



[Own business]

Ketaun Hydro Power Plant (In Development)

In November 2016, we established PT. Leborg Sukses Energi in a merger with an Indonesian company, and started developing a hydroelectric power plant (13,000 kW) in Bengkulu Province, Indonesia. In March 2019, this project passed the Indonesian National Power Company PT. PLN DPT inspection (power supplier qualification inspection).

As a power supply company, we will negotiate the conclusion of a power purchase agreement (PPA) and proceed to construction engineering.

Project Name	Ketaun Hydro Power Project	Enterprising body	SPC (PT. Leborg Sukses Energi)
Investment	NiX Holdings Singapore., LTD	Location	Bengkulu, Sumatra, Indonesia
Water consumption	36.0m ³ /s	Effective head	41.7m
Maximum output	13,000kW	Turbine form	Francis Horizontal x two units
Annual power generation	86.4GWh (100,000 households in Indonesia)	Off-taker	PT. PLN
Electric power selling Period	30 years (Feed-in Tariff contract)	Technical consultant	NiX Japan, NiX Indonesia Consulting



Weir and Intake

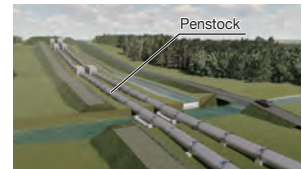
Weir and Intake are planning to take a sufficient amount of water to generate power. The length of the weir is 52.2m and its height is 5m from the river bed. It has two sluiceways with the 1.90m of length to discharge sediment sand and stone. The intake has 4 gates with 2.75m width and 3m height, which can be operated mechanically. Water is taken by intake and goes to the setting basin through a water canal of 106m length.



Penstock

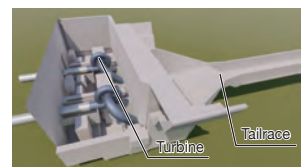
The penstock is a steel pipe to divert sufficient water for generator to powerhouse and is resistant to inner water pressure. The penstock is located on the ground surface and is fixed by anchor blocks.

There are two lines of penstock and each line can divert 18.0m³/s of water. In total they can divert 36m³/s. the length of penstock is 336.4m and they are made by steel. Internal diameter is 2600mm.



Powerhouse

A powerhouse will be located on the right bank of the Ketaun River. The length of the powerhouse will be 45m and the width is 23m, and accommodate two Horizontal Francis water turbine units, generators, flywheel, control rooms, and other facilities. The structure of powerhouse will be a concrete frame structure. The switchyard will be located on the rear side of the powerhouse.



Bridge

The bridge will be constructed so that construction equipment can cross the Ketaun river. The bridge will be left after the construction of the powerhouse and will be used by local people.

