

# **Bridge (Shalalth) – Seton (Lillooet) Capital Investment Update**

**June 2023**

# Agenda

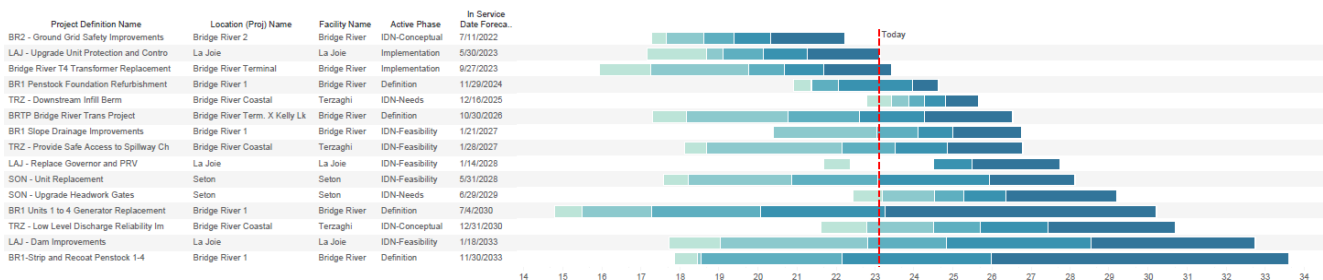
- Bridge River System Overview
- Capital Plan Update
- Access and Accommodation Studies
- Workforce
- Communications

# Bridge River System



# Capital Plan Summary

## BC Hydro Capital Projects in the region

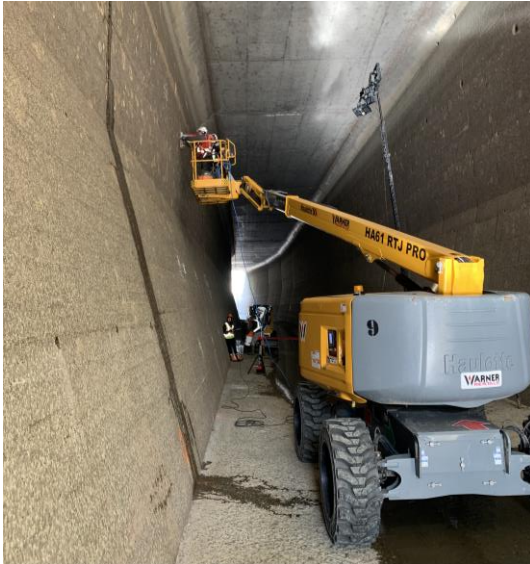


*This timeline is being used for presentational purposes only. These are the planned projects for the area and are subject to change.*

# Overview of Seton Generating Station with Bypass Alignment



# Capital Plan Summary – Seton



*Crews extracting coring samples in Seton Canal, spring 2022*

## Seton Bypass Project

- The generator and turbine are nearing end of life
  - Generator was installed in 1956; the turbine was replaced in 1977
- A bypass will provide long-term benefits for water conveyance in the Bridge River system
- Project planning is currently underway
- It is subject to BC Utilities Commission (BCUC) approval
- Targeted completion for the bypass is 2027, unit replacement schedule is under review

# Capital Plan Summary - LaJoie



*LaJoie Dam with Downton Reservoir in the background and a 25 MW powerhouse in the foreground*

## LaJoie Dam Improvement Project

### Recommended leading alternative: improve dam to full reservoir level

- The project will address dam safety risks related to aging and seismic vulnerabilities
- Received conditional endorsement from St'át'imc Authority for the leading alternative
- It is subject to British Columbia Utilities Commission (BCUC) approval
- Construction is targeted to begin 2027 and targeted completion is 2032
- Construction will require very low water levels in Downton Reservoir to enable the work

# Capital Plan Update - LaJoie



*Crews investigating at the toe of LaJoie Dam during the April 2022 drawdown*

## Downton Reservoir Drawdown, April 2022

- Upstream investigations were conducted for ~10 days
- Reservoir was lowered to 699m-700m (~10m below normal low levels) for one month
- Levels returned to normal operating ranges within 3 weeks
- Findings are being incorporated in design and construction planning



# Capital Plan Update - LaJoie



*LaJoie Dam powerhouse*

## Next Steps: Continue development and assessment of design options

- Undertake site investigations at the powerhouse and dam (including drilling at the dam)
- Carry out field studies (environmental, archaeological, etc.)
- Advance Access & Accommodations strategy

# Capital Plan Summary – Bridge River 1



*Aerial view of Bridge River Generating Station – Unit 1*

## Upgrading Bridge 1 Units 1 to 4

- Built in 1948, Generating Units 1 to 4 require upgrading as they are nearing end of life
- Certificate of Public Convenience and Necessity (CPCN) granted by the British Columbia Utilities Commission (BCUC) October 2022
- Construction is scheduled to begin in 2026
- Targeted completion is July 2030

# Capital Plan Summary – Bridge River 1 and 2



*The newly commissioned Unit 7 generator at Bridge 2*

## Bridge River Generating Station 1 Additional Key Projects:

- Units 1- 4 Penstock Internal Recoating – planning currently underway, targeted completion in 2033
- Penstock Foundation Upgrade – planning underway, completion targeted for 2024

## Bridge River Generating Station 2 Key Projects:

- Units 7&8 – Unit 7 Generator completed November 2022
- Replacement of Transformer 7 at Bridge River 2 completed, unit energized November 2022

# Capital Plan Summary - Transmission



*Transmission line 2L90 overlooking Seton Lake*

## Bridge River Transmission Project

- The project is required for upgrades and repair work on an existing transmission line in the region (2L90)
- Spring 2023, four temporary heli-pads were installed to allow crews to access the area for upcoming investigations
- Certificate of Public Convenience and Necessity (CPCN) filed with the BC Utilities Commission (BCUC) July 2021
- An updated application will be filed in spring 2024
- Targeted completion for late 2026

## Bridge River Transmission Substation – T4 Transformer Replacement Project

- T4 transformer anticipated to be in-service for December 2023

# Capital Plan Summary – Terzaghi



*Terzaghi spillway and low-level discharge outlet*

## Terzaghi Dam Spillway Chute Access Improvement Project

- Project will make the repair and inspection of the spillway safe for workers
- Construction is planned for 2024, targeted completion 2025
  - Intermittent road closures will be required along Mission Mountain Road

## Terzaghi Dam Low Level Discharge Reliability Project

- The project will improve reliability of the low-level outlet system.
- Project is in early planning stages, targeted completion 2030

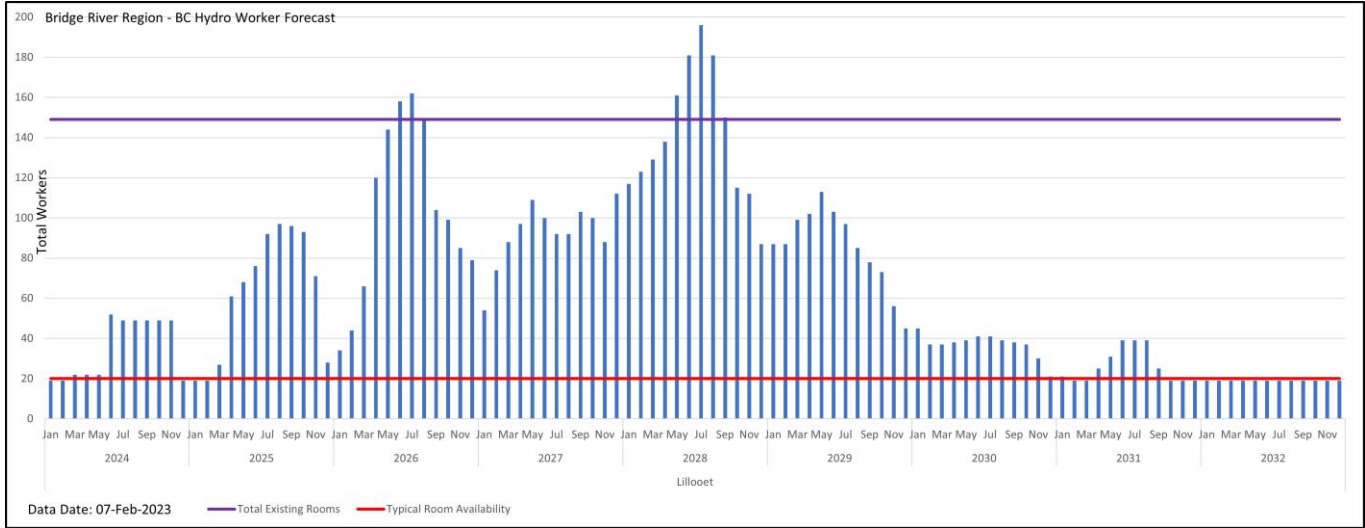


# Access and Accommodation Studies



- In the Bridge River region we're studying:
  - Transportation
  - Access
  - Worker accommodation
  - Socio-economic impacts and business opportunities
- This is an important opportunity for local communities, organizations, businesses and the public to better understand how BC Hydro operates in the region and find collaborative solutions
- Expected study completion is 2024

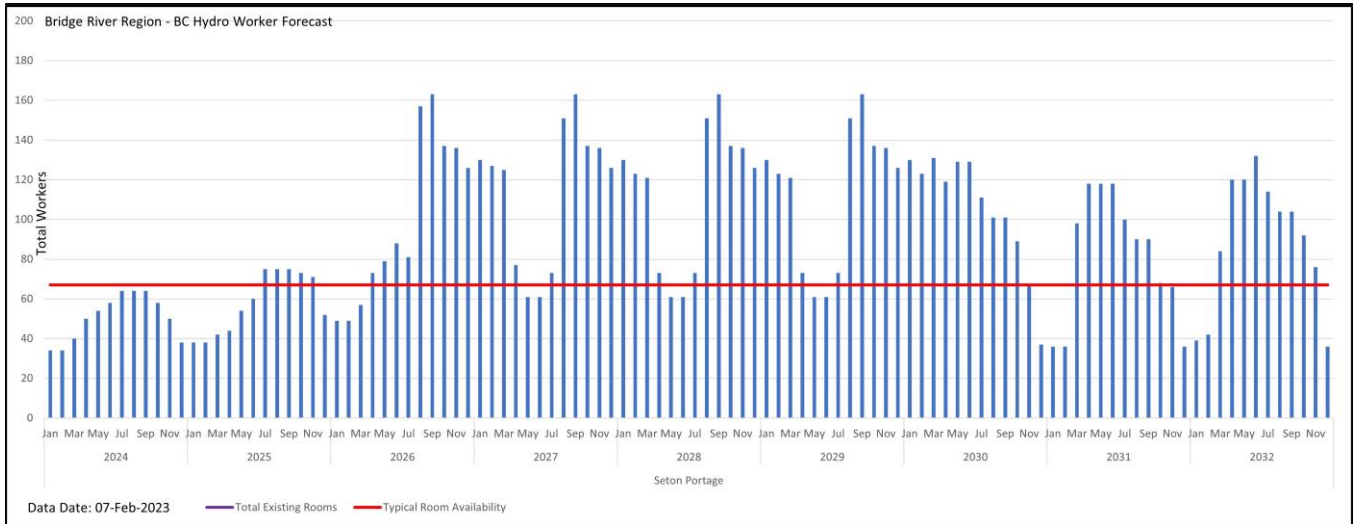
# Workforce Forecast - Lillooet



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# Workforce Forecast – Seton Portage

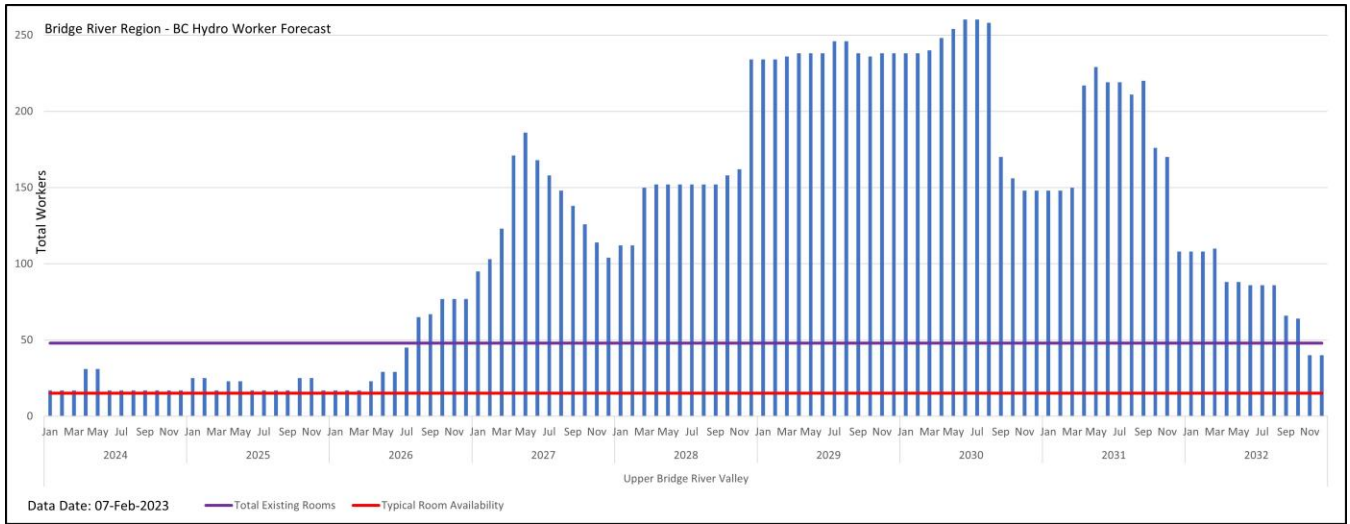


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# Workforce Forecast – Upper Bridge River Valley



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# First Nations - Consultation




*Field work for the Bridge River Transmission Project*

The Bridge River system is located entirely in St'át'imc Nation Territory.

In 2011, St'át'imc, BC Hydro and the Province signed an historic agreement that addressed past impacts and provides a framework for creating a new, more positive, relationship into the future.

As projects move forward, we're collaborating at various levels to better understand and integrate St'át'imc perspectives and interests into our planning, and to work together to identify meaningful economic and employment find opportunities across the projects.

# Communications



## Bridge River newsletter Projects update—Winter 2023

Bridge 1 Units 1-4 along the Seton Lake Reservoir

**"The project is needed urgently"**  
**BCUC approves Bridge River 1 Units 1-4 Generator Replacement Project**

The B.C. Utilities Commission has given their approval for the Bridge River 1 Units 1-4 Generator Replacement Project, saying there is, "...no justification to delay the BR1 Project because the project is needed urgently."

The project at Bridge River 1 will replace aging equipment in the generating station to improve reliability, restore capacity and increase operating flexibility.

Project manager John Fitzgibbon welcomed the granting of the Certificate of Public Convenience and Necessity (CPCN) for the project.

"We're grateful it's been found to be in the public interest. We're thankful to our stakeholders and St'atimc Nation for their involvement in the regulatory approval process."

The BCUC had asked for the Bridge River 1 project to be coupled with the Bridge River Transmission Project so the applications could be reviewed together. The transmission project will continue with their regulatory approval process separately.

In their decision the panel cited the growing need for clean energy in the province, managing water flows in the Lower Bridge River system, and aging infrastructure.

With the certificate in hand, Fitzgibbon's team is focused on getting the project to the end of the planning phase and into implementation.

"System design and detailed design of the generator's major components will take about nine months. It will be another 18 months for the manufacturing of the first generator, and about 27 months before new equipment shows up at site if everything goes to plan." The targeted completion of the project is 2030.

**Update on work forecast**

BC Hydro's workforce in the Bridge River region can vary depending on project status.

- This summer approximately 40 workers were in the area.
- The number increased to 50 this fall with the majority of work completed mid-November
- Workers have been staying at existing facilities with the majority in Ts'a'aliv/Seton Portage.
- No additional accommodations required for 2022 or 2023.

**BCUC DECISION**

You can find the full BCUC decision on the Bridge River Projects here:

Certificates of Public Convenience and Necessity for the Bridge River Projects - BCUC

**BC Hydro**  
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# Questions?