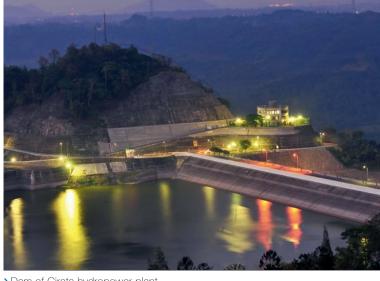
254.5 Mio. 96% 5.258 MW 1.780 MW 11% 25,140 GWh 401,646 GWh

Population Access to electricity Installed hydro capacity Hydro capacity under construction Share of generation from hydropower Hydro generation Technically feasible hydro generation

Hydropower & Dams World Atlas 2015 and The World Bank



> Dam of Cirata hydropower plant

Indonesia

potential

Republic of Indonesia

Energizing Thousands of Islands

By Gerhard Enzenhofer gerhard.enzenhofer@andritz.com

Indonesia is Southeast Asia's most populous country with a total installed hydro capacity of about 5,258 MW, which means only 6% of the technically feasible hydropower potential is developed so far. As the government intends to increase rural electrification, micro to small hydropower plants will be required in the years to come. Hydropower plants will play a significant role in the country's development schemes.

Unit hall of Cirata hydropower plant



ANDRITZ HYDRO in Indonesia

In 1996, ANDRITZ HYDRO established a subsidiary in the capital of Jakarta, but the company has been active in Indonesia for more than 100 years, with its first delivery in 1910 (Bangoen Poerbo). ANDRITZ HYDRO has installed or modernized about 180 units with more than 3,000 MW in Indonesia. This means, more than half of the installed capacity comes from ANDRITZ HYDRO.

HPP Cirata: In December 2013, ANDRITZ HYDRO was awarded a contract from PT Pembangkitan Jawa-Bali (PT. PJB) for the supply, installation, and commissioning of a new stator for the Cirata hydropower plant. The Cirata underground power station consists of HPP Cirata I and HPP Cirata II, with a total installed capacity of 1,040 MW. All eight turbine-generator units as well as the complete electro-mechanical equipment were originally supplied by ANDRITZ HYDRO.

Peusangan 1 and 2: In August 2013, ANDRITZ HYDRO signed a contract with PT. Perusahaan Listrik Negara (PLN) for the design, supply, and installation of electro-mechanical equipment at these run-of-river hydropower plants. The scope of supply consists of turbines, generators, and associated electrical auxiliaries. HPP Peusangan 1 and Peusangan 2 will have an expected annual output of 327 GWh.

HPP Karebbe: ANDRITZ HYDRO received several contracts: 2005, the supply and installation of turbines, generators and auxiliaries; 2008, for penstocks and gates; and 2009, for EPS (Electrical Power System).

HPP Larona: ANDRITZ HYDRO was assigned the modernization of the Larona hydropower plant in 2008. The scope of supply comprised two generators upgraded from 65 MVA to 85 MVA, replacement of runners and electrical equipment, as well as installation and commissioning services.

HPP Musi: In 2004, ANDRITZ HYDRO was awarded a contract for the supply of turbines and auxiliary equipment for the 210 MW Musi hydropower plant.

For the time being several small hydropower plants are currently under construction such as Cianten 1B, 2 and 3, and Cibalapulang 1, 2 and 3.

The high quality and excellent knowhow of ANDRITZ HYDRO equipment is demonstrated at HPP Ketenger, for which ANDRITZ HYDRO delivered the original runner in the 1930s. The runner is still in operation to the full satisfaction of the customer.

All these successful orders show the confidence of the customers in ANDRITZ HYDRO's technology knowhow and prove once again ANDRITZ HYDRO's leading position in Indonesia's hydropower market.