

Nam Lik 1 Dam Hydropower info by Hobo Maps - [Home](#) [Go Back to Hydropower Web Page](#)

Nam Lik 1 Dam images below:



Nam Lik 1 project site image below at coordinates 18°37'04.8"N 102°23'13.2"E (18.618, 102.387):



Nam Lik 1 Hydropower Project is located on the Nam Lik river about 90 km north of Vientiane in Hinheup district, Vientiane Province, downstream from the Nam Lik 1-2 dam and also 9.6 km downstream of the Hin Heup Bridges on National Road 13. The Nam Lik river runs through Hinheup district before merging into the Nam Ngum river at Nam Ngum reservoir.

The Nam Lik 1 hydropower project is developed by Nam Lik 1 Power Company Ltd, - shareholders are EDL-Generation Public 40%, Global Power Synergy Public (an affiliate of PTT Global Chemical Public Company Limited)40%, Hydro Engineering Company Ltd. 10% and POSCO Engineering and Construction Company Ltd. 10%.

Construction commenced in 2014 and the project entered into commercial operation in 2019. Estimated cost was US \$124 million.

The project is under a 30 year Build-Own-Operate and Transfer (BOOT) concession agreement and a Power Purchase Agreement with EDL that will be valid until the end of the concession period.

The project went through several studies including environmental and social impact analysis before progressing to the Project Development Agreement and the approval of the Concession Agreement on February 6, 2013.

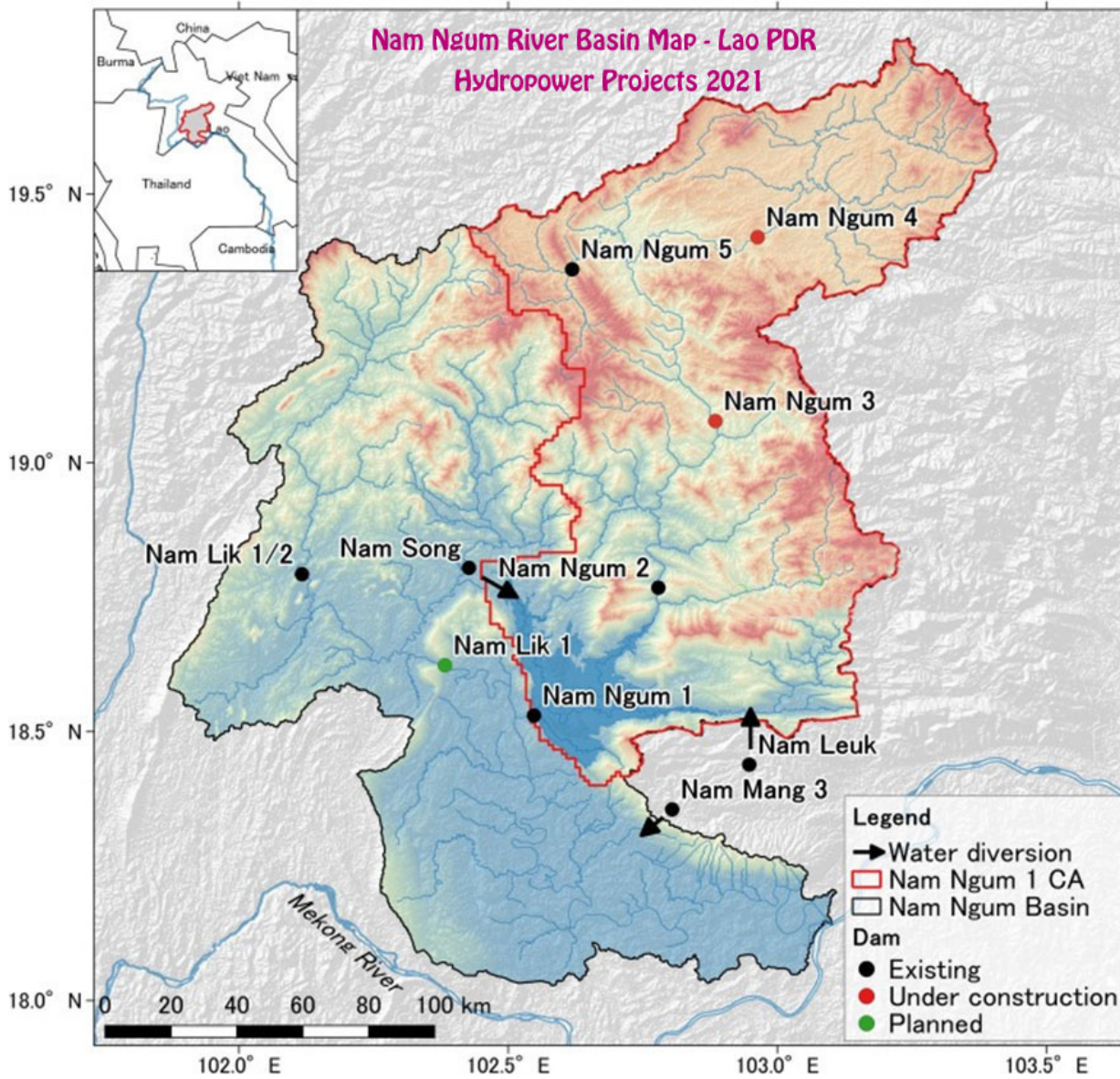
Nam Lik 1 dam is a concrete gravity structure built between sandstone outcrops and is 39.5 meters high with crest length of 148.6meters. The net head of the project is 22.3 meters.

