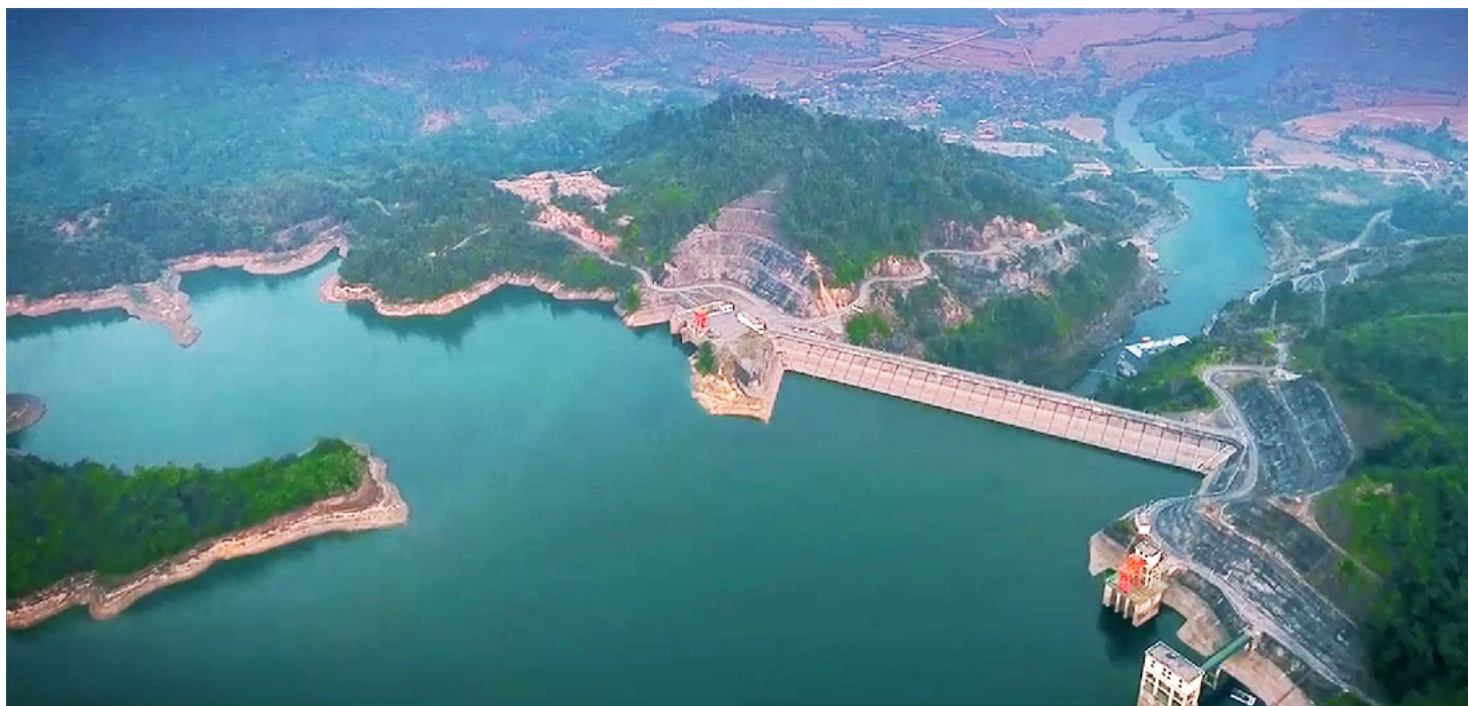


Nam Lik 2 Dam Hydropower info - Nam Lik 1-2 Dam Info - by Hobo Maps - [Home](#) [Go Back to Hydropower Web Page](#)

Nam Lik 2 hydropower project is also known as Nam Lik 1-2

Nam Lik 2 Dam images below:





Nam Lik 2 power plant image below:



Nam Lik 2 Hydropower Project is located on the Nam Lik River about 50 km upstream from the Nam Lik Bridges on National Road 13 at Ban HinHeup. The project was developed by Nam Lik 1-2 Power Company Limited.

The site of the Nam Lik 2 hydropower project is located on the main stream of the Nam Lik river north-west of the capital Vientiane. The dam is located in Mueng Fueng District of Vientiane Province and the river flows downstream through the Hin Heup district where it joins the Nam Song to form the Nam Ngum which flows into the Mekong river downstream of Vientiane.

The project is a diversion hydropower project that includes a dam, reservoir, diversion system, powerhouse and transmission system. The installed capacity of the project is 100 MW with annual gross power generation capacity of 435 GWh.

The project is equipped with two 50 MW Francis turbines coupled with 58 MVA generators that have a predicted lifespan of 25 years.



