AFFORDABLE ENERGY FOR GENERATIONS

Commissioned in 1985, Jebba is forming a cascade together with Kainji. Both hydropower plants are generating about 20% of Nigeria's power.

Nigeria – In line with its Capacity Recovery and Expansion Programme, Nigeria's largest hydropower generation company has engaged ANDRITZ for the rehabilitation, overhaul, and modernization of two generating units (units 2G5 and 2G6) at the Jebba hydropower plant.

Mainstream Energy Solutions Limited (MESL) owns two hydropower plants – Jebba and Kainji – which currently generate about 20% of Nigeria's power. A privately-owned company governed by a Board of Directors and an Executive Management team that oversees daily operations, MESL was incorporated in 2011 and is licensed as a power generating company.

The Kainji and Jebba hydropower plants have a combined installed generation capacity of 1,338.4 MW and were acquired through a concession agreement with the Federal Government of Nigeria in November 2013. The two plants are in a cascade 100 km apart with Kainji Dam upstream of Jebba and are rated at 760 MW and 578.4 MW, respectively. Kainji was commissioned as Nigeria's first hydropower plant in 1968, whereas Jebba was commissioned in 1985. When the power plants were taken over, Jebba was not operating at full power and Kainji was not generating at all. As a result, the total available capacity of both plants was only 482 MW. In response, MESL introduced its Capacity Recovery and Expansion Programme to restore both generating facilities and bring them back to full power.

The powerhouse of Jebba is housing six generating units, two of which are now undergoing a general overhaul.

In July 2022, a delegation of the MESL Executive Board with Chairman Colonel Sani Bello visited ANDRITZ sites in Austria. The itinerary included the Hydro headquarters in Vienna, the hydraulics laboratory in Linz, the production site in Weiz, and the ANDRITZ headquarters in Graz. The visit was used for further discussions on cooperation between MESL and ANDRITZ.

In mid-2019, the senior management team of MESL visited ANDRITZ' locations in Austria to get an impression of our extensive R&D, manufacturing and engineering facilities. During the visit a Memorandum of Understanding was signed agreeing to negotiate the scope for the rehabilitation of unit 2G6 of the Jebba hydropower plant as well as the overhaul of units 2G5, 2G3, 2G2 and 2G1, including their associated equipment.

In February 2020, ANDRITZ received the first major contract for the 2G6 project. The scope of supply covers the entire electro- and hydro-mechanical equipment, including a 96.4 MW turbine, a 103 MVA generator, and accessory equipment, as well as the intake gate. In September 2021, a second order for the rehabilitation of the 2G5 unit with an identical scope of supply was awarded. Both units are expected to be operational in 2024.

Nigeria is Sub-Saharan Africa's largest economy and the largest oil producer in Africa. It is also the most populous country of the continent with a growing demand for energy to support Nigeria's industrialization agenda. The successful privatization process of the hydropower sector has been ongoing and attracting companies to invest in the renewable power sector. In line with the company's ambitious expansion strategy, MESL will also partner with ANDRITZ to provide technical services in its bid to acquire more power generation assets within Nigeria and beyond.

"Jebba is equipped with six 96.4 MW turbines and has a total generating capacity of 578.4 MW. ANDRITZ is the original equipment supplier for the turbines."

ANDRITZ has been active in Nigeria for more than 100 years and was involved in Nigeria's most important hydropower projects such as Kainji, Jebba, Shiroro and the recently commissioned Kashimbila project. Taking account of the development of the hydropower market and in order to strengthen its position in the very promising Nigerian region, ANDRITZ has established a legal entity (ANDRITZ Hydro Nigeria).

TECHNICAL DETAILS

Jebba

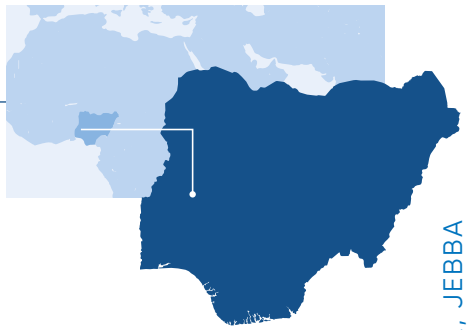
Total output: 578.4 MW

Scope: 6 × 96.4 MW / 103 MVA

Head: 27.6 m

Speed: 93.75 rpm

Runner diameter: 7,100 mm



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