POSCO Engineering & Construction rendered engineering, procurement and construction (EPC) services for the project. Korea Western Power is the Operating and Maintenance (O&M) contractor for the project.

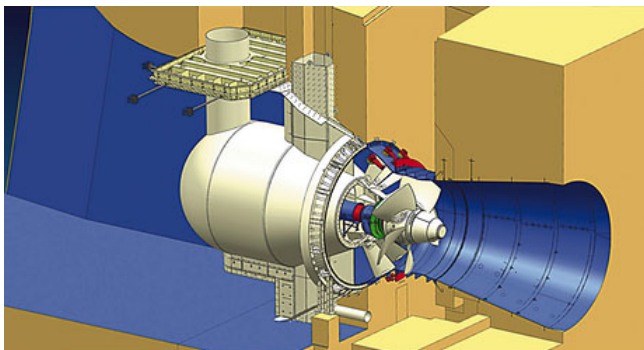
Nam Lik 1 is a run-of-river project. Although the maximum surface area of the reservoir is 11.5 square km, this is only about 7 square km more than the regular high water surface area of the river in the wet season. The river in this area has been converted into a narrow and deep reservoir.

The Nam Lik drainage basin area covers 1,588 square kilometers.

Nam Lik 1 project location shown on basin map below:



The powerhouse has two Andritz bulb turbine units (see image below) with total installed capacity of 64.5 MW. If the existing Nam Song Diversion operation rules remain unchanged the average energy production can be 248 GWh per year with a plant capacity factor of 48%.



Turbines

Output: 2 x 32.25 MW/39.3 MVA

Head: 22.31 m

Speed: 166.7 rpm

Runner diameter: 4,500 mm

The layout of the project is comprised of three parts: headworks, diversion works and power station structures.

The headworks consist of the retaining dam and water intakes.

Diversion works consist of headrace tunnel, surge chamber and penstock.

The power station structures are main and auxiliary powerhouses and switch yard.

The project has a surface powerhouse located on the right side. The layout includes a tunnel diversion and a four-gate spillway that can discharge extreme flood waters without endangering the dam structure.

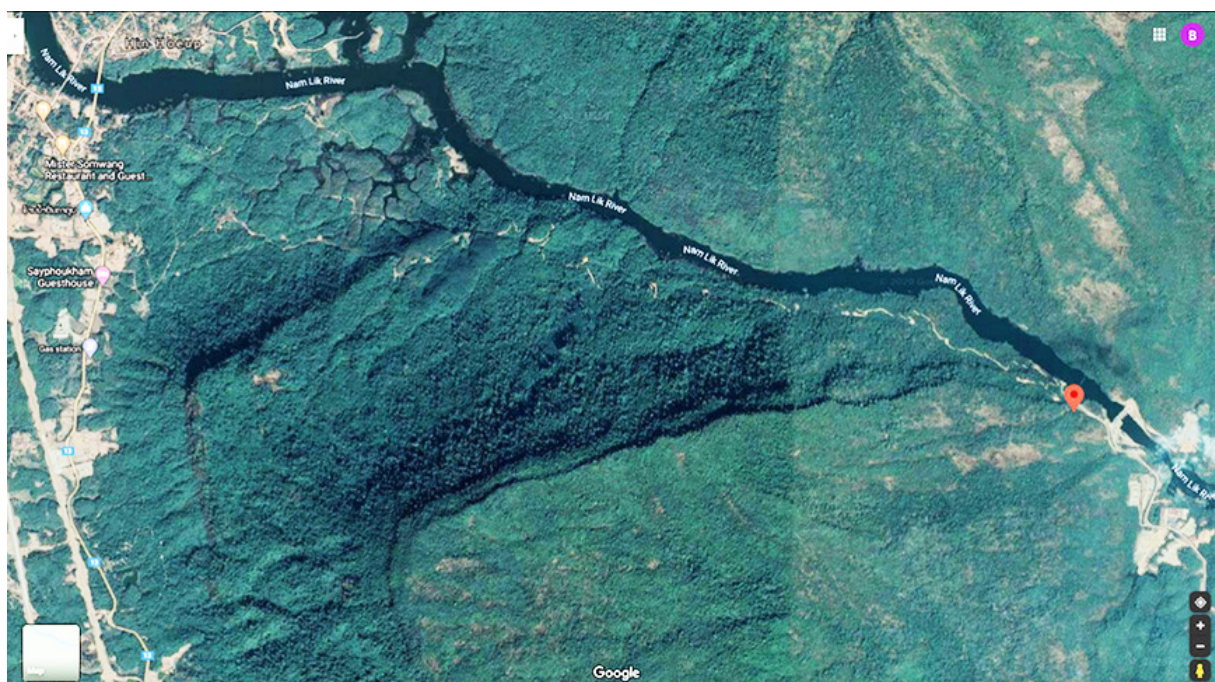
The penstock length is 100 meters with diameter of 6.6 meters.

