



▲ Powerhouse



▲ Mica runner on barge

# Mica Dam

New unit of a hydropower plant in Canada commissioned

**A**NDRITZ HYDRO's first unit for the Mica Dam expansion project of units #5 and #6 began commercial operations in early 2015.

Mica Dam is located in British Columbia, Canada, some 145 km from the city of Revelstoke. It has a height of 240 m and was originally built in 1973 under the terms of 1964 Columbia River Treaty between the USA and Canada to jointly control the Columbia River.

The first four generating units with a total capacity of 1,800 MW started commercial operation between 1976 and 1977, with two additional units to be installed in existing bays at a later date.

ANDRITZ HYDRO Canada entered a contract with British Columbia Hydro in July 2009 for the design, supply, installation, and commissioning of units #5 and #6. After successful completion of the model test, the execution of the project started in November 2010.

Major components for HPP Mica Dam were supplied by several ANDRITZ HYDRO manufacturing facilities with the turbine runners provided by ANDRITZ



▲ Stator assembly

HYDRO Germany. The rotor structures and lower brackets were delivered by ANDRITZ HYDRO China, the head covers, bottom rings, wicket gates and operating mechanisms were shop assembled by ANDRITZ HYDRO Mexico.

Limited-capacity roads and multiple bridges in the area created a transportation challenge when the heavy, 137 ton Francis runner had to be brought over forest roads, changing trailers to adapt to the different conditions and finally being conveyed by barge across Mica Dam reservoir.

The execution of the project's aggressive schedule for the first unit was not easy due to HPP Mica Dam's remote location and being an underground powerhouse. In consideration of these

circumstances, the work was executed under very high safety standards for the workers and with special care for the environment to protect the pristine region from any contamination by the works.

Unit #5 started commercial operation in early 2015 and unit #6 will follow by end of 2015, adding a total of 1,040 MW of capacity to the HPP Mica Dam project.

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#### TECHNICAL DATA

Output: 2 x 520 MW / 2 x 570 MVA  
Head: 170 m  
Runner diameter: 6,300 mm  
Speed: 133.33 rpm

