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View of powerhouse, dam and area

**ANGOLA** – Angola has one of the fastest growing economies in the world. Due to rapid urbanization and population growth, especially in the capital city of Luanda, there is a huge and growing demand for electricity. As a result Angola has taken steps to improve its energy supply.

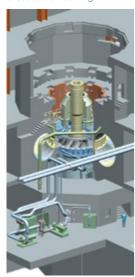
In 2014, ANDRITZ HYDRO received a contract to supply the electro-mechanical equipment for the new Laúca hydropower plant located in the middle section of the Kwanza River. This project consists of a main power house with six units and an eco-power house with one further unit. The scope of supply for ANDRITZ HYDRO includes design, supply, installation supervision, and commissioning of the Francis turbines, generators, main transformers, isolated bus ducts, as well as control and protection systems. The security, access control and telecommunication systems for both the main and eco power houses are also included within the scope of supply.

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Cross section drawing







The time schedule was challenging from the very beginning of the project, with the hydraulic development completed within the first four months and the site delivery of the embedded parts started in 2014. A complex sourcing concept was employed to fulfil the very demanding delivery schedule, expediting shop assemblies and functional inspections at the workshops.

After a commissioning phase of two months and successful first synchronization of unit#1 the inauguration ceremony took place in the presence of President José Eduardo dos Santos on August 4th, 2017. Commissioning of the remaining units is being conducted at two-monthly intervals. All six main units will be in commercial operation by mid-2018. With a total capacity of 2,070 MW, HPP Laúca will produce approximately 8,600 GWh of renewable energy per year – enough to supply about 8 mio. Angolan households – making a significant contribution to the fast growing demand of the country.

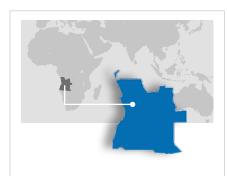
Corporate social responsibility is taken very seriously by ANDRITZ HYDRO and during the site works at Laúca hydropower plant, several important CSR activities are taking place. A permanent training center was built directly at the Laúca site with the objective of preparing technicians for operations and maintenance activities – and the commercial operation of the plant itself – but also to train local people for future power generation and transmission projects in Angola. ANDRITZ HYDRO completely furnished three laboratories for this training center.

## **AUTHOR**

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## Laúca | Angola

## Technical data:

Runner diameter:

Total output: 2,070 MW Scope:  $6 \times 338$  MW (Main)  $1 \times 42$  MW (Eco)

Voltage:  $6 \times 18 \text{ kV (Main)}$  $1 \times 15 \text{ kV (Eco)}$ 

Head: 200 m (Main)

118 m (Eco)

Speed: 200 rpm (Main) 233.77 rpm (Eco)

4,790 mm (Main)

3,220 mm (Eco)