

## CHICHI NANAN 2 AND HOSHAN, TAIWAN

### Turbines for existing irrigation structures

The government of Taiwan is pushing forward with its ambitious plans for the development of renewable energy, in particular small hydropower at existing drinking-water-reservoirs and irrigation canals.

In April 2019, ANDRITZ Hydro was awarded two new orders, both with the Nan Dao Engineering Corporation based in Taipei. Nan Dao is acting as the EPC-contractor for the project owner (Taiwan Power Corporation).



At the project site of ChiChi Nanan 2 an existing irrigation canal will be equipped with two identical low head Bevel Gear Bulb turbines. At Hoshan, which is located at an existing water dam, one horizontal Francis turbine will be installed.

Both projects are scheduled to be completed by March 2021. Following the successful PaTien project in 2012, these two small hydropower projects for Taiwan Power mark a further step into this small hydropower market. It proves the competence and excellent technology solutions available from ANDRITZ Hydro.

### TECHNICAL DETAILS

#### ChiChi Nanan 2

Total output: 3.94 MW  
Scope: 2 × 1.97 MW  
Head: 10 m  
Speed: 269 rpm  
Voltage: 6.6 kV  
Runner diameter: 1,770 mm

#### Hoshan

Total output: 1.96 MW  
Scope: 1 × 1.96 MW  
Head: 59.41 m  
Speed: 720 rpm  
Voltage: 6.6 kV  
Runner diameter: 747 mm

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## UPPER MALADUGAO, PHILIPPINES

### Further success in the Philippines

Located in Bukidnon in Mindanao, Upper Maladugao is the first project from the Philippine Independent Power Producer United Holding Power Corporation. ANDRITZ Hydro Germany was awarded the contract for the supply of the entire electro-mechanical "from water-to-wire" package with three Compact Francis units. Local erection infrastructure, manpower and commissioning services for the equipment round out the contract.

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### TECHNICAL DETAILS

Total output: 9.36 MW  
Scope: 3 × 3.12 MW  
Head: 39 m  
Speed: 450 rpm  
Runner diameter: 1,155 mm