

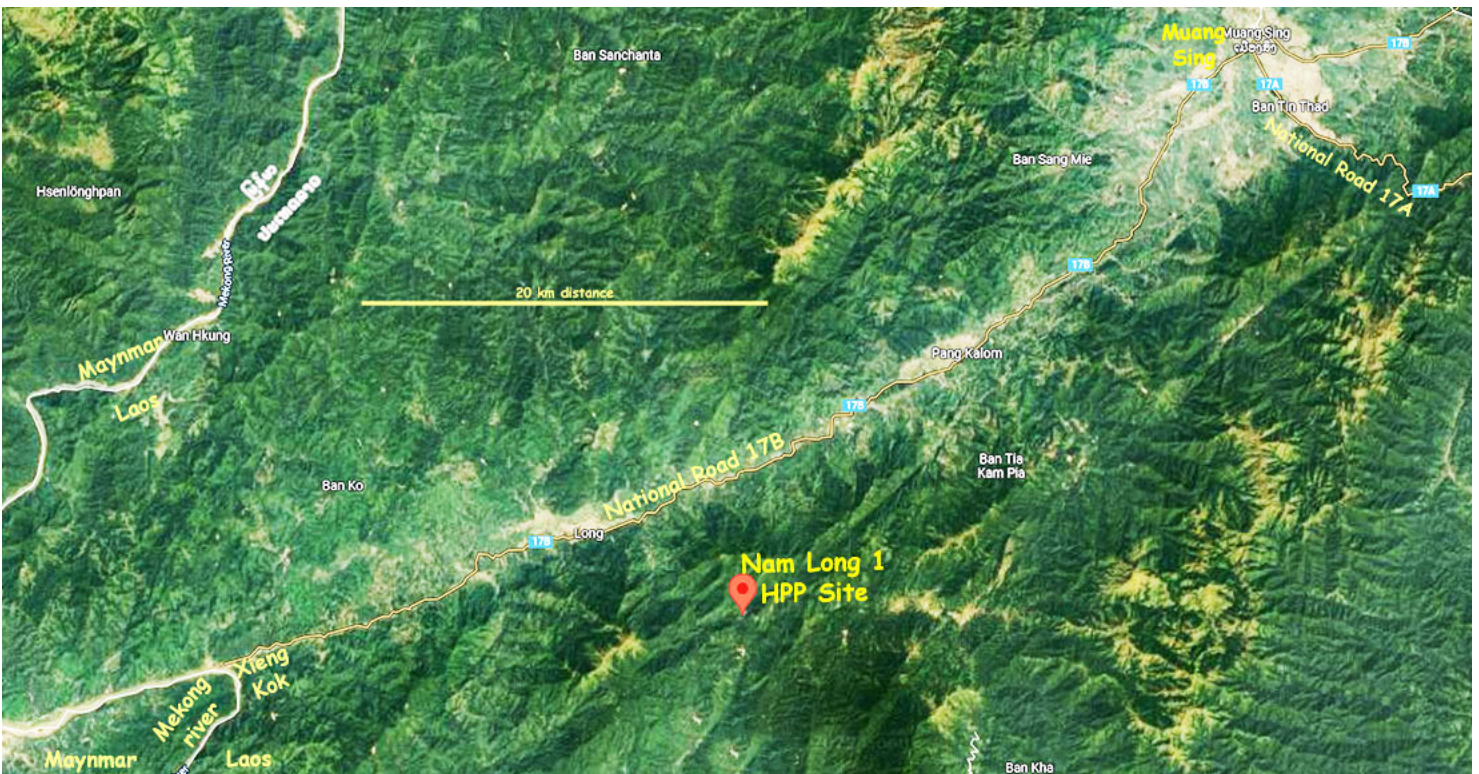
Nam Long 1 Dam Hydropower Info - by Hobo Maps - [Home](#) [Go Back to Hydropower Projects Web Page](#)

The Nam Long 1 Hydropower project is located on the Nam Long (river) about 50 km west of Luang Namtha and 9 km northwest of Long District, Luang Namtha Province, Lao PDR. The approximate coordinates of the project site are: 20°55'25.9"N 100°53'49.4"E (20.923867, 100.897058).

Nam Long 1 powerhouse and penstock image below:



Nam Long 1 location image below:



Nam Long 1 construction site image below:





Nam Long 1 weir image below:



The Nam Long 1 hydropower project is a run-of-river type. The installed capacity of the project is 5.6 MW. The estimated annual output of 37 GWh (seems a bit high) is to be supplied to EDL into the local Luang Namtha grid. In the beginning this grid was not connected with the main grid of Lao EDL but connected with China Southern Power Grid through transmission lines.

Nam Long Power Co., Ltd. was established between Luangpaseuth Construction Sole Co., Ltd. and Electricite du Laos. The equity share of the Luangpaseuth Construction Sole Co., Ltd. is 80% and the share of EDL-Generation Public Company (EDL-GEN) is 20%.

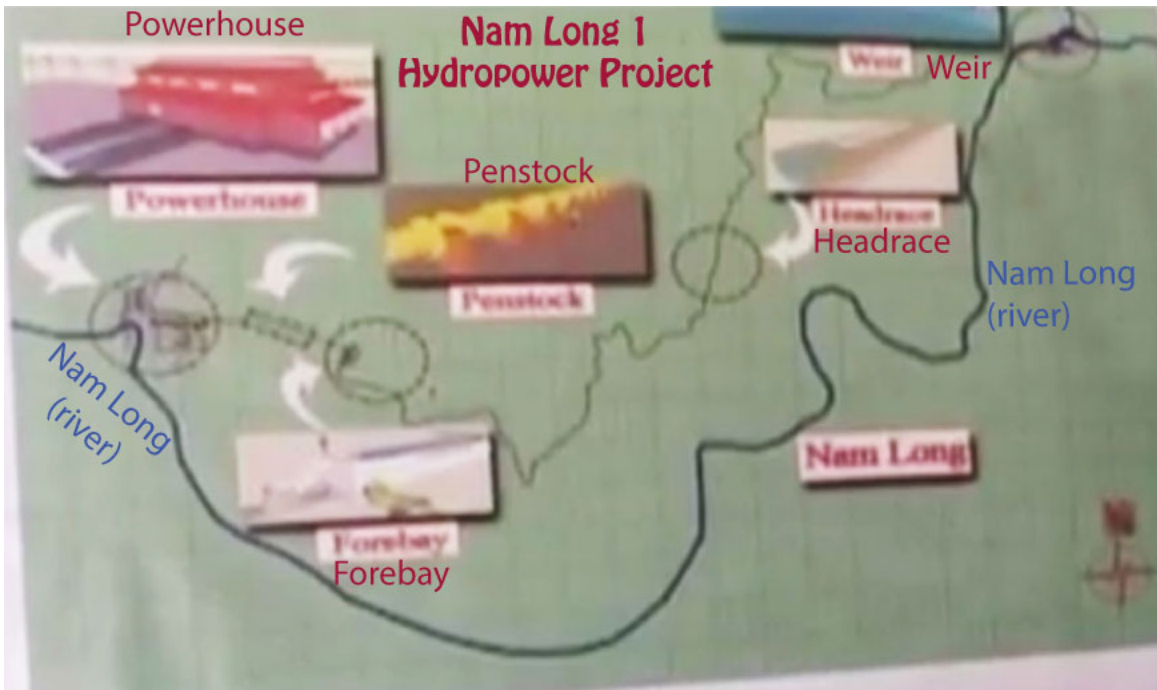
The project operates under a 30 year concession from the Lao government pursuant to a Build, Own, Operate and Transfer arrangement.

The project required an investment of about US\$ 16 million and is currently run by EDL-Generation Public Company (EDL-GEN).

Construction of the dam was completed in late 2013 and generation of electricity began on a commercial basis in 2014.

The Nam Long 1 reservoir has about 22,000 hectares of surface area.

Nam Long 1 layout below:



The electro-mechanical equipment for the plant was procured from Wasserkraft Volk AG, WKV, a well-known German turbine-manufacturer. Technicians from WKV installed the equipment and successfully completed all required tests.

NamLong I was connected to the national grid via a 14 km transmission line.

According to Luangpaseuth Construction Sole Co., Ltd. website at <http://lcclaos.com/our-projects/> the Nam Long 1 hydropower project was the first private sector hydropower plant in Lao PDR undertaken solely by domestic investors and it has generated revenues in the amount of US\$ 2.3 million per year.

Nam Long 1 Powerhouse images below:







Watch documentary video of Nam Long 1 Hydropower project at - <https://www.youtube.com/watch?v=zXXEzvyqAAg>

The project includes a dam/weir (gravity overspill type), water intake structure equipped with a settling basin, sand flush, a reinforced concrete headrace channel, forebay (head basin), surge tank, steel penstock, tailrace and a power house equipped with 2 pelton turbines (2 x 2.5 MW).

- Dam - Type: Gravity Spill Over
- Height: 7 meters (8 meters per video)
- Length: 50 meters
- Spillway Capacity: 600 cubic meters per second

- Headrace Channel - Cross Section: 2 x 2 meters
- Length: 3,650 meters (3,395 per video)
- Design Flow: 2.64 cubic meters per second
- Penstock - Diameter: 1.1 meter
- Length: 430 meters
- Wall Thickness: 12 – 15 millimeters
- Water Velocity: 2.64 cubic meters per second
- Forebay & surge tank capacity - 650 cubic meters (tiny)
- 
- Turbines - Type: Pelton
- Quantities (set): 2
- Rated Head: 240 meters
- Output: 2.5 MW x 2
- Generator - Type: 3-phase synchronous alternator
- Output: 3,300 kVA
- Rated current: 577A
- Frequency: 50 Hz
- Rated speed: 600 rpm
- Transmission Line - Type: 22kV (Overhead)
- Length: 14 km

The Nam Long 1 project is a Clean Development Mechanism (CDM) project under the Kyoto Protocol that will hopefully result in CO2 emission reduction because it may displace power generation that otherwise would be based on combustion of fossil fuels. The reduction in carbon dioxide emissions is estimated to be 24,035 tons per year. View or download the CDM application PDF file [HERE](#).

After Nam Long I was completed and commissioned, Luangpaseuth Construction Sole Co., Ltd. initiated preparatory works for the construction of Nam Long II down-stream from Nam Long 1 . Results of soil investigations and other on-site inspections were satisfactory. Suitable sources for civil works, electro mechanical equipment and construction capability for the transmission line have been identified. This project is ready for implementation as it has a high degree of “quality-at-entry”.

Nam Long II plant will have an installed capacity of 9.5 MW and will be able to produce 47.1 GWh of electricity per year. A take-off agreement for Nam Long II similar to the one agreed for Nam Long I has been signed with Electricité du Laos.

Other planned future Nam Long hydropower projects listed in chart below as shown on Luangpaseuth Construction Sole Co., Ltd. website at <http://lclaos.com/our-projects/>



The screenshot shows a web browser window with the URL lclaos.com/our-projects/. The page features a navigation menu with links for Home, Subsidiaries, Job Opportunities, Our Projects, News, Media Coverage, About Us, and Contact Us. Below the menu is a search bar. The main content area displays a table with the following data:

No.	Project Name	Install Capacity (MW)	Energy Output GWh/year	Project Cost USD Million	Project Status
1	Nam Long 1 Hydropower	5.6	37.0	16.0	In Operation
2	Nam Long 2 Hydropower	9.5	47.07	28.23	Under construction
3	Nam Long 3 Hydropower	4.0	21.0	10.0	Under construction of Weir
4	Nam Long 4 Hydropower	4.5	28.5	12.0	Pre - Feasibility Study
5	Nam Long 5 Hydropower	5.0	24.0	12.0	Pre - Feasibility Study