The main structures of the project are: a reinforced concrete-faced rockfill dam; spillway; flood release tunnel; headrace tunnel; powerhouse; switchyard (located on the top of the powerhouse) and a saddle dam.

Nam Lik 2 Hydropower Project was established as a joint venture between China Water & Energy, Ltd. holding 90 percent and EDL holding ten percent. The project operates under a 25-year build-own-operate-transfer contract. The project was licensed in 2007, commissioned in July 2010 and achieved commercial operation in August 2011. All the power generated from the Project is supplied to EDL in accordance with a Take-or-Pay Commitment for a period of 25 years for domestic consumption.

Nam Lik 2 control room image below:



Nam Lik 1-2 controls image below:



The power generated by the two generators will be supplied to Ban Don substation and Hin heup substations through 115kV transmission lines for distribution in the Laos Power Grid.

Nam Lik 2 dam site images below at coordinates : 18°47'31.2"N 102°07'08.4"E (18.792, 102.119).



Nam Lik 2 scene image below.



Nam Lik 2 intake structure image below.





Summary of technical information for the Nam Lik 2 Hydropower Project below:

**Table A.2. Main Technical Parameters of propose project**

Turbine		Generator	
Type	HLY226-LJ-300	Type	SF-J50-28/7000
Quantity	2	Quantity	2
Rated power	51.5 MW	Rated capacity	58.8MVA
Rated head	73 m	Rated voltage	10.5 kV
Rated flow	78.1 m <sup>3</sup> /s	Frequency	50Hz
Rated Rotation speed	214.3 r/min	Rated speed	214.3 r/min
Efficiency	94.25	Power factor	0.85(lag)
Lifetime	25 yr	Lifetime	25 yr
Annual equivalent full load operation hour	4350h		
Manufacturer	Hangzhou Resource Power Equipment Co.,LTD		

**The summary of the important technical information of the Nam Lik 1-2 Hydropower Project is as follows:**

**1. Reservoir**

Catchment area	:	1,993 km <sup>2</sup>
Estimated long term mean flow	:	883 masl
Total reservoir storage	:	84.9 m <sup>3</sup> /s
Reservoir storage below the normal level	:	1.33 x 109 m <sup>3</sup>
Regulation reservoir capacity	:	0.97 x 109 m <sup>3</sup>
Normal storage water level	:	305.0 m
Dead water level	:	275.0 m
Reservoir areas at the normal water level	:	46 km <sup>2</sup>

**2. Main Dam**

Type	:	Concrete faced rockfill dam
Maximum height	:	103.0 m
Crest length	:	327.84 m

**3. Saddle Dam**

Type	:	Homogenous earth dam
Maximum height	:	5 m / 10 m / 16 m
Crest length	:	44 m / 81 m / 102.3 m

**4. Spillway Tunnel**

Type	:	WES curved weir / tunnel
Opening dimension	:	13 m (W) x 20 m (H)
Design flood discharge	:	2,513 m <sup>3</sup> /s

**5. Flood Discharge Tunnel**

Opening dimension (pressurized / unpressurized)	:	Radium 6 m/ 10 m x 12 m
Design flood discharge	:	1,371 m <sup>3</sup> /s
Check flood discharge	:	1,390 m <sup>3</sup> /s

**6. Headrace Tunnel**

Number of tunnel	:	1 unit
Length	:	280.73m
Diameter	:	8.0 m
Lining	:	Reinforced concrete lining

**7. Penstock**

Length	:	128.94m
Inner diameter	:	6.4 m / 4.0 m - - trunk / branch
Maximum static head	:	85.71 m

**8. Powerhouse**

Type	:	Surface
Dimension of main hall	:	60 m (l) x 21.6 m (w) x 43.67 m (h)
Dimension of secondary hall	:	21.6 m (L) x 12 m (W)

**9. Generating Equipment**

Number and type of turbines (type)	:	2 units / HL240-LJ-300 (Francis type)
Rated head	:	72 m
Rated rotation	:	214.3 r/min
Rated discharge	:	80.31 m <sup>3</sup> /s
Total installed capacity	:	2 x 50 MW
Energy output	:	435 GWh per year
Type of generator	:	SF50-28 / 6300
Rated capacity	:	50 MW
Rated voltage	:	10.5 kV

**10. Interconnection with the EDL's Grid System** Transmission line voltage : 115 kV

Conductors size	:	240 mm <sup>2</sup>
Number of circuits	:	2
Length of transmission line	:	15 km

Transmission destination : Nam Lik – Ban Don

Nam Lik 2 generator images below:



Nam Lik 2 apparatus below:



The Nam Lik 2 hydropower project has qualified as a greenhouse-gas-reducing Clean Development Mechanism (CDM) project under the Kyoto Protocol and has a 7-year renewable crediting period. Estimated CO<sub>2</sub> emission reductions during this crediting period are 207,512 tons per year.

