



OCTOBER 2013 PROJECT UPDATE

SINCE OUR LAST PROJECT UPDATE IN SUMMER 2012:

- The new turbine for the new fifth generating unit was delivered to Mica in June 2013.
- The new turbine for the sixth generating unit is on its way to Mica and is expected to be delivered in 2013.
- Work to prepare the concrete and steel water passage from the new fifth turbine into Revelstoke Reservoir below Mica Dam is nearly complete.

PROJECTS TO HELP MEET BC'S ELECTRICITY NEED

To ensure the province of BC continues to have the electricity it needs, BC Hydro is re-investing close to \$800 million 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. BC Hydro is also replacing aging high voltage switchgear equipment at the facility needed to maintain reliability and installing additional equipment needed to support the new generating units.

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.



Barge transport of new turbine down Kinbasket Reservoir to Mica dam

NEW GENERATING UNITS WILL PROVIDE MORE CAPACITY

Now in its third year, Mica 5 and 6 Project construction continues with installation of two new generating units into existing unit bays in the Mica Powerhouse.

For Mica Unit 5, work to prepare the concrete and steel water passage that will channel water from the new turbine into Revelstoke Reservoir below Mica Dam is well underway. The new 137.5 tonne turbine that will power the fifth generating unit was delivered to site in June, 2013. Andritz Hydro manufactured the turbine in Germany and transported it over 13,000 kilometres to Mica Dam.

Remaining work includes installing the new turbine, generator, and various electrical components to complete construction and tie the new unit in to the rest of the Mica powerhouse systems. The target in-service date for Mica Unit 5 is late 2014.

For Mica Unit 6, work on the water passage continues. Andritz Hydro has completed welding on the spiral case and Peter Kiewit Infrastructure Group is preparing to embed the water passage components in concrete. The new turbine for Mica Unit 6 has been manufactured and is on its way to Mica Dam and expected to arrive soon.



Loading of new turbine at Rotterdam, Netherlands

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 is close to \$800 million.
- The new turbines that will power the generating units will be transported over 13,000 kilometres to Mica from Germany.

NEW SWITCHGEAR EQUIPMENT TO MAINTAIN RELIABLE GENERATION

To maintain reliable generation of electricity from the facility, BC Hydro is continuing work to both replace the original gas-insulated switchgear equipment and install additional equipment needed to support the new fifth and sixth generating units. Gas insulated switchgear (GIS) equipment safely conducts the electrical energy produced from the underground generating units at Mica to the above-ground transmission lines.

So far on the project, new gas-insulated switchgear equipment that will bring the power generated by the new fifth and sixth generating units to the switchgear building has been installed and the original switchgear equipment for two of the original four generating units has been replaced. Also switchgear work on the existing two transmission lines from Mica Generating Station has been completed. Work to replace the switchgear for the remaining two original generating units continues. Mitsubishi Electric Power Products Incorporated (MEPPI) is completing the project work that will be finished before the new fifth generating unit comes online, expected in 2014.

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 of progress on some of the project commitments 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's



Inspecting gas-insulated switchgear

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

Employment

The two Mica projects are expected to create an average of 200 jobs each year of construction. All labour 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). CHC has staff on site to manage hiring for both BC Hydro and project contractors.

For more information about jobs, please contact

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QUICK FACTS

- Mica generates 7,202 gigawatt hours (GWh) of electricity each year that represents about 15 per cent of the electricity generated in the province.
- As of September 30, 2013, more than 800 individual workers have been hired to help with project work at Mica.
- BC Hydro recently expanded its Mica Creek Camp to house facility staff and up to 400 temporary workers.

MINIMIZING IMPACTS

Nesting Platforms



Osprey building nest

BC Hydro installed two nesting platforms near Mica dam in spring 2012 to provide alternative 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



Pottlach Creek wetland

In September 2012, BC Hydro constructed a 12 by 15 metre wetland at the Pottlach Creek Recreation Site north of Mica dam to compensate for potential impacts of project construction-related traffic on the local Western Toad population. 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



RCMP on Highway 23 North

A number of road safety measures are in place to address construction-related traffic on the 136 kilometre stretch of Highway 23 North from Revelstoke to Mica. Throughout project construction additional RCMP patrols are being conducted. From April 1, 2012 to March 31, 2013, the RCMP conducted 69 patrols.

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. For more information about the Mica 5 and 6 or Mica Switchgear Projects, please visit our website at bchydro.com.

QUESTIONS? PLEASE CONTACT

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