The switchyard is located beside the powerhouse and connects to a single-circuit 11 km-long 115 kV transmission line going to the Hin Heup substation.

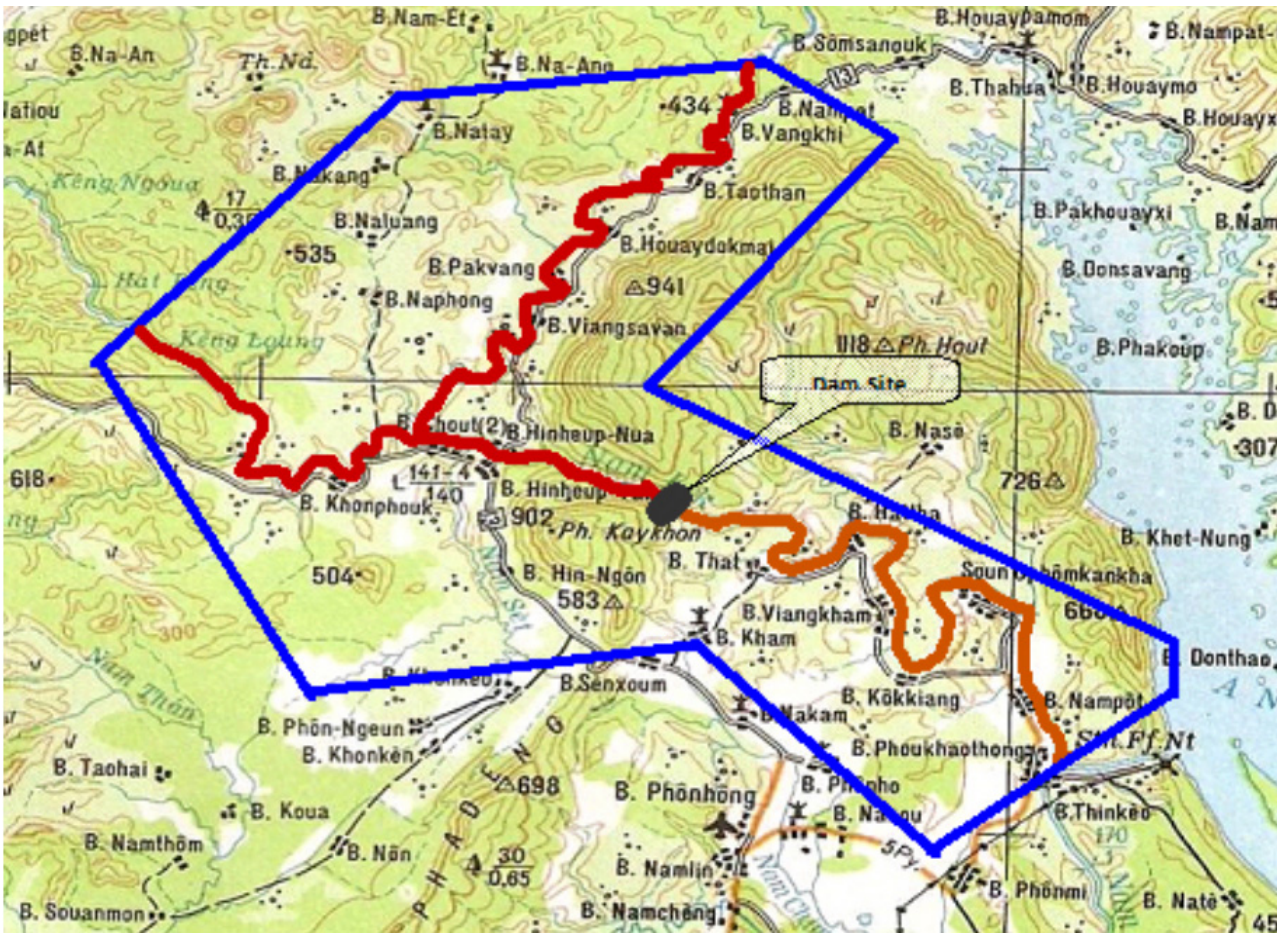
About 112 affected families from three villages in Hinheup district were compensated for the effects of the project on their property.

The Nam Lik 1 hydropower project is intended to qualify as a Clean Development Mechanism (CDM) project under the Kyoto Protocol and be eligible to receive carbon reduction credits. Annual average CO2 reductions over the crediting period are estimated to be 122,145 tons. See the CDM application PDF document [HERE](#).

Nam Lik 1 project is at far right of image below - Highway 13 and the Nam Lik bridges are on the far left side.



On the map below the red line is the narrow Nam Lik 1 reservoir while the orange line is the Nam Lik river downstream of the dam.



Motorists and railway passengers pass over the reservoir when they cross one of the Hin Heup bridges over the Nam Lik river on Highway 13. The reservoir surface is now almost up to the bridges all year long whereas in the past the river surface was far below the bridges in the dry season.



More Nam Lik 1 hydropower project images below:





See location of the project at left side of map below:

