

Nam Ngum 5 Dam images below:





Nam Ngum 5 Power Project began operations in December 2012. The Project is a joint investment between Sinhydro Corporation from China and EDL. The 120 MW project has generating capacity of 507 GWh per year.

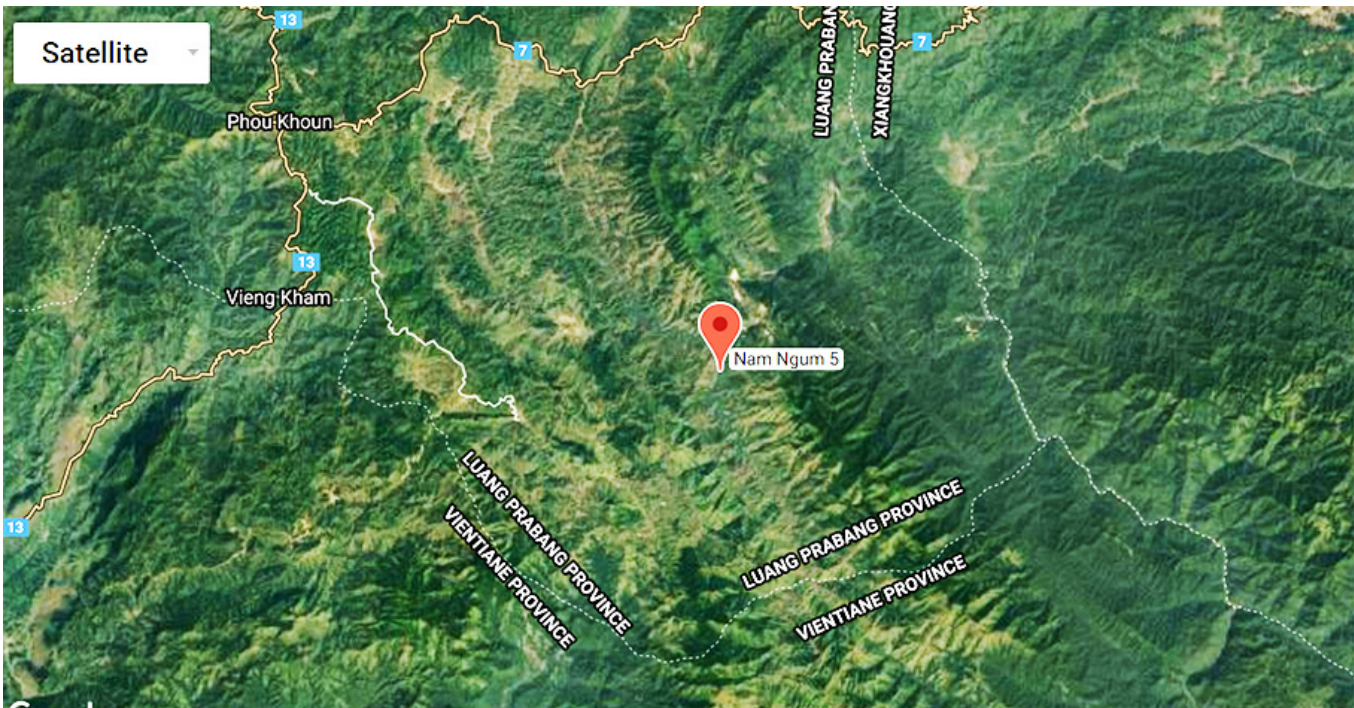
All the power generated from the Project is to be supplied to EDL for domestic consumption in accordance with a Take-or-Pay Commitment for a period of 25 years. After the end of the concession period, ownership of the plant will be transferred to the Lao government.

The Nam Ngum 5 Hydropower Station is located on the right bank of the Nam Ting (river) upstream from the Nam Ngum (river) in the mountainous area of northern Lao PDR. The main dam is located in Vientiane province and the powerhouse is in Xiangkhuang province nearby. The project is approximately 10 km upstream from Nam Ngum 3 reservoir.

The coordinates of the dam structure are east longitude of 102°27'9.13" and north latitude of 19°21'23.80".

