

MICA PROJECTS FEBRUARY 2015 PROJECT UPDATE

Mica switchgear building at night.

SINCE OUR LAST PROJECT UPDATE IN SUMMER 2013:

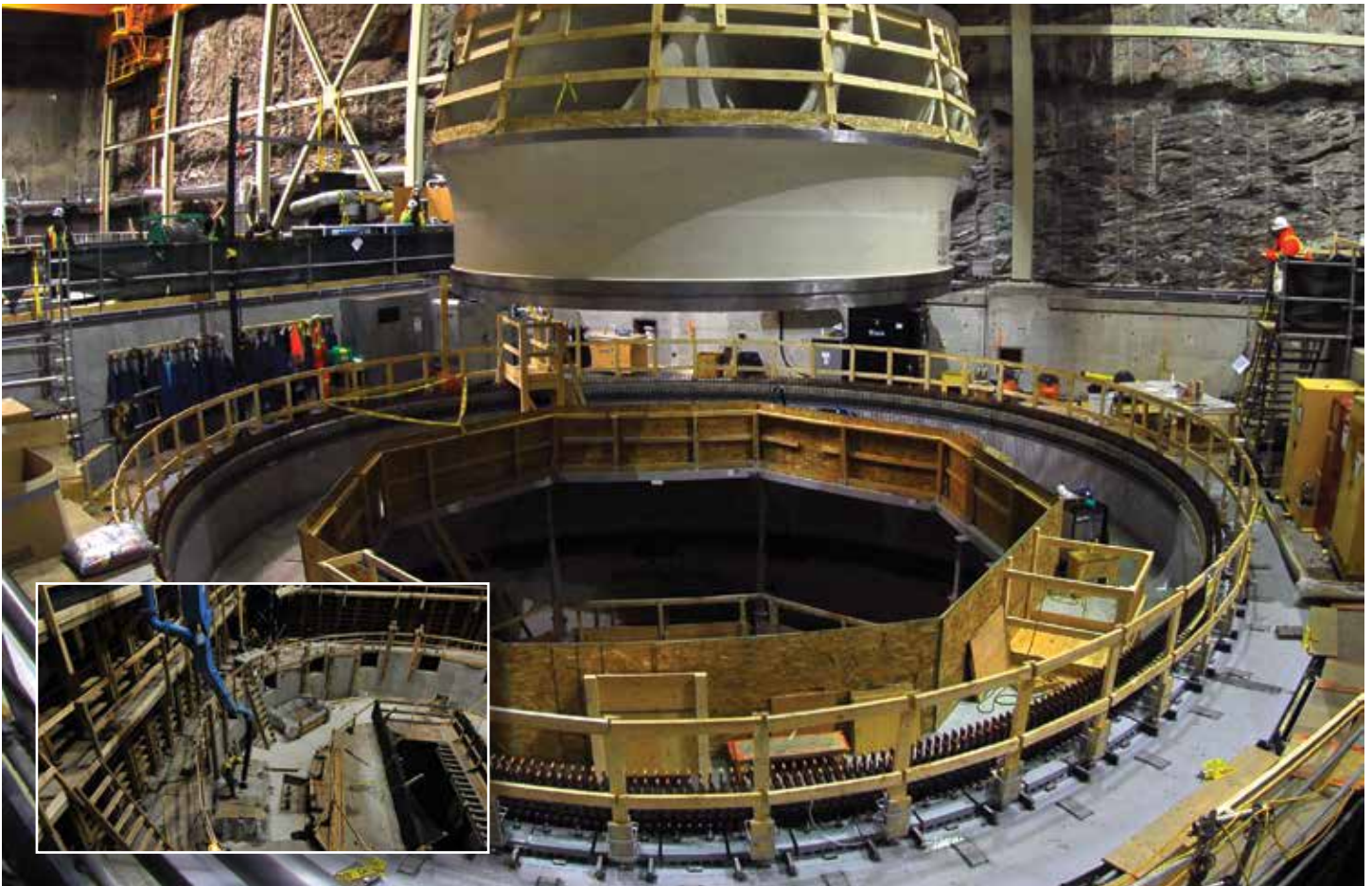
- The new fifth generating unit was installed and has now started supplying electricity to BC Hydro's grid.
- BC Hydro completed the Mica switchgear project that replaced aging switchgear equipment from the original powerhouse construction in the 1970's and installed additional equipment needed for the new generating units.
- BC Hydro finished construction of a new series capacitor station near Seymour Arm on the 500 kilovolt transmission line that runs from Mica Dam to the Nicola substation. The station is needed reliably to deliver the additional electricity that will be generated by the new units to BC Hydro customers.
- BC Hydro has started to assemble the new sixth generating unit.

