

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

Some of the images below are screen shots from these Nam Sana videos:

- <https://www.youtube.com/watch?v=w4doJoCMSys>

- <https://www.facebook.com/100063507314786/videos/3048528938554866>

Nam Sana Power Plant images below:



Nam Sana site images below:





Nam Sana surge tank image below:



Nam Sana weir image below:



Nam Sana Hydropower locations below:



Nam Sana Powerhouse site image below:



Nam Sana Hydropower Project is owned by EDL and is located on a tributary of Nam Lik River near Muang Kasi in central Laos about 7.5 km east of National Road 13 north.

Dam structure coordinates - 19°12'57.7"N 102°20'21.2"E (19.216038 102.339227)

Power House coordinates - 19°12'16.8"N 102°18'39.2"E (19.204662 102.310886)

The site has a watershed catchment area of about 96 sq km.

The Nam Sana Project is characterized as a run-of-river-project with medium head (elevation drop) of about 160 meters.

Installed capacity is 14 MW (3 units of 4.69 MW each) with average annual capacity of 49.55 GWh

The project has a low pressure headrace box culvert and high pressure penstock. Between the two sections a surge tank is provided to reduce the effect of water hammer from sudden gate closing and opening.

The weir of the Nam Sana project has a height of 7 meters and length of 29.5 meters. The weir crest elevation is at 642 meters above sea level.

The Nam Sana Hydropower Project has a 1,140 meter long headrace culvert, a surge tank 5.0 meters in diameter, a 1,390 meter long penstock, a small powerhouse of 14 MW installed capacity and two sections of 22 kV transmission line about 60 km long.

#### Summary of important technical information of Nam Sana Hydropower Plant

##### Storage

Catchment area	:	96 sq km
Mean Operating water Level	:	642 meters above sea level
Minimum Operation Level	:	640 meters above sea level

##### Main Dam and Embankment

Type	:	Concrete Weir
Height	:	7 meters
Length	:	30 meters

##### Powerhouse

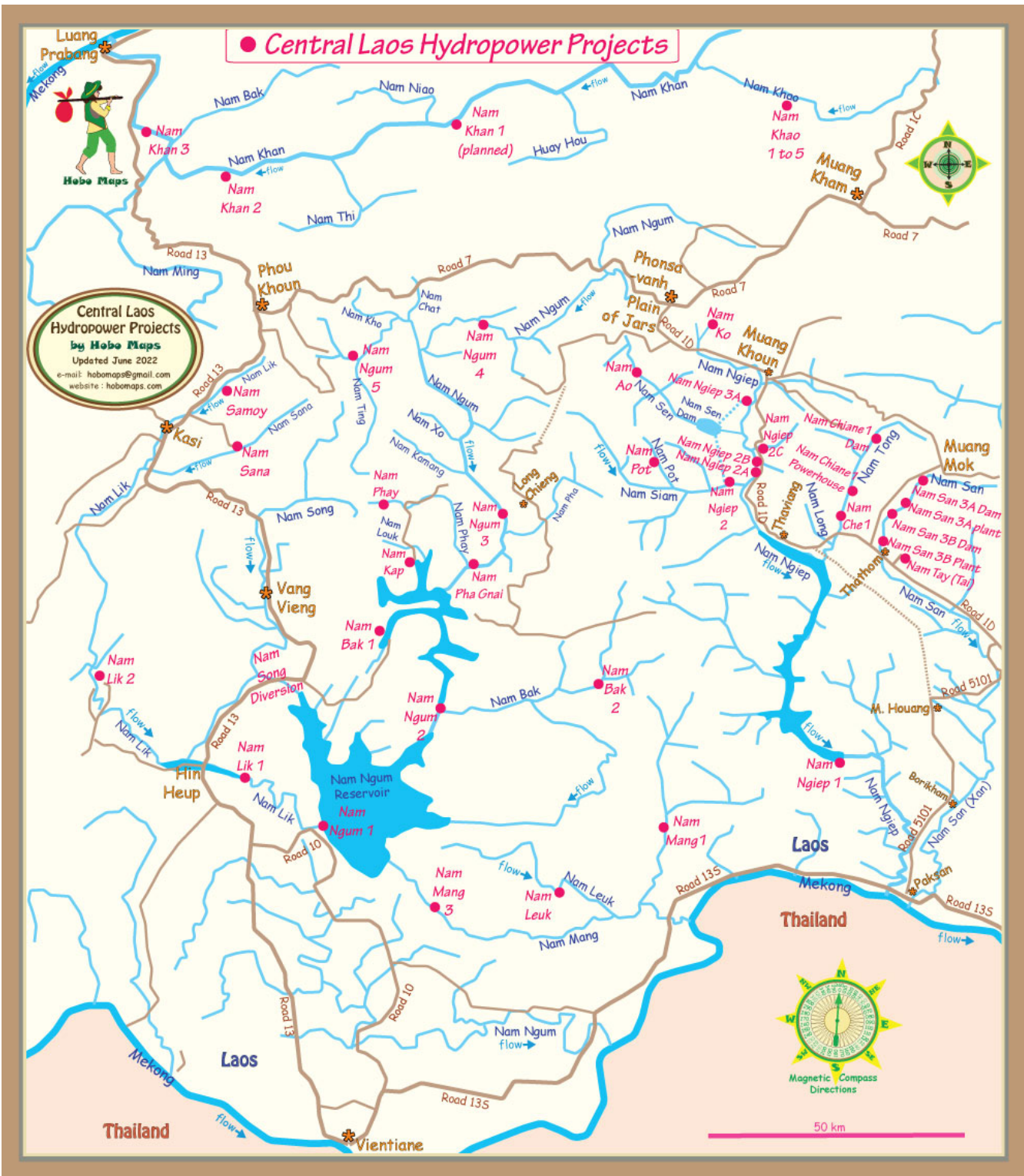
Type	:	Surface
Dimension of Substructure	:	48.9 meters x 16.75 meters

