



Kokhajor

Storage Hydropower Project (63 MW)



Government of Nepal
Ministry of Energy, Water Resources and Irrigation
Department of Electricity Development



Background

The project is designed as a storage-type scheme to ensure energy production continuity during periods of low river discharge to harness the potential of Kohajor Khola. The project site is on the border of Sindhuli and Kavre Districts, with installed capacity of 63 MW and total annual energy generation of 307.4 GWh. The proposed dam site, located 7 to 8 km upstream from the confluence of Bagmati and Kohajor River near Bhorleni, lacks a motorable road connection from Bhorleni. Access to the dam site requires a 5-hour walk. The confluence of the two rivers near Bhorleni is reachable from Hetauda via a motorable road spanning approximately 57 km from Hetauda. Hetauda is accessible from Kathmandu via two routes: the Kathmandu-Hetauda road covering around 87 km via Dakshinkali, suitable only for small vehicles, and the Tribhuvan Highway, which is approximately 158 km long. Additionally, the proposed powerhouse near Pipalmadi is accessible by a motorable road from Kathmandu.



Sector
Hydropower



Location
Sindhuli and Kavre Districts
Bagmati Province



Land Required
274.74 hectares

Salient Feature:

- o Scheme: Storage type
- o Installed Capacity: 63 MW
- o Average Annual Energy: 307.4 GWh



Features/ Components

- Catchment Area is 282 km²
- Design discharge: 31m³/s
- Net head: 232.47 m
- Central Clay-core Rock fill type dam with height 130 m
- Chute spillway with stepped channel with channel width 27 m
- Intake: 2 inclined side intake
- Head Race Tunnel: Horseshoe with length 7488m and internal dia 4 m
- Restricted Orifice Single Chamber surge tank with dia 7 m and height 100.5 m
- Penstock length 843 m and internal diameter 3 m
- Surface powerhouse, 26m*31.64m*50.72m
- 2 units of Francis turbine
- Open channel tailrace of length 591.6 m and width 12m
- 132 KV system with an ACSR Bear conductor that connects to the Integrated Nepal Power System and is located 7 km from the switchyard to the Faparbari S/s

Project Outcome



Increased electricity generation capacity



Contribution to sustainable development and environmental conservation



Enhanced regional connectivity and access to remote areas.



Water resource management



Fisheries Enhancement

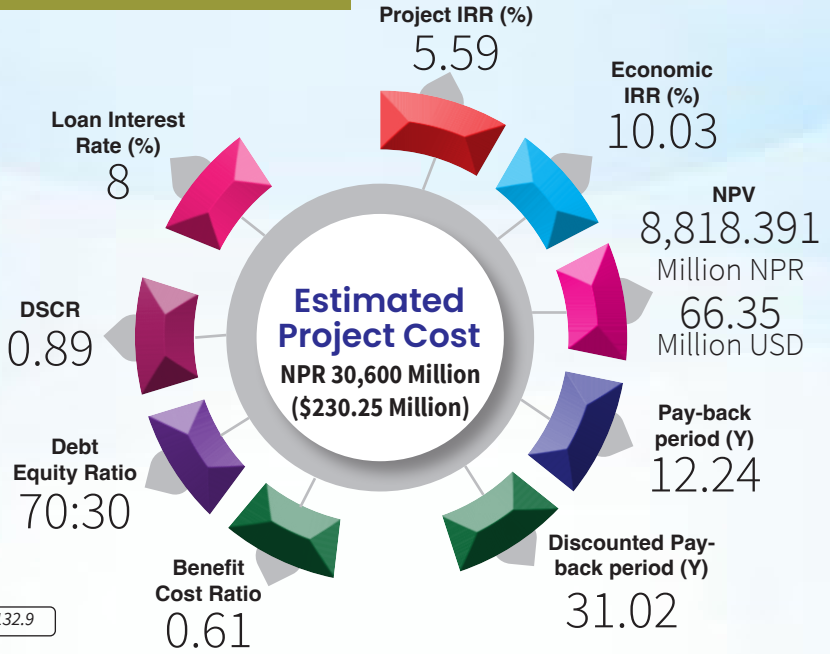


Revenue generation for central, provincial, and local governments



Job creation during construction and operation

Financial Indicators



Project Implementation Modality



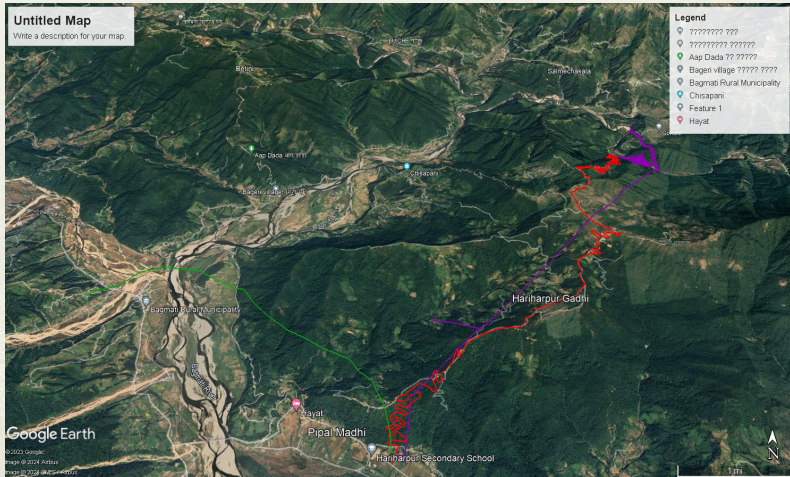
**Build Own Operate Transfer
(BOOT)**

Project Implementation Timeline



Additional Information

The project encompasses areas within several rural municipalities, including Pipalmadi, Hariharpur Gadhi, Mahendrajhadi, Kapilakot, Kyaneshwor, Mahabharat, Khanikhola, and Bagmati.



Pic 1: Project Layout

Relevant Agencies

- Ministry of Energy, Water Resources, and Irrigation (MoEWRI)
- Department of Electricity Development (DoED)

About the Agency

Department of Electricity Development (DOED), Government of Nepal

The Department of Electricity Development (DOED), part of Nepal's Ministry of Energy, Water Resources, and Irrigation, envisions facilitating efficient and sustainable hydropower projects to meet the nation's growing energy demands, thereby contributing to economic growth and energy security. Its mission involves promoting private sector involvement and local investment in large, medium, and small hydropower projects, fostering an environment conducive to hydropower development, and ensuring efficient water resource utilization. The agency's objectives include incentivizing private sector participation, developing implementable hydropower projects to address energy needs, conducting feasibility studies and environmental assessments, and enhancing the overall capacity and efficiency of Nepal's electricity sector. The DOED aims to achieve these goals by promoting PPPs, adhering to environmental and social standards, and ensuring equitable electricity distribution.

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