

NELSON HYDRO

HYDRO POLE UPGRADES AND REPLACEMENT

Telus' Project Falcon is part of a \$4-billion investment in new fibre infrastructure and facilities that Telus is making across British Columbia to provide its customers with a new high-speed network.

This Aerial Make Ready (AMR) Project includes the upgrade or replacement of over 500 poles or structures throughout the City of Nelson and surrounding area. Nelson Hydro poles carry hydro lines, telephone lines, and cable lines.

Due to tight timelines and Telus' schedule, there will be several power line crews working throughout the City and area.

The project started in June and will run until the end of November. To date, over 300 poles have already been replaced.

This project is important for our customers as we are upgrading or replacing infrastructure that is important for reliability and safety to your electric utility. We are working cooperatively with our partner Telus on this project. Without the completion of the AMR project, the

necessary Telus infrastructure cannot be installed, thereby preventing the installation of a new high-speed network/fibre to homes and businesses.

Residents may be impacted as multiple crews using large equipment will be setting power poles and working at heights that will create congestion in the area where they are working. To upgrade or replace poles, areas around the pole will be disturbed. Any landscape restoration work necessary will be completed near the end of the project.

Disruptions to traffic and parking areas will be managed with notification and signage as needed.

For any planned outages, crews will hand-deliver notices to affected residences where practical. Sandwich boards will also be placed in affected areas.

For more information, please contact Nelson Hydro Administration at (250) 352-8240 or nelsonhydro@nelson.ca.

REPLACEMENT OF HYDRO LINE FROM CITY TO NORTH SHORE UNDER THE ORANGE BRIDGE

Nelson Hydro has installed new high voltage power line marine cables that cross the lake adjacent to the orange bridge.

This new line is not just a benefit to North Shore customers, but to all Nelson Hydro customers. With this new high voltage marine cable crossing, Nelson Hydro is laying the foundations needed to power Nelson Hydro customers well into the future.

As part of the project, a 17 minute video of the underwater cable was taken. If you're interested in viewing, visit nelson.ca/cable.

The cable installation itself was completed in April. The second phase is currently being completed which includes testing and energization. Removal of all the old infrastructure will follow.

Why is this project important for our customers?

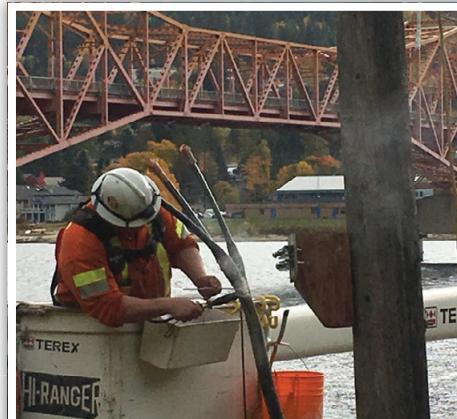
The existing cable has failed twice and was at the end of its life expectancy.

Features of the new cable include:

- Lifespan will be approximately 45 years
- Increased power carrying capacity
- Improvement to North Shore reliability and City power supply redundancy
- Large enough to manage load requirements, not just now, but 25 years from now

The top photo shows the repair of one of our marine cables feeding the North Shore that failed and was repaired in October of 2018.

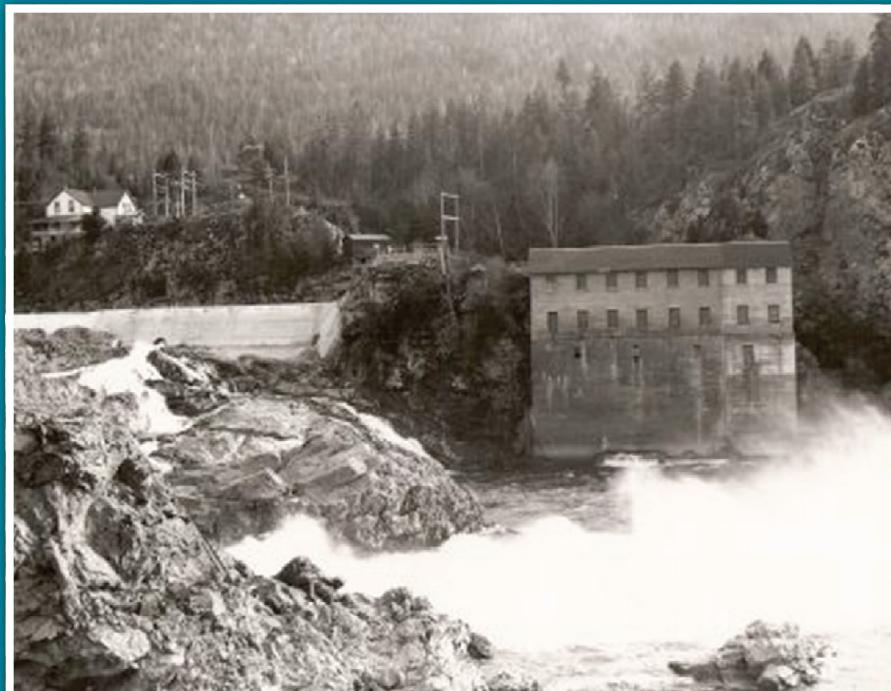
The bottom picture shows us taking delivery of new cable to replace the failed cable. This work will be finalized this year.



This work, and last year's re-conductoring of the North Shore feeder, will allow better supply options to improve reliability for our North Shore customers.

As a bonus, when we were cleaning up the job site early this year, we cleaned up the boat launch parking lot by grading and adding new gravel.

POWER PLANT – CONCRETE REPAIR WORK



Historic photo of the Bonnington Power Plant taken in 1940.

The Power Plant at Bonnington Falls started operations on January 27, 1907, over 100 years ago.

Historically the design life span of concrete used in a dam is 100 years before remediation is required. The oldest concrete dams are around 120 years old.

One of our vital safety concerns is the aging of the concrete and the foundation rock. This includes:

- thawing-freezing and drying-wetting cycles
- growth of plants in cracks, etc.
- seepage in the foundation and the dam body



Concrete in the forebay area prior to work being done.

The aging processes have to be followed by periodic visual inspections, tests and monitoring of the dam, but not everything is visible or measurable.

A dam inspection was completed in 2016. It was recommended that the concrete be resurfaced within five years. In 2017, the first phase of the dam concrete repairs was completed. First we refurbished the main forebay gate which allowed us to drain and dry the forebay, and then we repaired the first section of dam face, both above and below the waterline behind the trash rack. This was the first time in its history that concrete repairs were needed or undertaken. There was damage above the waterline where the concrete had deteriorated, due to freeze/thaw cycles. Below the waterline, the water does not freeze consistently, and it was recommended that repairs should be completed to three feet below the current water line.

Phase II will continue in 2020.

Interested in a group tour of the power plant? Please contact: 250-352-8240 or nelsonhydro@nelson.ca.

STATUTORY HOLIDAY OFFICE CLOSURES

Offices are closed on Monday, November 11, 2019 for Remembrance Day.

AFTER HOURS EMERGENCY SERVICE

For operations emergency service, please call 250-352-3103. To report a power outage, electrical hazard, damage to Nelson Hydro equipment or for outage updates, call 1-877-32HYDRO (1-877-324-9376).

NELSON TRANSIT SERVICE

Transit service is not available on Monday, November 11, 2019 for Remembrance Day. For transit information visit www.bctransit.com or call 1-855-993-3100.

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