##### Turbines

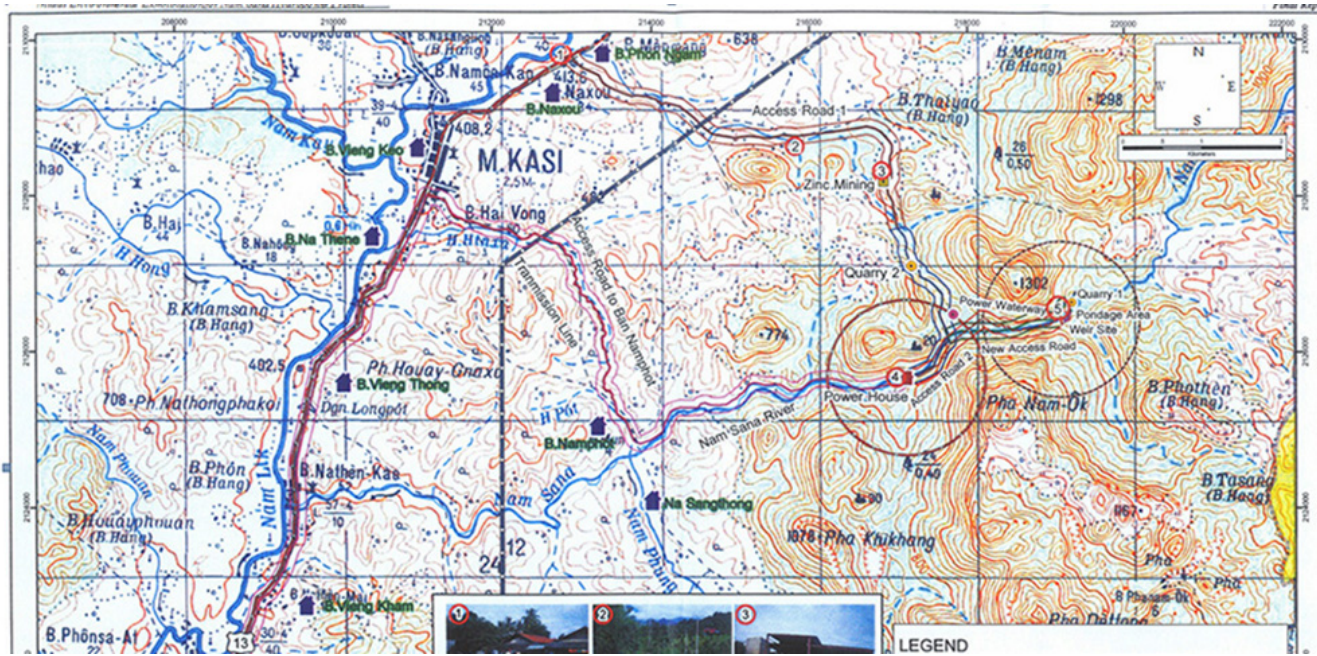
Number and Type of hydraulic Turbine	:	3 units Horizontal Francis
Rated Output	:	14 MW Rated Speed
Rated Discharge	:	4.07 cubic meters per second per unit

	Item	Main Features
Hydrology	Catchment Area	96 km <sup>2</sup>
	Reservoir Inflow	5.96 m <sup>3</sup> /s
Output	Installed Capacity	14 MW
	Annual Generated Energy	49.55 GWh/y
Reservoir	Run of River Project	-
Dam / Headrace and Penstock	Weir Height	7m
	Full Surface Level	642 masl
	Headrace Tunnel	966m
	Penstock	1,424 m
	Number of Units	3
	Turbine Type	Francis
	Turbine Discharge	11.50 m <sup>3</sup> /s
	Average net Head	145 m
Transmission	Line Length	17 km
	Voltage	22.00 kV

Nam Sana Dam location shown on left side of map below:



Topographic map below shows dam project in circles:



The Nam Sana project apparently qualifies as a Clean Development Mechanism (CDM) project under the Kyoto Protocol allowing it to receive carbon emission reduction credits. The project will help result in CO2 emission reduction as it's output may displace power generation that otherwise would be based on combustion of fossil fuels. The reduction in carbon dioxide emissions is estimated to be 25,335 tons per year. View or download the CDM application document [HERE](#).

Nam Sana powerhouse interior below:



Nam Sana area basin below





Nam Sana switchyard image below:



Nam Sana power transmission route image below:



Nam Sana Powerhouse image below from Nam sana Facebook page - <https://www.facebook.com/search/top?q=namsana%20hydro%20power%20plant>:

