Canada
Chaudière Falls

ANDRITZ HYDRO was awarded a contract by Chaudière Hydro LP. (owned by Hydro Ottawa) for supplying the complete Water-to-wire equipment for one hydropower plant at Chaudière Falls in August 2014.

The Ottawa River has always played a key role in the development of Canada. Since the commissioning of the first generating station at Chaudière Falls in 1891, the Ottawa River has become a major source of renewable electrical energy production with some 2,300 MW of hydropower capacity installed at 12 hydropower plants along its length.

Over the years, seven generating stations at the Chaudière Falls location have been built by different companies. Hydro Ottawa owned two of these hydropower stations. In 2012 the company acquired three more stations as well as the remaining undeveloped water rights.

Hydro Ottawa will now redevelop the site by decommissioning two of the three acquired hydropower stations and building a new low-profile, run-of-river power plant. The four turbines with a nominal capacity of 8 MW will be the most powerful ECOBulb™ turbines delivered to date by ANDRITZ HYDRO.

HPP Chaudière Falls is located within the city limits of Ottawa, the capital of Canada. The site itself presents many challenges. Construction must take place without disturbing power generation or traffic circulation in the vicinity. The new facility must also be aesthetically pleasing, complimenting the urban and historical nature of the site and be welcoming to the public.

Once complete, the 29 MW facility will produce enough clean energy to power 20,000 homes.

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TECHNICAL DATA

Output: 4 x 8 MW
Head: 10.1 m
Speed: 163.6 rpm
Runner diameter: 3,350 mm

Germany
Illerstufen V–VII

ANDRITZ HYDRO Germany has received an order from Bayrische Elektrizitätswerke GmbH (BEW) for the electromechanical equipment for three hydropower stations on the Iller River.

The scope of supply consists of three Bevel Gear Bulb turbines, each with a runner diameter of 1,600 mm, synchronous generators and a large electrical package, including erection and commissioning.

BEW owns five run-of-river power stations along the Iller River, among these are the Illerstufe V (Fluhmühle), the Illerstufe VI (Legau) and the Illerstufe VII (Maria Steinbach). All these hydropower stations were built between 1938 and 1944 and are equipped with Straflo turbines – single regulated axial turbines with a fixed runner position and integrated generator pole shoes located on the outer rim of the runner blades.

Due to a change in the operation license, the decision was made to replace one of the existing Straflo turbines at each location with a double-regulated Bevel Gear Bulb turbine. The new turbines are able to work continuously under part-load conditions with good efficiency values.

The handover of the turbine equipment for the three locations is planned to take place in three stages, at the end of the years 2016, 2017 and 2018.

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TECHNICAL DATA

Illerstufe V – Fluhmühle:
Output: 1.07 MW
Voltage: 3.1 KV
Head: 8 m
Speed: 300 rpm
Runner diameter: 1,600 mm
Illerstufe VI – Legau:
Output: 1.17 MW
Voltage: 3.1 KV
Head: 8.65 m
Speed: 300 rpm
Runner diameter: 1,600 mm
Illerstufe VII – Maria Steinbach:
Output: 1.11 MW
Voltage: 3.1 KV
Head: 8.85 m
Speed: 300 rpm
Runner diameter: 1,600 mm