PROJECTS TO HELP MEET BC'S ELECTRICITY NEEDS

To ensure the province of BC continues to have the electricity it needs, BC Hydro is re-investing close to \$1 billion in projects to expand and upgrade Mica Generating Station. Originally designed to hold six generating units, only four were installed at the time of construction with a combined maximum capacity of 1,805 megawatts (MW). Now BC Hydro is adding two new generating units that will each provide approximately an additional 500 megawatts of capacity.

THE MICA PROJECTS INCLUDE:

- Two new generating units at the Mica Dam powerhouse on the Columbia River system, 145 kilometres north of Revelstoke. Originally designed to hold six generating units, only four generating units were installed when Mica was constructed.
- New switchgear equipment to deliver power from Mica's underground generating units to the above-ground transmission lines.
- A new series capacitor station on the 500 kilovolt transmission line near Seymour Arm needed to deliver the increased electricity generated from Mica to BC Hydro's grid.



Installation of the 137.5 tonne turbine in Mica's underground powerhouse that will power the new fifth generating unit.

NEW GENERATING UNITS WILL PROVIDE MORE CAPACITY

Now in its fourth year, on-site construction work continues to complete the installation of two new generating units into existing unit bays in Mica's underground powerhouse. Mica Unit 5 was successfully installed and has now started operating. The new unit provides 500 megawatts of capacity to BC Hydro's system. This is a significant amount of electricity that that will help meet winter peak demand loads when it is cold and dark and BC Hydro's customers are using more electricity for heat, lights, appliances, and electronics. For Mica Unit 6, construction of the concrete and steel water passage that will channel water from the new turbine into Revelstoke Reservoir below Mica Dam is complete. Now Andritz Hydro is assembling the generator (stator and rotor). The new 137.5 tonne turbine that will power the generator was delivered to site in October, 2013. Andritz Hydro manufactured the turbine in Germany and transported it over 13,000 kilometres to Mica Dam. Remaining work includes installing the turbine and various electrical components and tying the new unit into the rest of the Mica powerhouse systems. The target in-service date for Mica Unit 6 is late 2015.

NEW SWITCHGEAR EQUIPMENT INSTALLED

BC Hydro's project to replace Mica's aging high voltage switchgear equipment and install additional equipment needed for the two new generating units was completed in August 2014. Gas insulated switchgear equipment safely conducts the electrical energy produced from the underground generating units at Mica to the above-ground transmission lines.



Work on the new switchgear equipment.

QUICK FACTS

- The Mica expansion is BC Hydro's largest capital project since the building of Revelstoke Dam in the 1980's.
- The estimated cost of the project including the Seymour Arm Series Capacitor Station is close to \$1 billion.

NEW SEYMOUR ARM SERIES CAPACITOR STATION ENERGIZED

BC Hydro finished construction of a new series capacitor station near Seymour Arm on the 500 kilovolt transmission line that runs from Mica Dam to the Nicola substation. The station was energized in November 2013. The station is needed to reliably deliver the additional electricity that will be generated by Mica's two new generating units to BC Hydro's customers.



New Seymour Arm series capacitor station.

MICA'S CHIEF KINBASKET LODGE WINS PRESTIGIOUS AWARD



Mica 5&6 upgrade Project Manager Owen Williams (middle) congratulates Secwepemc Camp and Catering General Manager Robin Billy (right) and Horizon North Vice President Pat Hammerschmidt (left), on earning the 2014 Outstanding Achievement in the Joint Venture Business of the Year category during the BC Aboriginal Business Awards gala on October 15, 2014.