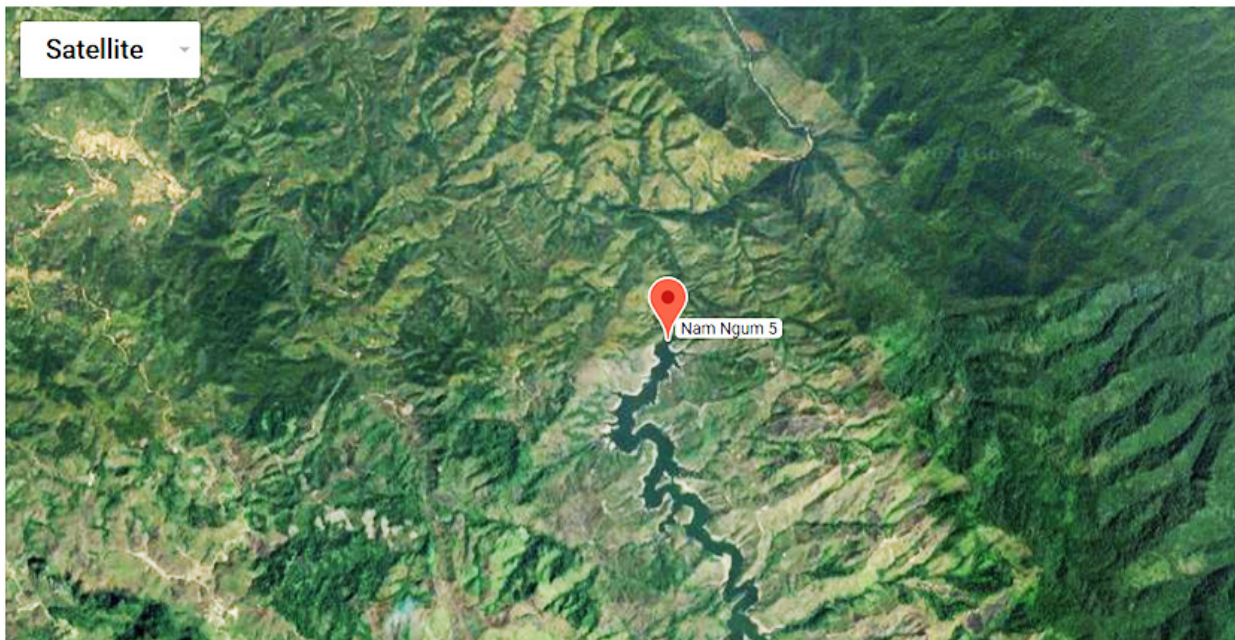
The coordinates of the powerhouse are east longitude of 102°42'44.00" and north latitude of 19°21'35.83".

Nam Ngum 5 Dam Location below in satellite images:



DMS Co-ordinates: 19° 20'20.12"N, 102° 36'37.5"E

DD Co-ordinates: 19.338923, 102.610420



The 104-meter-high dam creates a reservoir that covers 483 sq km. The reservoir is planned to be flushed each year.

The project includes water-intake structures, a diversion tunnel 8.6 km long , a penstock 1.2 km long , a surge shaft 197 meters high, a tailrace tunnel 428 meters long and a booster station.

Financing for the \$200 million USD project was expected to come primarily from the National Bank of China.

Nam Ngum 5 powerhouse below:



Important technical information of the Nam Ngum 5 Power Project shown below:

1. Reservoir

Reservoir Area	:	483 sq km
Yearly averaged discharge capacity	:	314 million cubic meters
Full supply level	:	1,100 masl
Reservoir area (full supply level)	:	15 sq km
Minimum operating level	:	1,060 masl

2. Dam

Type	:	concrete face rockfill
Crest length	:	234.83 m
Crest level	:	99 masl
Height from foundation	:	99 m

3. Headrace Tunnel

Type	:	concrete-lined
Diameter	:	4.2 m
Length	:	8,917 m

NAM NGUM 5 HYDROPOWER PLANT

Name of Project	Nam Ngum 5 Hydropower Development Project (NN5HDP)
Shareholders	<ul style="list-style-type: none"> • Power China resources 85% • EDL-GEN 15%EDL-GEN 15
Location	River: Nam Ting, Province: Xiengkouang
Operation date	Jan 2013
Contractor	SINOHYDRO
Install Capacity	120 MW
Average Annual Energy	421 GWh/year
Turbines	2 Units x 60 MW (Francis)
Project Type	Reservoir
Type of Dam	Roller-compact concrete dam (RCC)
Catchment Area	483 km ²

Dam:	Nam Ngum 5	Country	Laos
River	Nam Ting	19°20'20.12"N 102°36'37.5"E	19.338923 102.610420
Owner/Client	Nam Ngum 5 Power Company Ltd. (15% Électricité du Laos - Generation Company Ltd., 85% Power)		
Designer/Engineer	SinoHydro (Bureau N°14)		
Contractor	SinoHydro (Bureau N°10)		
Purpose (code)	H		
Site start	01.10.2008		
RCC start	07.11.2011		
RCC completion	02.12.2012		
Site completion	02.12.2012		
Height (m)	101		
Length (m)	235		
Volume of RCC (m ³ x10 ³)	298		
Total volume (m ³ x10 ³)	421		
Reservoir capacity (m ³ x10 ⁶)	314		

Completed Dam

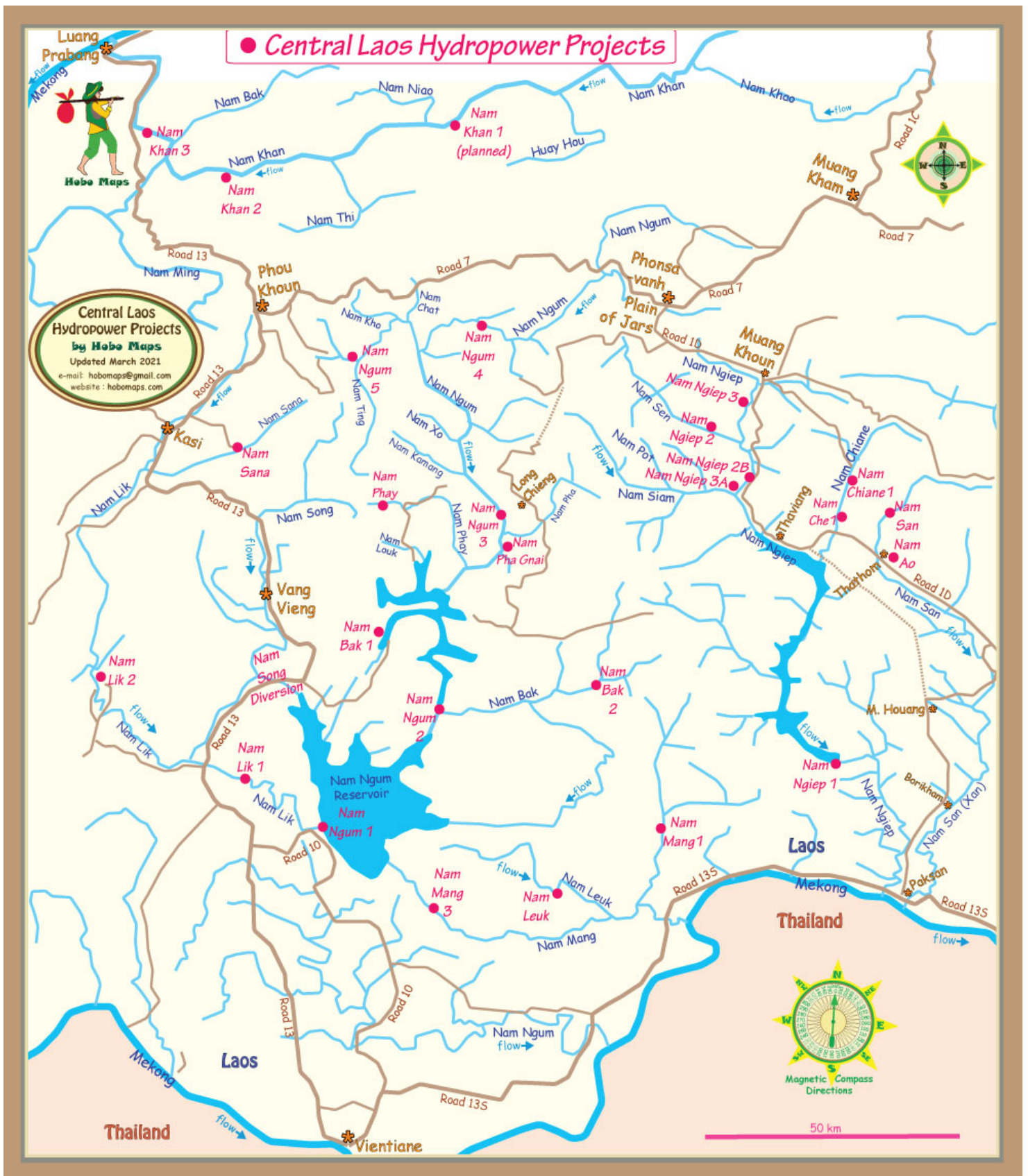


RCCDAM0839CD

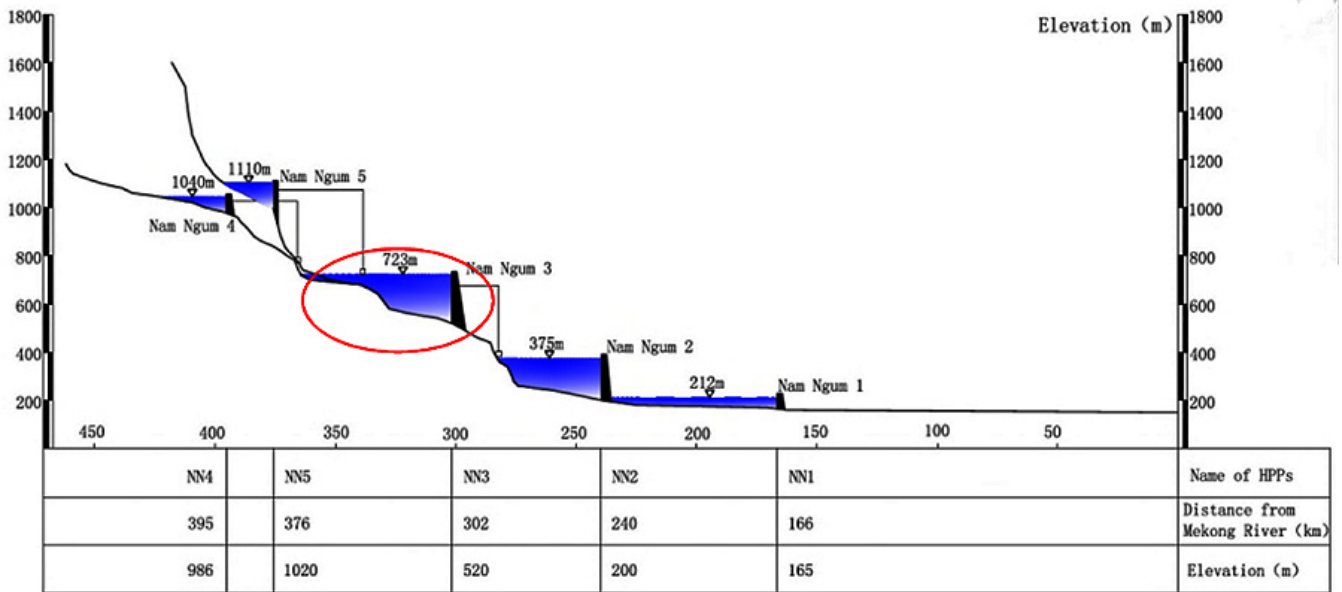
Table 1 The parameters of equipments adopted by the proposed project

Water turbine	Model:	HLA981-LJ-232
	Number:	2
	Rated water head:	337m
	Rated speed:	500r/min
Generator	Model:	SF-J60-12/4380
	Number:	2
	Rated power:	60MW
	Power Factor:	0.85
Data source	Equipment purchase contract	

Nam Ngum 5 is located upstream of the Nam Ngum 3 Dam - in upper left part of map below:



Nam Ngum 5 elevation of 1,110 masl shown above the red-circled Nam Ngum 3 reservoir in the image below.



The developers claim there are no villages located close to the construction area. Only Ban Chim village is located close to the reservoir of the project. There was no resettlement resulting from the project and only 43 households of Ban Chim village were affected due to land occupation which includes paddy land, upland land and garden.

Nam Ngum 5 Hydropower Project was designed to qualify as a greenhouse-gas-reducing project under the Clean Development Mechanism (CDM) of the Kyoto Protocol and receive carbon reduction credits that can be sold. The goal is to encourage and subsidize clean and green power production that will eliminate the need to build more dirty polluting power plants. The CDM application form can be viewed or downloaded [HERE](#).