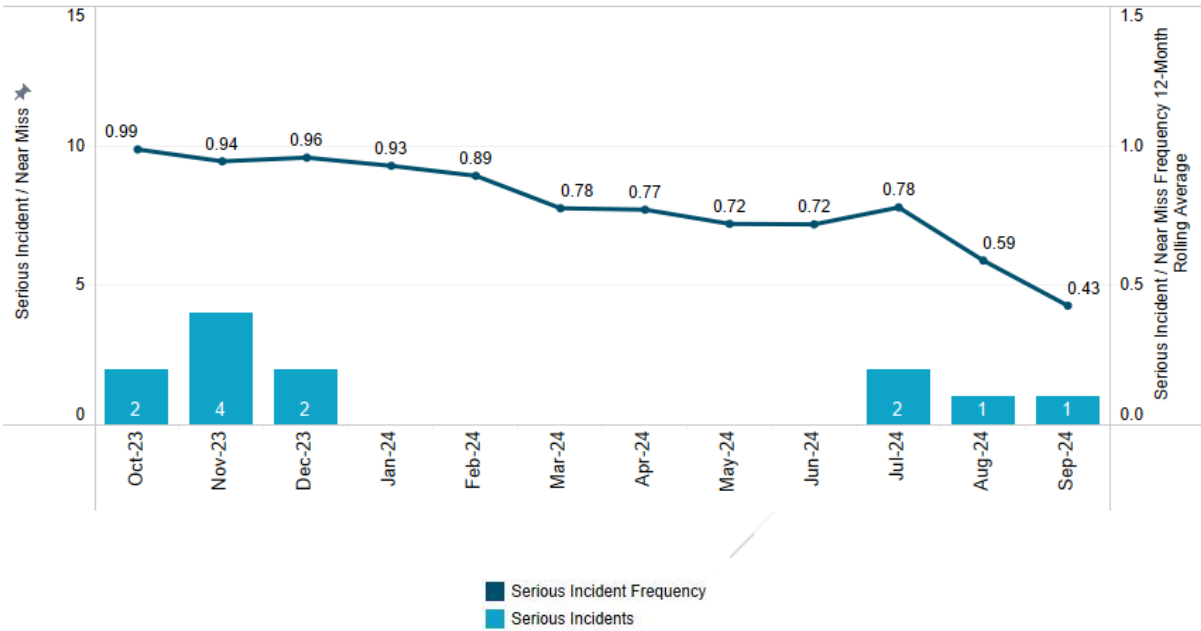
18 *Safety Performance Frequency Metrics*

19 The following graphs provide information on employee and contractor serious
20 incidents/near miss frequency, lost time injury frequency and all-injury frequency
21 from October 2023 to September 2024.

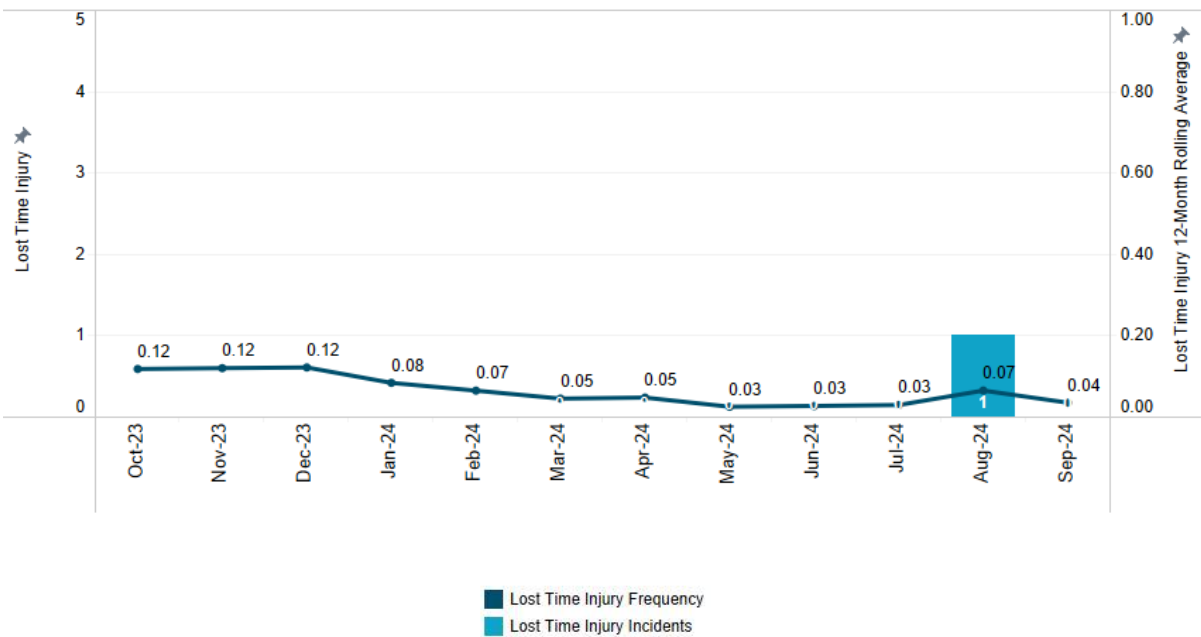
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Figure C-1 Employee and Contractor Serious Incident/Near Miss Frequency, Lost Time Injury Frequency and All-injury Frequency

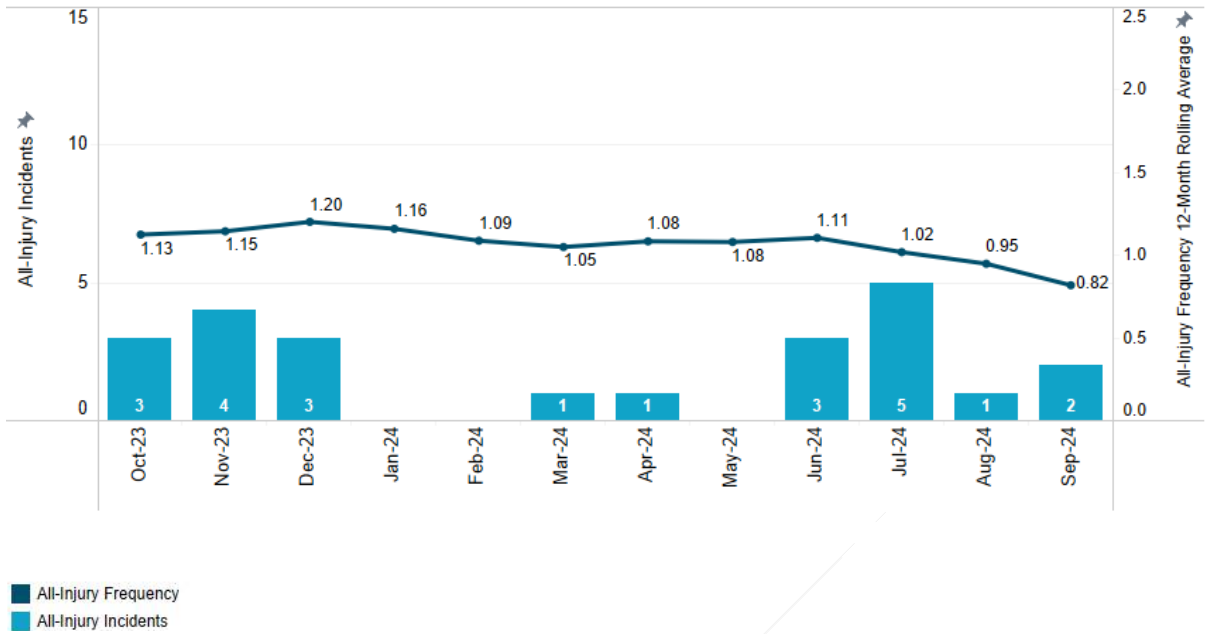
Employee & Contractor Serious Incident / Near Miss Frequency



Employee & Contractor Lost Time Injury Frequency



Employee & Contractor All-Injury Frequency



Regulatory Inspections and Orders

[Table C-1](#) lists the safety regulatory inspections and orders received from WorkSafeBC and the Ministry of Energy, Mines and Low Carbon Innovation from July 1 to September 30, 2024.

Table C-1 Safety Regulatory Inspections and Orders

#	Date of Inspections	Regulatory Agency	PPM Subproject	Inspection Report Number Title	Inspection Report Type	Inspection Report Status	Number of Orders Issued	Subject of Order	Regulation Order / Reference
1	July 5, 2024	WorkSafeBC	Balance of Plant	202417876047A	2024 Construction Initiative: Falls from elevations	Closed	3	Ladders, Scaffolds and Temporary Work Platform general standards	Order(s): OHS13.2(1)(a); OHS13.5(1)(b); OHS13.6(1) Reference(s): OHS20.4(1); OHS13.3; OHS13.4; OHS13.5(1)(a); OHS11.2(1)(b); WCA2(1); WCA23(1)(a); WCA90(1)
2	July 10, 2024	WorkSafeBC	Infrastructure	202417876053A	General site inspection	Closed	0	None	Reference(s): OHS3.3; OHS3.5; WCA31; OHS3.26(1); OHS3.26(2); WCA69(1); WCA21(1); OHS14.38(3); OHS14.38(5); OHS14.44(1); OHS15.2; OHS4.8(2)(c); OHS4.3(2)(b); OHS20.78(1)(c); OHS20.78(1)(d); OHS20.88
3	July 18, 2024	WorkSafeBC	All	202417791091A	Incident Investigation - serious near miss	Closed	0	None	Reference(s): WCA69(1); WCA71(2)(c); WCA72(2)(b)
4	August 23, 2024	WorkSafeBC	All	202417876064A	First aid procedures	Closed	0	None	Reference(s): OHS3.3; OHS3.5; WCA31; OHS3.26(1); OHS3.26(2); WCA69(1); WCA21(1); WCA24(1); OHS3.18(1)(a); OHS3.20; OHS3.23(2); OHS20.4(b)
5	August 26, 2024	WorkSafeBC	GSS	202417876058A	Incident Investigation - injury of a worker	Closed	0	None	Reference(s): WCA69(1); WCA71(2)(c); WCA72(2)(b); OHS4.26
6	August 26, 2024	WorkSafeBC	GSS	202417876060A	2024 WorkSafeBC Psychological Health & Safety Planned Inspectional Initiative	Closed	0	None	Reference(s): WCA21(1)(a)(i); WCA31
7	August 28, 2024	WorkSafeBC	GSS	202417876061A	2024 WorkSafeBC Occupational Disease Planned Inspectional Initiative	Closed	0	None	Reference(s): OHS6.112(2); OHS6.112(3); OHS6.112.1(1); OHS6.112.2(2); OHS6.112.6(1); OHS6.112.7; OHS8.5; OHS8.40(2.1)(b)
8	August 28, 2024	WorkSafeBC	GSS	202417876065A	General site inspection	Closed	0	None	Reference(s): OHS13.29(3); OHS14.38(6); OHS14.42.1(1); OHS14.42.1(3); OHS14.42.1(5); OHS14.71(1); OHS19.25(1)
9	September 17, 2024	WorkSafeBC	GSS	202417876062A	Incident Investigation - injury of a worker	Closed	3	Scaffolding components; Temporary structure support	Order(s): OHS13.15(a); OHS13.15(b); OHS20.14 Reference(s): WCA69(1); WCA71(2)(c); WCA72(2)(b); WCA88(1); WCA88(2); OHS13.3; OHS13.12; OHS13.13

Total **6**

Site C Clean Energy Project

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Appendix D

Workforce Overview

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**Table D-1 Current Site C Jobs Snapshot
 (July 2024 to September 2024)²⁸**

	Number of B.C. Workers and Total Workers	Construction and Non-Construction Contractors ²⁹ (Including Some Subcontractors). Excludes Work Performed Outside of B.C. (e.g., Manufacturing)	Engineers and Project Team ³⁰	Total
July 2024	B.C. Workers	1,551	675	2,226
	Total Workers	2,253	740	2,993
August 2024	B.C. Workers	1,441	663	2,104
	Total Workers	2,026	740	2,766
September 2024	B.C. Workers	1,305	650	1,955
	Total Workers	1,803	739	2,542

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

Employment numbers are provided by Site C contractors and are subject to revision.

Data not received by the Project deadline may not be included.

BC Hydro has contracted companies for major contracts, such as the main civil works, who have substantial global expertise. During the month of September 2024, there were no workers in specialized positions working for a Site C construction or non-construction contractor, who were subject to the Labour Market Impact Assessment process under the Federal Temporary Foreign Worker Program. Additionally, there were 14 management and professionals working for Site C construction and non-construction contractors through the Federal International Mobility Program.

²⁸ Employment numbers are direct only and do not capture indirect or induced employment.

²⁹ Construction and non-construction contractors total workforce employment numbers include work performed on the Site C dam site, transmission corridor, reservoir clearing areas, public roadwork, worker accommodation and services.

³⁰ Engineers and Project team are comprised of both onsite and offsite workers. The Project team includes BC Hydro construction management and other offsite personnel. An estimate is provided where possible if primary residence is not given.

1 **Table D-2 Site C Apprentices Snapshot (July 2024 to**
 2 **September 2024)**

Month	Number of Apprentices
July 2024	209
August 2024	196
September 2024	134

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

4 **Table D-3 Current Site C Job Classification Groupings**

Biologists and Laboratory	Carpenters	Inspectors	Construction managers/supervisors	Crane Operators	Electricians	Engineers
Foresters	Health Care Workers	Heavy Equipment Operators	Housing Staff	Heating, Ventilation, and Air Conditioning	Kitchen Staff	Labourers
Mechanics	Millwrights	Office Staff	Pipefitters	Plumbers	Sheet Metal Workers	Truck Drivers
Underground Mining	Welders	Surveyors	Security Guards	Boilermakers	Cement Masons	Social Science
Ironworkers	Other construction trades	Office managers/supervisors				

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

6 **Table D-4 Indigenous Inclusion Snapshot**
 7 **(July 2024 to September 2024)**

Month	Number of Indigenous Workers
July 2024	129
August 2024	125
September 2024	127

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

9 The information shown has been provided by BC Hydro’s construction and
 10 non-construction contractors and their subcontractors that have a contractual
 11 requirement to report on Indigenous inclusion in their workforce.

1 Employees voluntarily self-declare their Indigenous status to their employer and
2 there may be Indigenous employees that have chosen not to do so; therefore, the
3 number of Indigenous employees may be higher than shown in [Table D-4](#).

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

8 *Women*

9 In September 2024, there were 282 women working for Site C construction and
10 non-construction contractors. The number of women was provided by
11 on-Site Construction and non-construction contractors and engineers that have a
12 contractual requirement to report on the number of women in their workforce.

Site C Clean Energy Project

Quarterly Progress Report No. 35

Appendix E

**Technical Advisory Board Report and Independent
International Dam Experts Report**

There were no reports issued by the Technical Advisory Board or the independent international dam experts during the reporting period.

Site C Clean Energy Project

Quarterly Progress Report No. 35

Appendix F

**Summary of Individual Contracts Exceeding
\$10 Million**

PUBLIC

CONFIDENTIAL

APPENDIX

Site C Clean Energy Project

Quarterly Progress Report No. 35

Appendix G

Project Progression

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Site C Clean Energy Project

Quarterly Progress Report No. 35

Appendix H

Detailed Project Expenditure

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APPENDIX