

Nalgad Storage Hydroelectric Project (417 MW)



Background

Nalgad Storage Hydroelectric project is a storage scheme hydropower designed to harness the potential of Nalgad River. The project is in Jajarkot district with installed capacity of 417 MW and total annual energy generation of 1280.4 GWh. The project area is accessible from Kathmandu via a 580 km black-topped road followed by 40 km of earthen road. The nearest airports are Surkhet (135 km away) and Nepalgunj (181 km away) from the Khalanga Jajarkot. The pre-construction activities like all weathered access road, office, guest house and bunkers are already completed.



Sector:
Hydropower



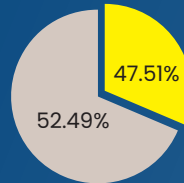
Location:
Nalgad Municipality and Barekot Rural Municipality, Jajarkot district



Land Required:
required: 263.83 ha
acquired: 253.66 ha

Salient Feature:

- Storage-type project with a capacity of 417 MW
- Annual energy generation: 1280.4 GWh



■ Firm Energy: : 672.1 GWh
■ Secondary Energy: 608.3 GWh

Features/ Components

- Catchment area upto dam site: 569 km²
- Design Discharge: 78.4 m³/s
- Head: 708 m (Gross), 610 m (Net)
- RCC gravity dam with 248 m height
- Concrete lined Horseshoe shape headrace tunnel with 5.85m diameter and total length 8168.5 m
- Restricted Orifice Surge Shaft with 3m diameter and height of 165.5 m
- Circular shape penstock with 4m diameter and 84.34 length
- Underground Powerhouse
- 4 units of vertical axis Pelton turbine
- Concrete Lined, Inverted D-shaped tailrace tunnel with 520 m length
- 10 Km 400 kV transmission line connected to the Danipal sub-station Jajarkot

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

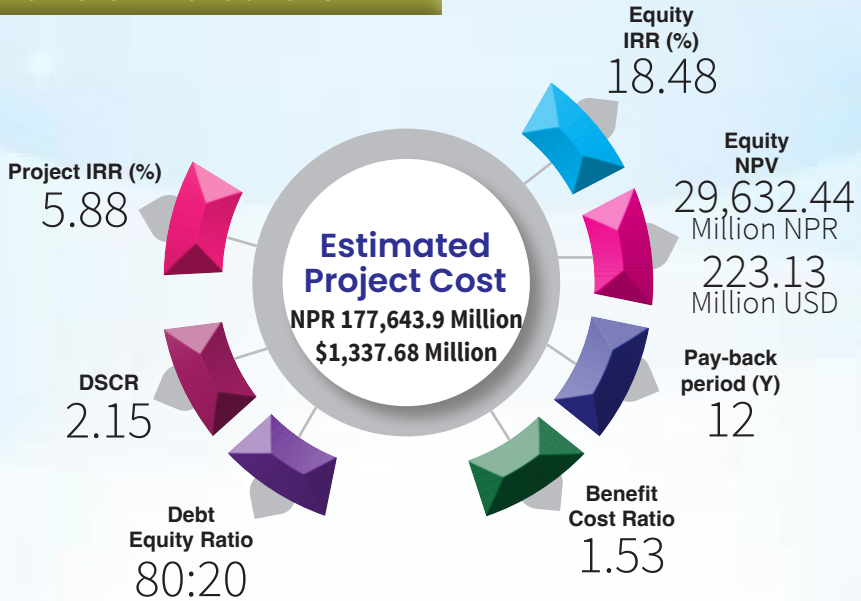


Increment in economic activities



Employment Opportunities

Financial Indicators



Note: 1 USD = NPR 132.8

Project Modality & Requirement



Public Private Partnership (PPP model)

Build Own Operate Transfer (BOOT)

Project Seeking Finance



Seeking lenders to finance 80% of the total project cost as a debt

Project Implementation Timeline



Additional Information

The project will displace 503 households, and 263.83 hectares of private land will be permanently required for its implementation. Among these, 253.66 hectares (95.3%) have already been acquired.

The generated power from the Nalgad storage hydropower project will be transmitted to Nepal's integrated power system at the Danipipal substation (10 km away).

The company is also keen on collaborating with multilateral banks, particularly if they can offer loans at favorable interest rates.



Relevant Agencies

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

About the Agency

Agency: Nalgad Hydropower Company Limited

Nalgad Hydropower Company Limited is dedicated to harnessing the potential of water resources to provide clean and sustainable energy solutions. With a commitment to environmental stewardship and technological innovation, we aim to deliver reliable electricity while fostering economic development and social well-being in the communities we serve.

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