Click [HERE](#) to view/download CDM application PDF file.

Nam Lik area scene images below:





**Nam Lik 1-2 dam and reservoir below:**



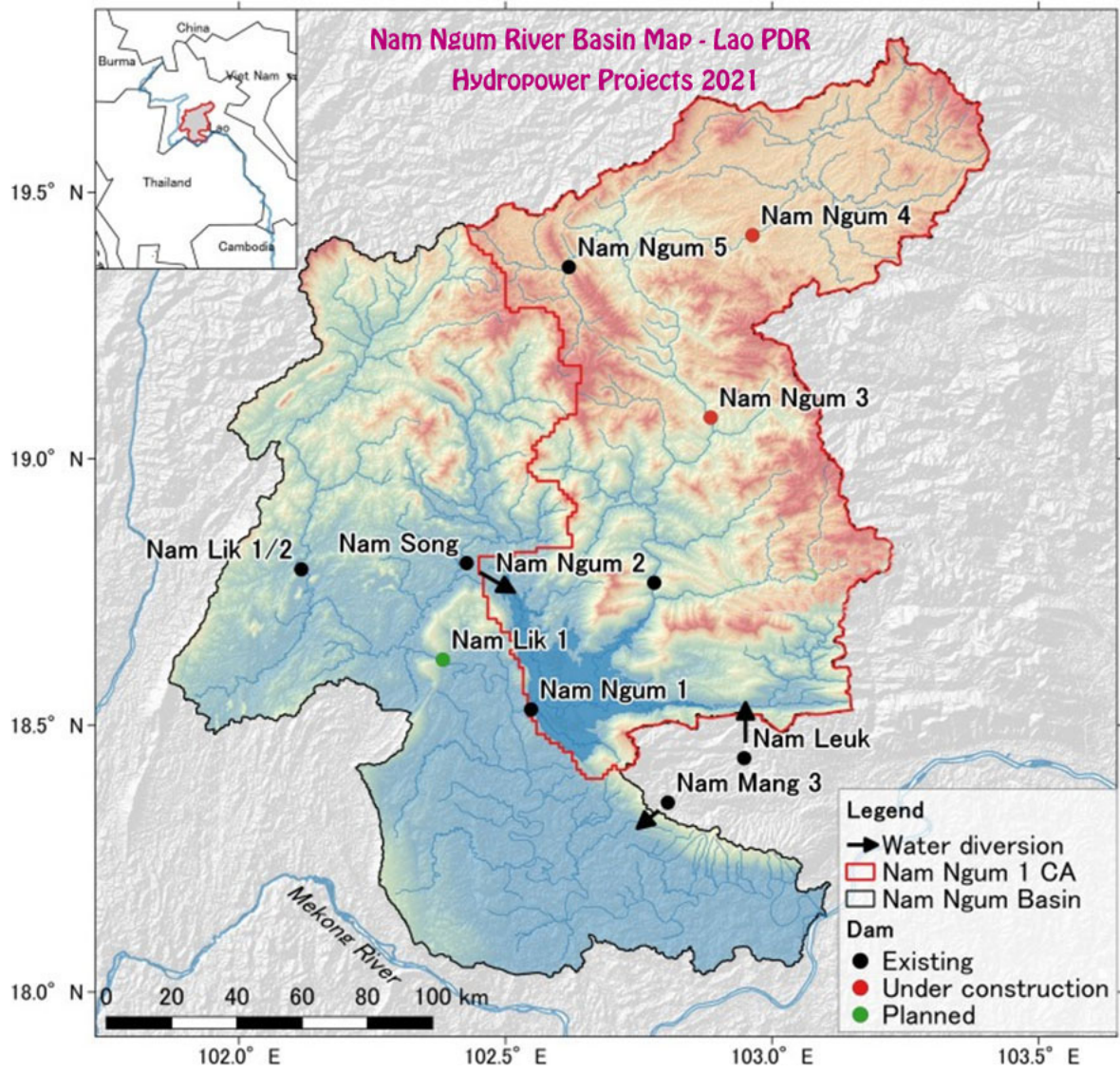
**Nam Lik 1-2 administration buildings below:**



Nam Lik 2 site building below.



Nam Lik 2 project shown as Nam Lik 1/2 on left side of basin map below:



Nam Lik 2 Dam location shown on far left side of map below:

