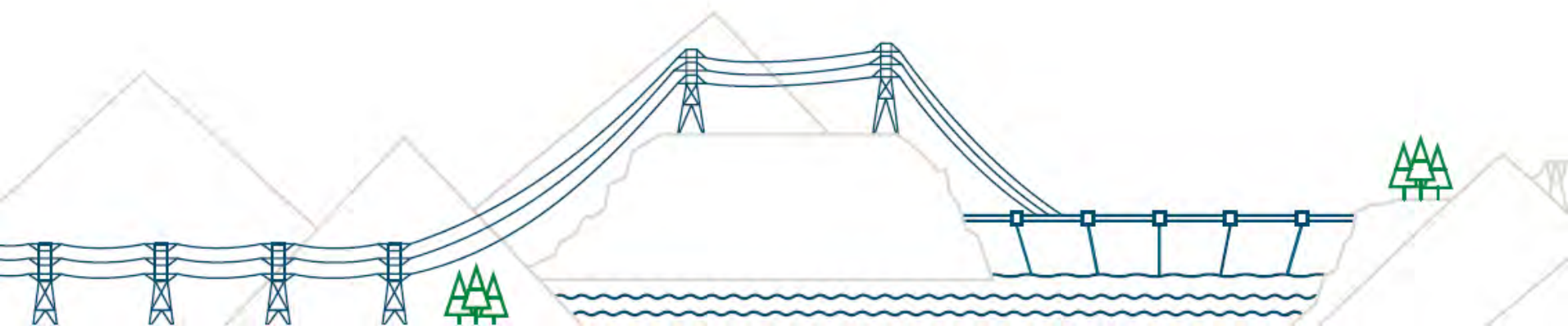


Site C Clean Energy Project

Regional Community Liaison Committee Project Briefing

March 13, 2019



On Dam Site Construction Update

Ross Turner & Steve Abbey



On Dam Site Construction Update

- **2019 Summary Schedule**
- **Left Bank**
 - **Diversion Tunnels**
 - **Dam Construction**
- **Right Bank**
 - **Powerhouse**
 - **Spillway**
- **Plans for Spring Season**
 - **Worker Accommodation Lodge Expansion**
 - **Penstock Shipments**
 - **Care of Water**

On Dam Site Summary Schedule: 2019

| Construction Activity | Anticipated Schedule |
|------------------------------------|-----------------------------|
| Diversion Tunnels | Q3 2018 to Q4 2019 |
| Assemble Till Conveyor | Q4 2018 to Q2 2019 |
| Left Bank Dam Grout & Fill | Q3 2019 to Q3 2020 |
| Crusher & Aggregate Production | Q1 2017 to Q3 2021 |
| Spillway RCC | Q2 2019 to Q4 2019 |
| Powerhouse Concrete | Q3 2018 to Q4 2020 |
| Penstock | Q2 2019 to Q1 2021 |
| Infrastructure Upgrades | Ongoing |
| *All major construction activities | *To be completed by Q4 2024 |

Left Bank



Left Bank



Diversion Tunnels

- Inlet Portal



Left Bank: Diversion Tunnels

- Outlet Portal



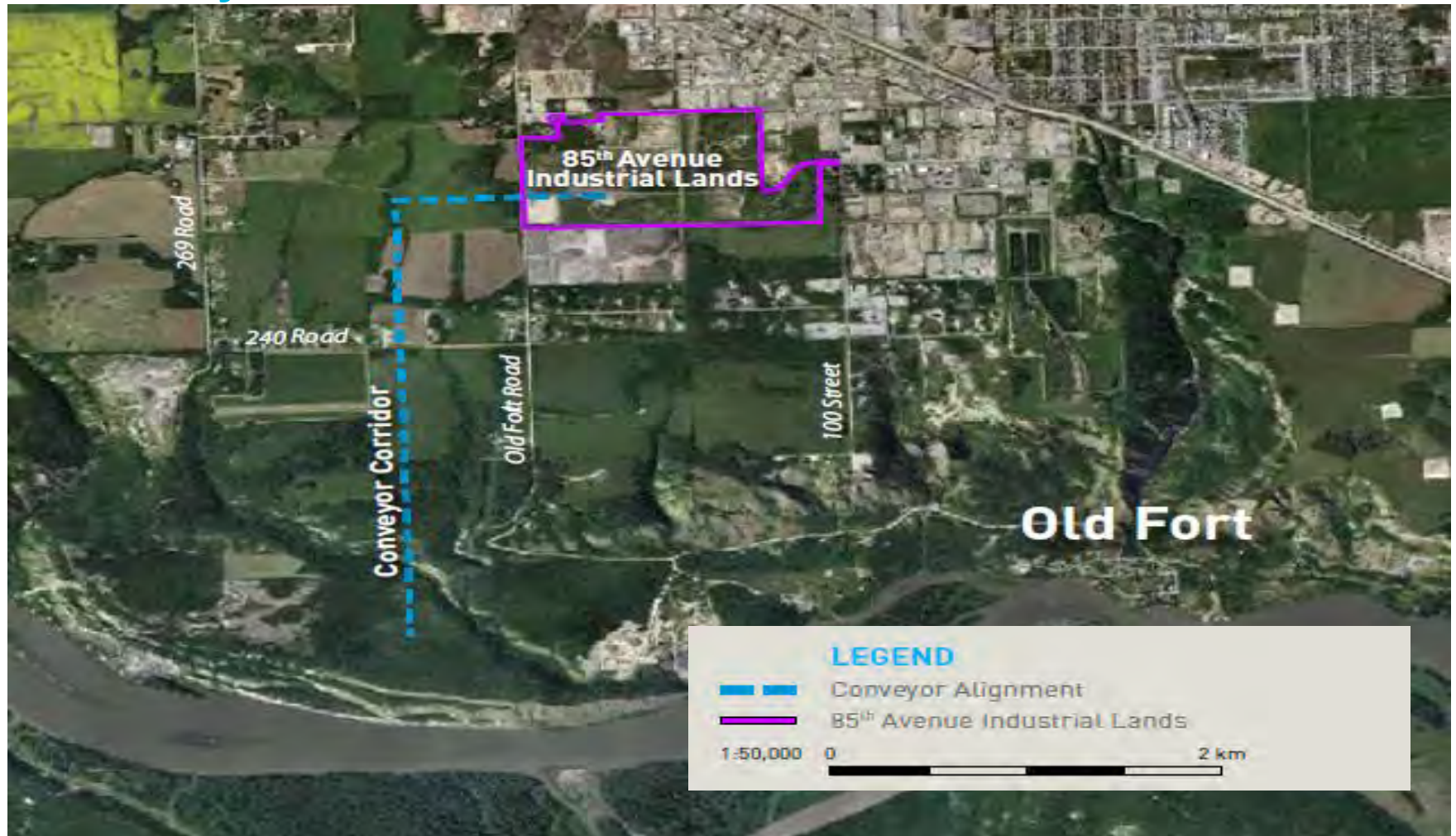
Left Bank: Dam Construction

- Earthfill Dam



Left Bank: Dam Construction

- Conveyor Corridor



Left Bank: Dam Construction

- Till Conveyor



Right Bank



SITE C - RIGHT BANK

Right Bank

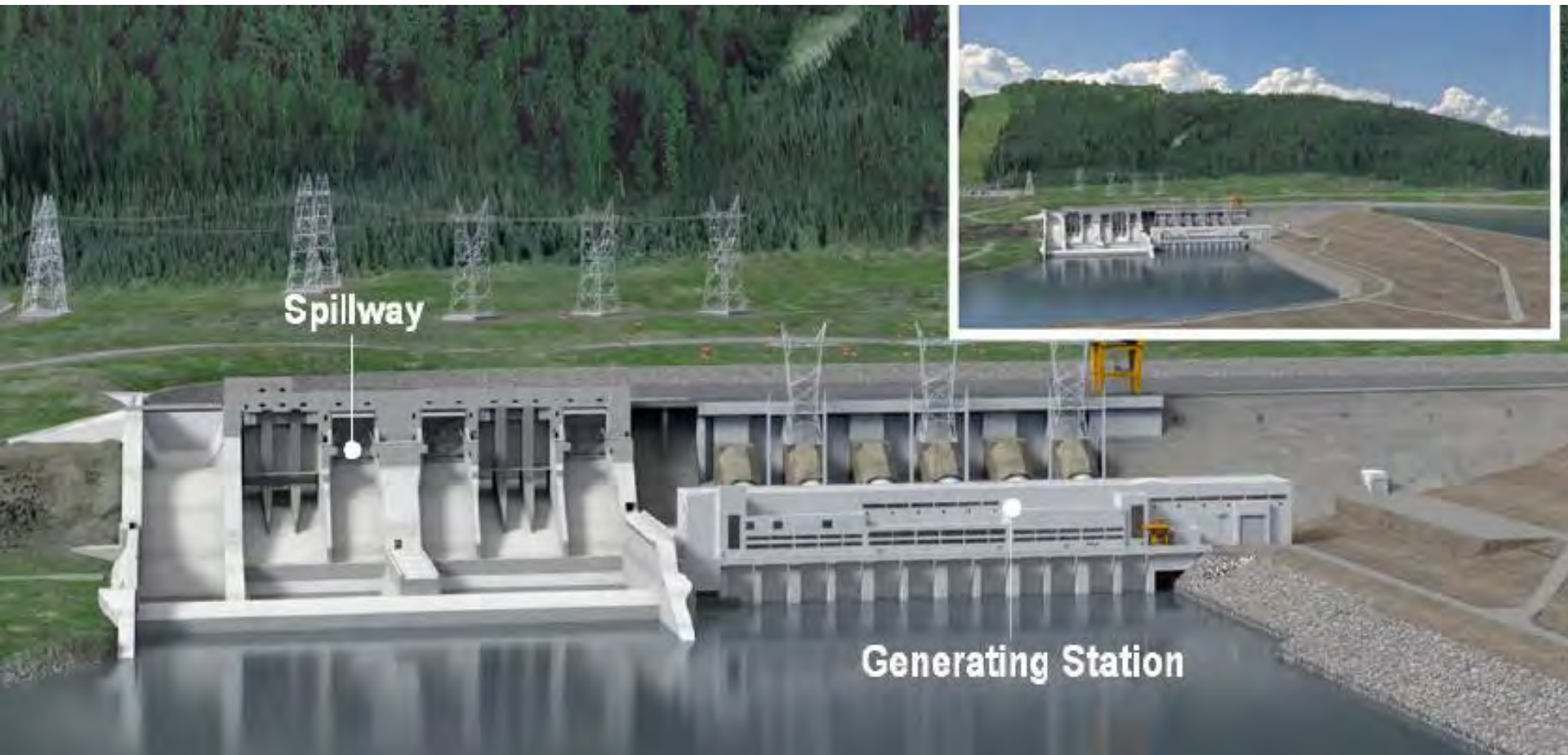


Right Bank: Powerhouse



Right Bank: Spillway

- Future RCC Placement



Right Bank: Spillway

- Excavation Work



Plans for Spring Season

- Worker Accommodation Lodge Expansion



Plans for Spring Season

- Penstock Shipments



Plans for Spring Season

- Care of Water



Plans for Spring Season

- Care of Water



Off Dam Site Construction Update

Chris Waite



Off Dam Site Construction Update

- **Transmission Work**
 - **Site C Substation**
 - **Transmission Lines**
 - **Peace Canyon Gas Insulated Switchgear Building Expansion**
- **Highway 29 Realignment**
 - **Schedule**
 - **Halfway River Segment**
 - **Cache Creek East**
- **Reservoir Clearing Work**
 - **Work in Progress**
 - **Work Plan**

Transmission Work: Site C Substation



- Site C substation showing new 500kV transmission line terminal tower

Date of photo: January 23, 2019

Transmission Work: Site C Substation



- South bank shunt reactor from factory acceptance test at the Siemens facility in Weiz, Austria.

Date of photo: January 15, 2019

Transmission Work: Transmission Lines



- First structure (33/1, self-supporting tower) and the second structure (29/1, guyed tower)

Date of photos: February 25, 2019

Transmission Work: Peace Canyon Gas Switchgear Building Expansion



- New protection panels ready for installation in Peace Canyon control room and wiring to the new Protection & Control panels

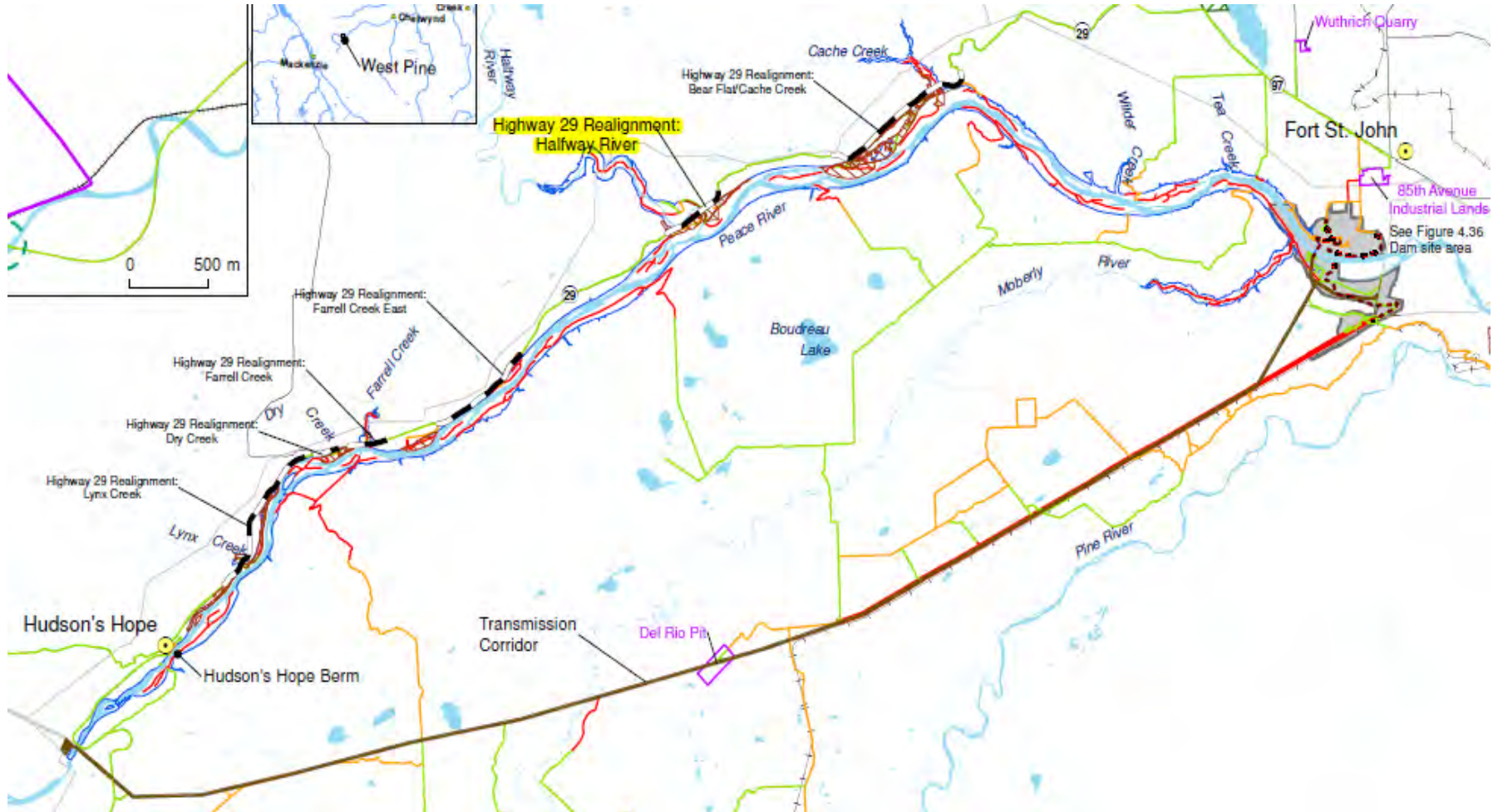


Date of photo: February 16, 2019

Highway 29 Realignment: Schedule

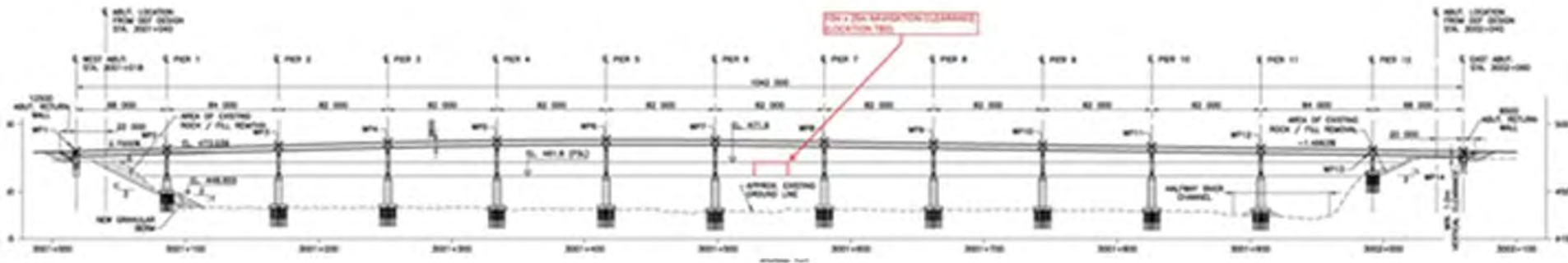
| Segment name | Site preparation | Construction | Procurement Start Date for Construction (Quarter and year) |
|--------------------|------------------|--------------|--|
| Cache Creek East | 2018 – 2020 | 2020 – 2023 | Q1/2020 |
| Cache Creek West | 2017 – 2018 | 2018 – 2020 | Q3/2018 |
| Halfway River | 2019 – 2019 | 2019 – 2022 | Q2/2019 |
| Farrell Creek East | 2020 – 2020 | 2021 – 2022 | Q1/2021 |
| Farrell Creek | 2020 – 2020 | 2020 – 2022 | Q2/2020 |
| Dry Creek | 2019 – 2020 | 2020 – 2021 | Q1/2020 |
| Lynx Creek East | 2020 – 2021 | 2020 - 2022 | Q1/2020 |
| Lynx Creek West | 2020 – 2021 | 2021 – 2023 | Q1/2021 |

Highway 29 Realignment: Halfway River Segment

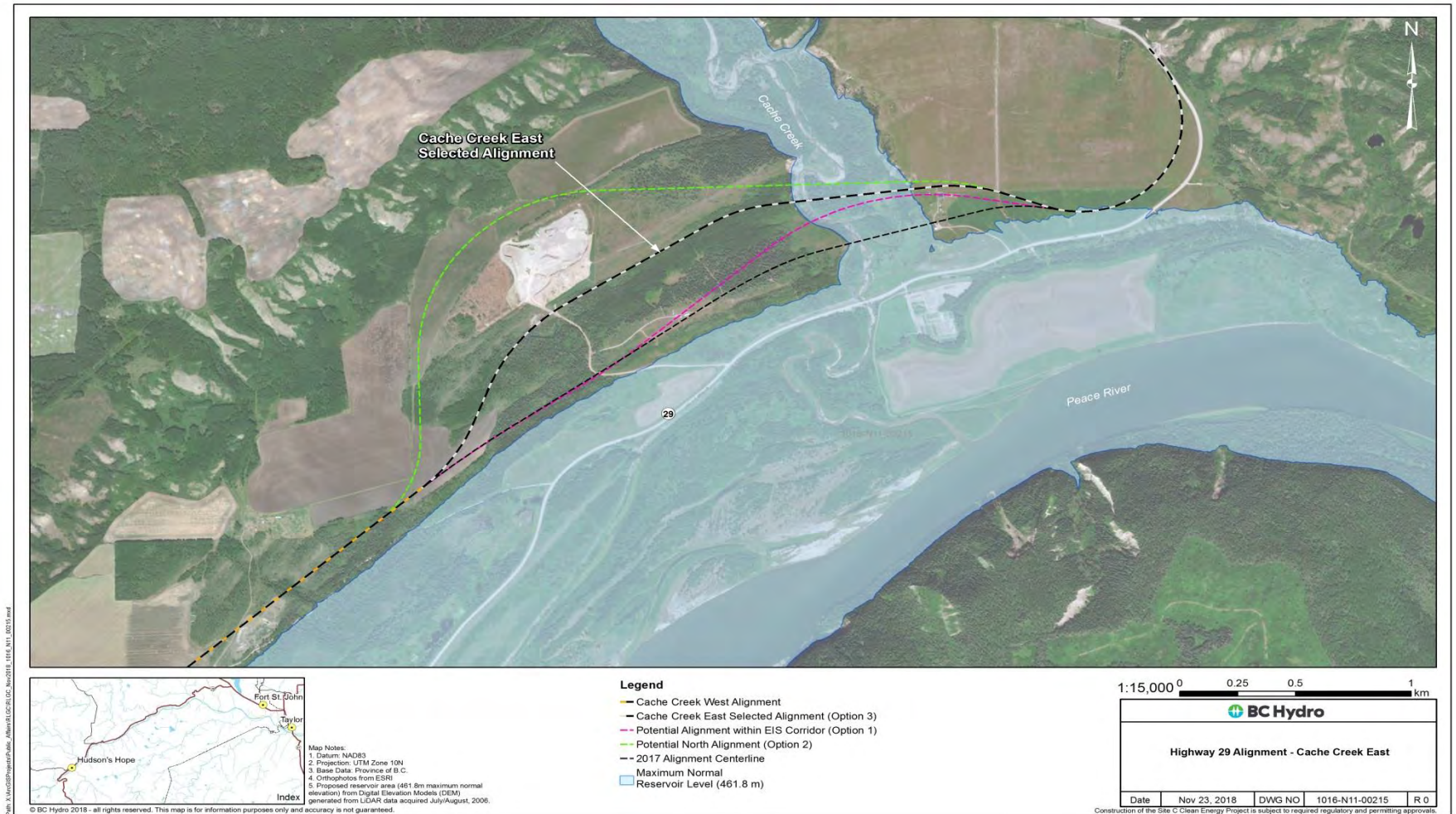


Highway 29 Realignment: Halfway River Segment

- Halfway River scope of work:
 - grading and paving of 3.7 kilometres of highway, including a 1,040 metre long bridge with 12 piers up to 47 metres tall.
 - Profile of Halfway River Bridge, per proposed design (not to scale)



Highway 29 Realignment: Cache Creek East



- Environmental Assessment Certificate Amendment

Reservoir Clearing: Work in Progress

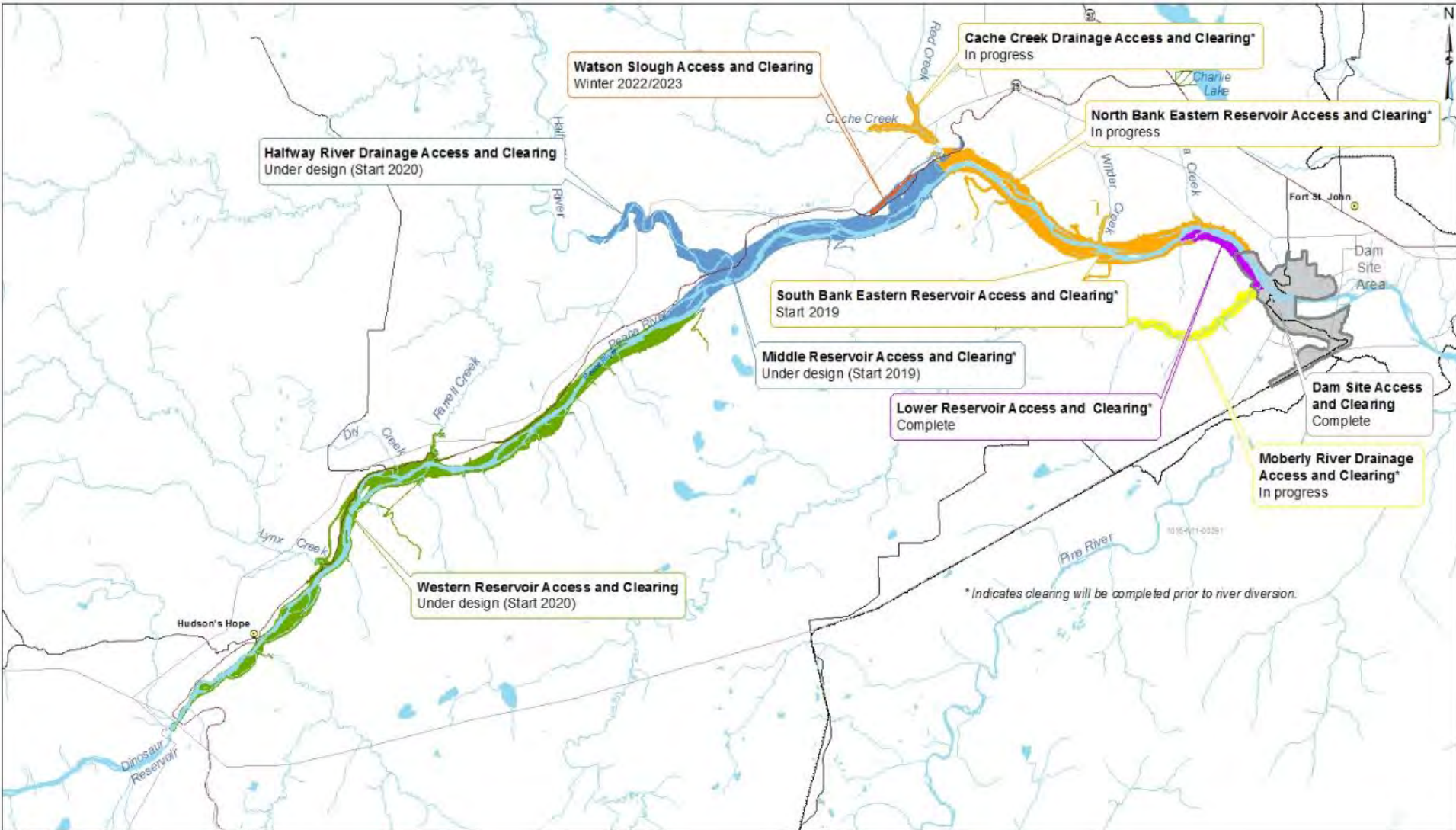


- Feller buncher clearing and helicopter logging in Cache Creek drainage – Eastern Reservoir



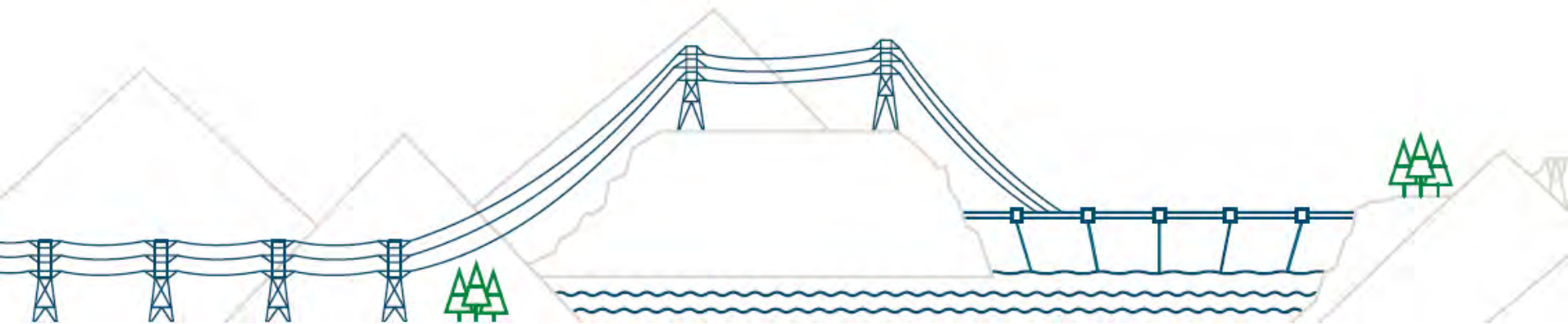
Date of photos: January 2019

Reservoir Clearing: Work Plan



EAC Amendments & Program Updates

Shanna Mason



EAC Amendments Update

- In February 2019, BC Hydro received an EAC amendment (EAC Amendment #4) allowing for the use of machines in riparian zones during reservoir clearing.
 - Where worker safety prohibits manual tree falling and vegetation removal
 - As addressed in a site-specific prescription prepared by a QEP
- BC Hydro is planning to submit three EAC amendment applications in March 2019. The amendments are related to:
 - Ground Water Monitoring versus Compensation for Ground Water Impacts
 - Expansion of the Worker Accommodation
 - Realignment of Highway 29 at Cache Creek



Site C Project Heritage Program

February 2019



BC Hydro has been studying the Site C project area since 2010 in order to understand and mitigate the project's impact on heritage resources.

Heritage resources include archaeological, historical, and palaeontological sites, objects and features.

For thousands of years, the Peace River Valley has been home to Indigenous peoples. To develop the project's Environmental Impact Statement, archaeologists sought the input of Indigenous groups to understand the area's significant sites and study the impact on heritage resources and areas of cultural importance.

Archaeologists also sought input from Indigenous groups to develop a set of mitigation, management, and monitoring plans guide the program.

The plans meet requirements set out in the conditions of the project's Environmental Assessment Certificate and the federal Decision Statement. The activities are authorized by permits issued under the Heritage Conservation Act.

The Site C heritage program covers the work done before and during construction to identify heritage resources. The program focuses on three main areas:

- Archaeology (the study of human activity prior to European contact)
- Palaeontology (the study of ancient organisms and fossils)
- Historical sites (the valley's early Euro-Canadian settlement sites)

The heritage resources management plan describes the ways the project plans to mitigate adverse effects on heritage resources. Learn more at sitecproject.com

Approximate area studied as part of the Site C heritage program



Community and Social Mitigation Update

Nancy Pepper



BC Hydro and Northern Lights College Pre-Carpentry Skills Pilot Program, Site C

Learn essential employment
and carpentry skills in
preparation for employment
opportunities with BC Hydro
and its contractors



BC Hydro Peace Agricultural Compensation Fund



Jobs and Business Opportunities

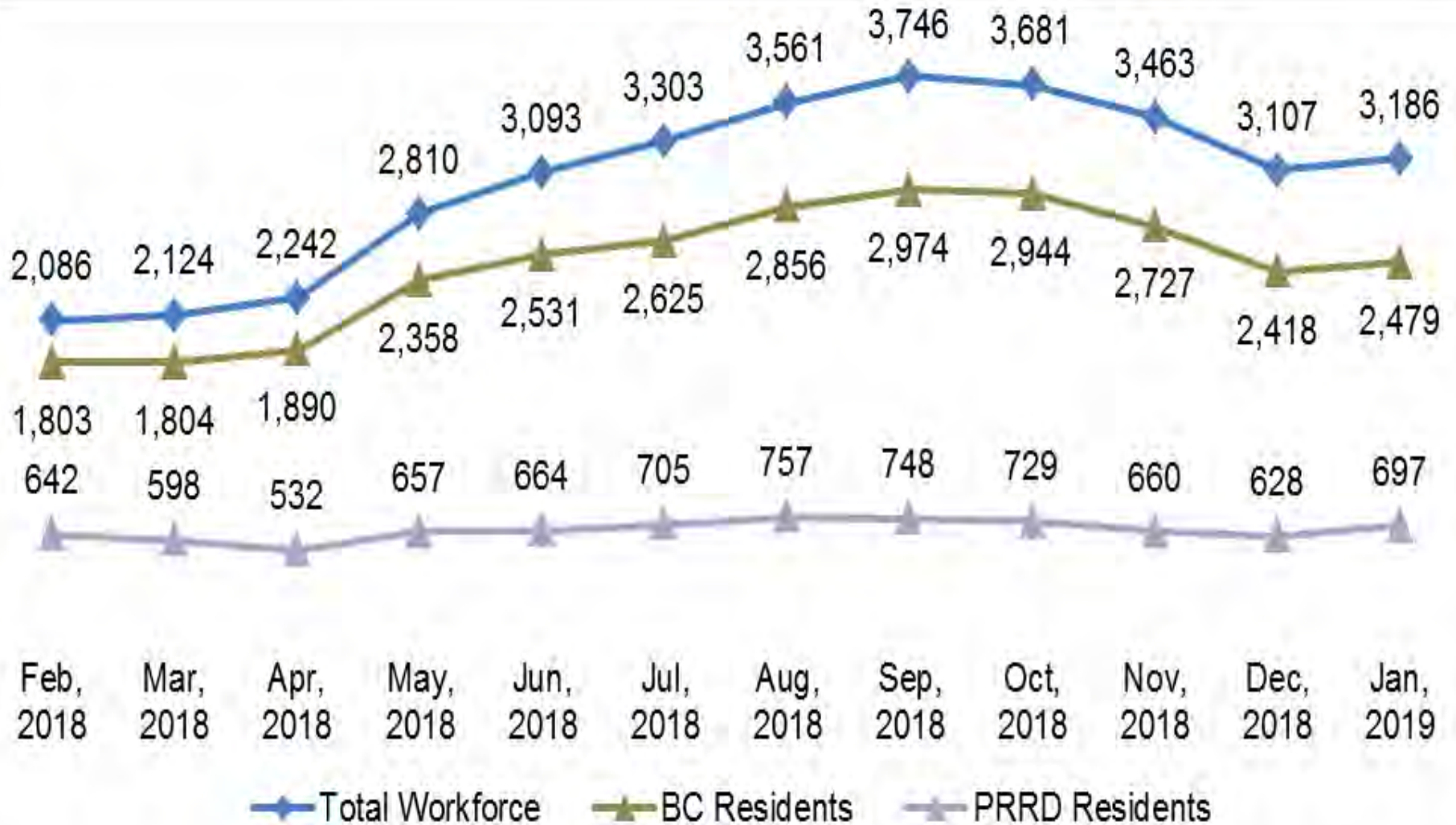


Employment Statistics

- Site C jobs posted to WorkBC / Employment Connections (Fort St. John) website; all contractors listed on Site C website.
- BC Hydro requires all major contractors to report employment information.
- Total of **3,186 workers** in January 2019; **2,479** from B.C (78%). Total of **697** workers from PRRD (27%).

| Site C Employment Statistics – January 2019 | | | |
|---|--------------------|---------------------------|-----------------|
| | # of Total Workers | # of BC Primary Residents | % of BC Workers |
| Construction and Environmental Contractors | 2,579 | 1,927 | 75% |
| Engineers and Project Team | 607 | 552 | 91% |
| Total Workforce | 3,186 | 2,479 | 78% |

Site C jobs snapshot (January 2019)



2018 Q4 Regional Business Participation

Companies engaged by BC Hydro and Site C contractors to provide goods & services in relation to Site C construction between October- December 2018

| Community | Number of Businesses | Community | Number of Businesses |
|----------------|----------------------|---------------|----------------------|
| Cecil Lake | 1 | Moberly Lake | 4 |
| Charlie Lake | 16 | Montney | 1 |
| Chetwynd | 37 | New Hazelton | 1 |
| Dawson Creek | 34 | Pouce Coupe | 2 |
| Fort Nelson | 1 | Prince George | 33 |
| Fort St. James | 1 | Rose Prairie | 1 |
| Fort St. John | 310 | Taylor | 9 |
| Hudson's Hope | 10 | Tumbler Ridge | 3 |
| Total | | 464 | |



BC Hydro

Power smart