



# Kimathanka Arun Hydroelectric Project (454 MW)



## Background

Kimathanka Arun Hydroelectric Project (KAHEP) is Peaking Run of River (PROR) hydropower scheme designed to harness the potential of Arun River. The project is in Sankhuwasabha District with installed capacity of 454.07 MW and annual energy generation of 2551.16 GWh. The total distance from Kathmandu to the headworks site is 665 km. The Project area is accessible from Kathmandu by a black-topped road of 516 km upto Khandbari, followed by an additional 76 km length of earthen road upto Gola and 60 km from Gola to nearby project area.



**Sector:**  
Hydropower



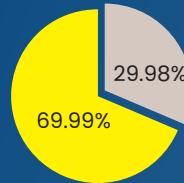
**Location:**  
Bhotkhola, rural municipality,  
Sankhuwasabha district



**Land Required:**  
166 hectares  
(govt land: 100 ha,  
private land: 66 ha)

### Salient Feature:

- Installed Capacity: 454.07 MW
- Energy: 2551.16 Gwh



Wet Energy: 765.21 GWh  
Dry Energy: 1785.95 GWh

## Features/ Components

- Catchment area: 24,835.6 km<sup>2</sup>
- Design Discharge: 143.5 m<sup>3</sup>/s
- Head: 379.52 M (Gross), 367.55 M (Net)
- Dam: RCC gravity, 140 Meter High, 65 meters below riverbed
- Reservoir capacity: 10.3 Mm<sup>3</sup>, Live 3.24 Mm<sup>3</sup>, Dead 7.06 Mm<sup>3</sup> & Inundation area: 0.35 Sq. KM
- Head race tunnel 5900 m
- Surge Shaft: 18 m Dia 56 m depth connected with Ventilation tunnel
- Powerhouse: 117.5 x 19.5 x 40.1 m underground
- Turbine: Pelton (vertical Axis) 4 units
- Transmission line: 400 KV, D/C, 18.5 KM long to Haitar Sub-Station (to be developed by RPGCL)

## Project Outcome



Excess energy Export to neighboring country



Achievement of Sustainable Development Growth and Green Growth



Promote Tourism and Development



Enhancing local infrastructure, including access roads & bridges

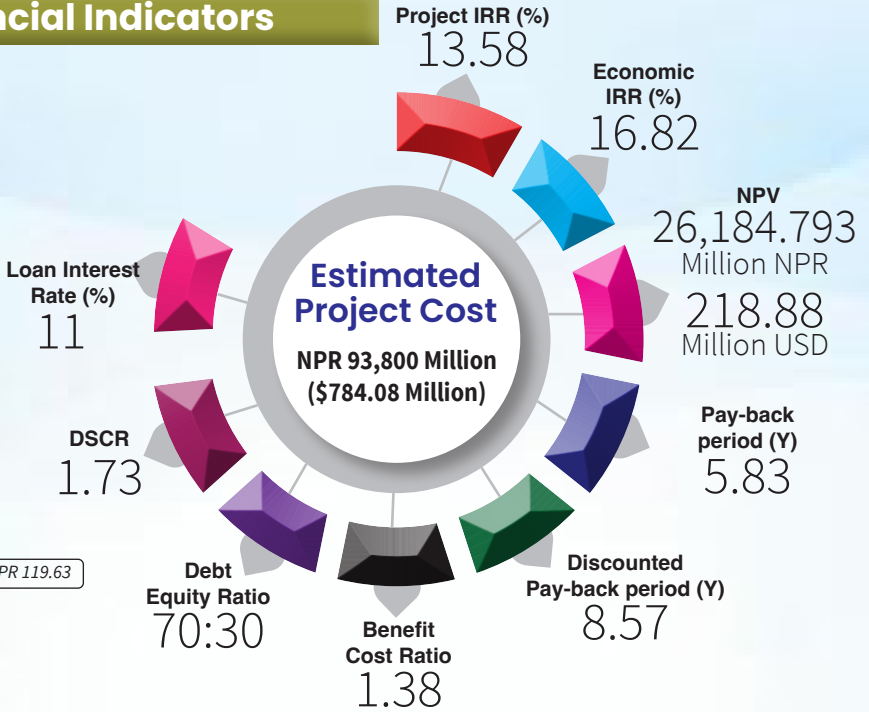


Increment in economic activities



Employment Opportunities

# Financial Indicators



# Project Modality & Requirement



Public Private Partnership (PPP model)

Build Own Operate Transfer (BOOT)

## Project Seeking Finance



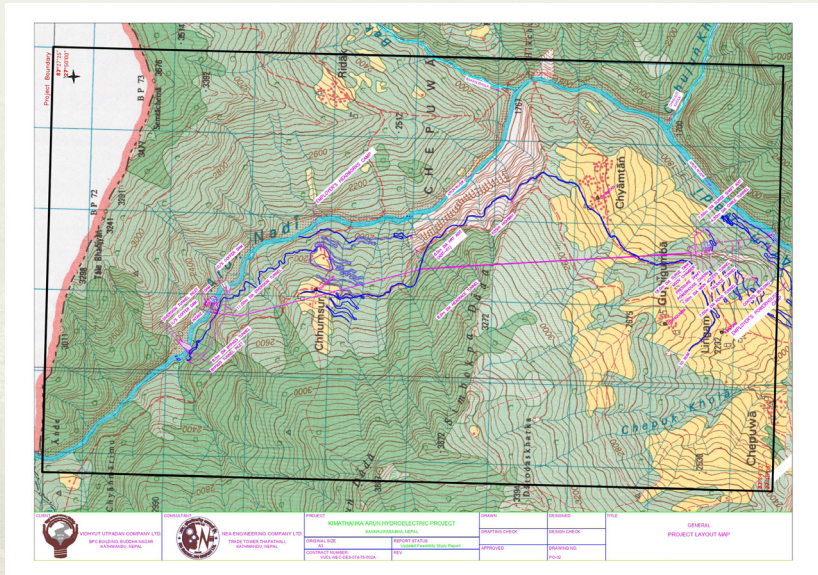
Seeking lenders to finance 70% of the total project cost as a debt

# Project Implementation Timeline



## Additional Information

The generated power will be fed into the integrated power system of Nepal at the nearest national grid substation proposed at Haitar, Sankhuwasabha.



Pic 1: Project Layout

## Relevant Agencies

- Vidhyut Utpadan Company Limited (VUCL)
- Ministry of Energy, Water Resource and Irrigation (MOEWRI)

## About the Agency

### Agency: Vidhyut Utpadan Company Limited

Government of Nepal has established Vidhyut Utpadan Company Limited (VUCL) under the Companies Act 2006 AD and registered in Ministry of Industry, Office of the Company Registrar Government of Nepal 'to identify HPP Potential of country and to carry out other work for the development of HPP. The company is working for survey, construction/development, generation, operation and management of HPP in an economically efficient and sustainable manner to meet the growing power demand in the country. Company is diversifying its business from HPP to Renewable energy sector as well through collaboration with National and International investor and various Development Partners (DP).

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