In 2014, Secwepemc Camp and Catering was awarded a BC Aboriginal Business Award for their work to build and operate the Chief Kinbasket Lodge— a temporary 400-person construction camp that houses Mica project workers. Secwepemc Camp and Catering is a joint venture between the Adams Lake, Neskonlith

and Splatshin First Nations and Horizon North Camp and Catering. The Mica camp contract is one of the largest tendered contracts ever awarded by BC Hydro to a First Nations joint venture.

PROJECTS DESIGNED WITH STAKEHOLDERS

The Mica Units 5 and 6 Core Committee worked from January 2008 until June 2009 to identify and address potential project effects. The Committee included representatives from federal, provincial and local government, First Nations, interested groups and individual stakeholders. Recommendations designed by the Committee were further refined during the Environmental Assessment Office review to maximize project benefits and minimize impacts. BC Hydro will deliver on all project commitments. Highlights are included below.

TO BENEFIT THE REGION

Helping Build Trades Skills

BC Hydro is providing a total of \$120,000 through the Mica 5 and 6 Project to support trades training programs offered in the local communities of Revelstoke, Golden, Valemount and Nakusp. Local trades training programs supported by BC Hydro to date have involved 79 students. These programs include:

- Okanagan College 2010 Residential Construction Program and 2012 Electrical Foundation Program in Revelstoke,
- Selkirk College 2010 Carpentry Program in Nakusp
- College of the Rockies 2011 and 2013 Introduction to Trades programs in Golden.

BC Hydro has allocated remaining funding to several training programs planned for 2015 including an Introduction to Trades program in Golden, an Electrical Pre-apprenticeship program in Revelstoke, and an ACE-it Carpentry Program in Nakusp.



Nakusp ACE-it Carpentry Program students.

QUICK FACTS

- So far more than 1500 individual workers have been hired to help with project work at Mica.
- Chief Kinbasket Lodge has cooked 30,798 pounds of bacon, 502,740 eggs, and 17,593 pounds of beef to keep these workers well fed.

Employment

So far on-site construction activities at Mica and the Seymour Arm Series Capacitor Station have created the equivalent of roughly 1000 full time jobs for tradespeople in the region. All labour at Mica is hired through the Collective Agreement between the Columbia Hydro Constructors Ltd (CHC) which represents the affiliated unions and the Allied Hydro Council of British Columbia (AHC).



Work on Mica 5 generating unit stator.

For more information about jobs, please contact

COLUMBIA HYDRO CONSTRUCTORS
chcgeneral@bchydro.com
250 805 4300
Fax: 250 805 4340

MINIMIZING IMPACTS

Nesting Platforms

BC Hydro installed two nesting platforms near Mica dam in spring 2012 to provide additional nesting habitat for osprey and other raptors occupying areas that could be affected by construction related traffic and noise. One nesting platform was installed near the blue bridge roughly eight kilometres south of Mica dam and the second was installed on the east side of the reservoir



roughly three kilometres south of BC Hydro's Mica camp adjacent to Highway 23 North.

New Wetland

In September 2012, BC Hydro constructed a new wetland at the Pottlatch Creek Recreation Site north of Mica dam. The wetland is intended to compensate for potential impacts of project construction-related traffic on Western Toads. Prior to the wetland being built, toads would lay their eggs in a flooded drainage ditch at the recreation site each spring but the ditch would dry out before the tadpoles became toads. Now the toads are using the new wetland that provides ideal habitat for growth and development, helping the toad population in the area and other wetland species.

Highway Safety

A number of road safety measures are in place to address construction-related traffic on the 136 kilometre Highway 23 North from Revelstoke to Mica. Throughout project construction additional RCMP patrols are being conducted.



Mountain Caribou

ADDITIONAL INFORMATION

For details on the environmental review and Mica 5 and 6 Project mitigation and compensation commitments including a copy of the Mica Units 5 and 6 Core Committee report, please visit eao.gov.bc.ca.

QUESTIONS? PLEASE CONTACT

JENNIFER WALKER-LARSEN
Stakeholder Engagement Advisor BC Hydro
250 814 6645
Jennifer.walker-larsen@bchydro.com