



## IPP Business in Overseas

Our company, as a growth-engine business, is using hydroelectric power generation technology developed in Japan to conduct national hydroelectric power business and perform international business consultations.

With the support of JETRO (Ministry of Economy, Trade and Industry), JICA (Ministry of Foreign Affairs), Ministry of the Environment, and also based on the inter-city cooperation agreement with Toyama City to roll out its policy for a “Future environment city,” we are working to expand renewable energy overseas.

In terms of our international business, we established PT. Lebong Sukses Energi after merging with an Indonesian company in November 2016, and started developing a hydroelectric power plant in Bengkulu Province, Indonesia. In April 2019, we established PT. NiX Indonesia Consulting as a local entity, in Jakarta, Indonesia, to strengthen our international hydroelectric power business structure in terms of development, technology review, and construction management. Furthermore, in November 2019, as our second international hydroelectric power business, we established PT. Optima Tirta Energy and worked on constructing a hydroelectric power plant in Sumatra Province, Western Indonesia.

Now, through NiX Holdings Singapore Pte., Ltd., our regional international business base, we are identifying new projects with a focus on expanding our business and deploying renewable energy in other South-East Asian countries such as Myanmar and Malaysia.

In terms of human resources, in addition to the Indonesian engineers belonging to local entities, we are regularly hiring fresh foreign engineer graduates at our Japanese head office, and are planning to expand our international business further as a growing group. Moving forward, we plan to contribute to the economic growth of the country of interest and the establishment of a sustainable environment by strengthening the development of renewable energy, primarily hydroelectric power, as a power source.

### Indonesia

#### [ Own business ]

#### Tongar Hydro Power Plant (Under construction)

In November 2019, through NiX Holdings Singapore Pte., Ltd., (Singapore holding company) in the NiX group, we acquired stock in the PT. Optima Tirta Energy business entity and are currently involved in its execution as a majority shareholder.

In this business, the NiX group is carrying out construction execution management that is centered on a local entity responsible for redesign and engineering, and because of that the group is working to reduce business costs and risks.

Project Name	Tongar Hydro Power Project	Enterprising body	SPC ( PT. Optima Tirta Energy )
Investment	NiX Holdings Singapore., LTD	Location	West Pasaman, West Sumatra, Indonesia
Water consumption	16.0m <sup>3</sup> /s	Effective head	44.4m
Maximum output	6,200kW	Turbine form	Francis Horizontal x two units
Annual power generation	38.7GWh (46,000 households in Indonesia)	Off-taker	PT. PLN
Electric power selling Period	25 years (Feed-in Tariff contract)	Technical consultant	NiX Japan, NiX Indonesia Consulting



#### Weir

Weir and Intake are planning to take a sufficient amount of water to generate power. The length of the weir is 49m and its height is 4m from the river bed. It has two sluiceways with the 2m of length to discharge sediment sand and stone.



#### Waterway

The water way is connecting between the setting basin and head pond.

The purpose of this section is to convey design discharge flow to head pond. The length is 3275m, width is 9.12m, and height is 4.0m.



#### Penstock

The penstock is a steel pipe to divert sufficient water for generator to powerhouse and is resistant to inner water presser. The penstock is located on the ground surface and is fixed by anchor blocks. There is one line of penstock and can divert 16.0m<sup>3</sup>/s of water. Internal diameter is 2800mm.



#### Powerhouse

A powerhouse will be located on the right bank of Tongar River. The length of the powerhouse will be 32m and the width is 17m, and accommodate two Horizontal Francis water turbine units, generators, control rooms, and other facilities. The structure of powerhouse will be a concrete frame structure.

