

REVELSTOKE UNIT 5 PROJECT UPDATE

DECEMBER 2010

BC HYDRO PROJECT TO INSTALL A FIFTH GENERATING UNIT AT THE REVELSTOKE GENERATING STATION IS NEARLY COMPLETE, EXPECTED TO BE IN-SERVICE BY 31 DECEMBER 2010.

BC HYDRO'S OPERATION OF REVELSTOKE UNIT 5 WILL PERIODICALLY INCREASE COLUMBIA RIVER FLOWS DOWNSTREAM OF REVELSTOKE DAM. REVELSTOKE RESERVOIR WILL CONTINUE TO BE OPERATED WITHIN ITS LICENSED LIMITS.

ALL OF THE ENVIRONMENTAL AND SOCIAL PROGRAMS RECOMMENDED BY THE REVELSTOKE UNIT 5 CORE COMMITTEE TO ADDRESS PROJECT EFFECTS ARE UNDERWAY. MOST PROGRAMS ARE COMPLETE.

PROJECT STATUS

BC Hydro completed the installation of the fifth turbine and generating unit at Revelstoke Generating Station in August 2010. Now testing is underway to ensure the generating unit operates according to its specifications. BC Hydro expects the generating unit to be in-service by the end of December, 2010.

The new generating unit will increase the capacity of Revelstoke Generating Station by approximately 500 megawatts, bringing the facility's total capacity to 2480 megawatts.

The fifth generating unit allows the facility to produce more power at any given moment. BC Hydro will use this extra capacity to meet increasing provincial peak demand loads and help the Province achieve the Clean Energy Act objective of electricity self-sufficiency by 2016.

REVELSTOKE GENERATING STATION OPERATIONS

BC Hydro operates Revelstoke Generating Station as a peaking plant, meaning that the available water is used to maximize generation during the time of day when customer demand for electricity is high and the value of the power is the greatest. As a result, power generation (and downstream Columbia River flows) from the facility tends to be greatest in the morning and evening periods and lowest at night during the low load hours.



INCREASED COLUMBIA RIVER FLOWS

BC Hydro's operation of Revelstoke Unit 5 will increase Columbia River flows downstream from Revelstoke Generating Station during peak generation periods. The increased flow will be more noticeable in areas close to the dam and when Arrow Lakes Reservoir levels are low.

Expected changes to Columbia River flows downstream of Revelstoke Generating Station at peak generation with 5 units compared to 4 units at low Arrow Lakes Reservoir level of 434 metres (1424 feet).

Location	Increase in water level (metres)	Increase in water velocity (metres per sec)
Revelstoke Dam tailrace	0.6	0.7
Revelstoke Golf Course	0.4	0.3
Revelstoke Airport	0.1	0.1



Revelstoke Dam tailrace

START OF MINIMUM FLOW FOR COLUMBIA RIVER

As recommended by the Columbia River Water Use Plan, BC Hydro will change Revelstoke Generating Station operations when the new unit is in service to make sure water discharge flows are always at or above 141.6 cubic metres per second (5,000 cubic feet per second). This minimum flow is expected to benefit fish and fish habitat in the mid-Columbia River during low Arrow Lakes Reservoir levels. BC Hydro has implemented a monitoring program to determine whether the minimum flow provides the expected benefits. Four years of baseline data has been collected.

MINIMAL CHANGE TO REVELSTOKE RESERVOIR

The amount of water available for power generation stays the same with the addition of the fifth generating unit so Revelstoke Reservoir will continue to be operated within its normal operating range of 1.5 metres (4.9 feet). Reservoir levels are expected to fluctuate slightly more often within this range however during the winter and spring periods. This is a result of the larger discharge capacity at Revelstoke Generating Station (5 units) compared to Mica Generating Station (4 units)

ENVIRONMENTAL AND SOCIAL PROGRAMS NEARLY COMPLETE

All environmental and social programs recommended by the Revelstoke Unit 5 Core Committee and further refined during the provincial Environmental Assessment Office environmental review have been started and most are complete. The Revelstoke Unit 5 Core Committee included representatives from federal, provincial and local government, First Nations, interested groups and individual stakeholders.

The project's Environmental Assessment Certificate included a total of 76 commitments to maximize project benefits and minimize project impacts. Key mitigation programs include:

LOCAL AND FIRST NATIONS EMPLOYMENT

The Columbia Hydro Constructors (CHC) Agreement was used to support local and First Nation equity hire. The project hired over 380 person-years of trades work under the CHC Agreement. Of these, 33% (125 person-years) were local hires and about 6% (22.8 person years) were First Nation hires.



Penstock installation

RIVERBANK PROTECTION

A total of 1.4 km of riverbank along the Revelstoke Golf course was covered with rock rip-rap to protect the riverbank from increased river flows due to the operation of the fifth unit. The rip-rap was designed to also address operation of a sixth unit when it is eventually installed. An environmental assessment study identified the golf course riverbank as the only site requiring protection from increased Columbia River flows.



Revelstoke Golf Club riverbank

PUBLIC SAFETY

BC Hydro has improved signage at key locations to warn users along the mid-Columbia River and shoreline areas of the upstream dam and fluctuating water levels.

TRADES TRAINING

BC Hydro contributed \$30,000 to the Okanagan College Residential Construction Program to help build trades capacity in the Revelstoke area.

WESTSIDE ROAD REPAIR

As agreed by the City of Revelstoke, BC Hydro contributed \$150,000 for Westside Road repairs to address wear and tear from project traffic.

AFFORDABLE HOUSING

As agreed by the City of Revelstoke, BC Hydro contributed \$250,000 to the Revelstoke Housing Society to address project worker impacts on local rental housing.

ADDITIONAL INFORMATION

The Revelstoke Unit 5 Core Committee report, details of the environmental review, and full listing of project commitments can be found at www.eao.gov.bc.ca.

QUESTIONS

If you have any questions please contact:

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