

# TAMOR STORAGE HYDROELECTRIC PROJECT

## SALIENT FEATURES

SN	FEATURES	CHARACTERISTICS
GENERAL		
1	Name of the Project	Tamor Storage Hydroelectric Project
2	Sector	Hydropower
3	Type	Storage Type (756 MW capacity dam-toe power Station as per NEA Feasibility Study 2016)

### PROJECT LOCATION

1	Province	Province 1
2	Project Location	Tehrathum and Panchthar district ( <a href="#">Location Map</a> )
3	Project Area	The project is located about 650 Km east from Kathmandu, the capital city of Nepal. The nearest airport to the site is at Biratnagar which is about 175 Km away from project site. Myanglung bazaar is around 153km from Biratnagar, can be reached from in around 6 hours' drive. 20 Km drive through earthen road from Myanglung Bazaar the dam site can be accessed. The proposed Dam Integrated with Powerhouse site is located about 1.5km downstream of Suspension Bridge in Myanglung- Yashok roadway confluence of Lambhu Khola to Tamor.

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#### PROJECT FEATURES (NEA FEASIBILITY STUDY 2016)

1	Project Layout	Rock fill Dam is arranged at the riverbed with Chute Spillway, four Headrace tunnel as well as penstock pipe to carry discharge to underground powerhouse on the right bank around 150m downstream of the dam toe with 4 units of turbine of 194 MW installed capacity (total 756 MW).
2	Climate	As in other parts of Nepal, Tamor River also experiences the effects of Southwest monsoon, which on average lasts from June to end of September. The total runoff is caused by monsoon rainfall, the climate is strongly influenced by altitude that differs over very short distances. The region receives approximately 80% of rainfall during the monsoon.
3	Geology	The study mentions, no major geological structure was identified during the investigation. As per the regional geology, thrusts were identified upstream and downstream of the proposed Headworks and powerhouse location. A thick shear zone was observed about 2Km upstream of the proposed dam axis as well as a thin shear zone was identified on left bank of Tamor River which is around 80m upstream of proposed dam axis. This Shear zone strikes along N-S with average slope of 200 due southwest.
4	Hydrology	Catchment Area: 5094 km <sup>2</sup> Average flow: 310 m <sup>3</sup> /s Design flow: 657.4 m <sup>3</sup> /s (Note: There are two Hydrological station of Department of Hydrology and Meteorology (DHM) namely Station: Station Number 684: Majhitar and Station Number 690: Mulghat)

#### TECHNICAL COMPONENTS (AS PROPOSED BY NEA STUDY)

1	Diversion	Three Inverted D type diversion tunnel of 11m diameter with average length of 1.5 km carrying diversion discharge of 1667.67m <sup>3</sup> /sec per tunnel. An earthen coffer dam around 70m height.
2	Dam	A 210 m high Rock fill type with impervious clay core storage dam. The crest elevation of the dam is 558 masl and the crest length is around 550m, a gate controlled chute type Spillway at elevation of 530 masl.

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3	Reservoir	Full supply Level: 550m Minimum Water Level: 492m Dead Storage Level: 475m Live Storage: 1900 MCM
4	Intake	Four number of sloping intake with minimum operating level of 492m is proposed.
5	Waterway	<ul style="list-style-type: none"> <li>■ Headrace Tunnel: 6.5 m diameter, around 1km long four Inverted D type headrace tunnel.</li> <li>■ Vertical Shaft: around 130m long four vertical drop shaft.</li> <li>■ Penstock Pipe: Four penstock pipe of average length 100 m and 6m diameter are proposed.</li> </ul>
6	Powerhouse	An underground power station, 150 m downstream of toe of the dam.
7	Turbine	Four 194MW rated Vertical Axis Francis turbine with, <ul style="list-style-type: none"> <li>■ Gross head: 198m</li> <li>■ Rated Turbine Net Head= 169.73 m</li> <li>■ Rated Discharge: 129.75m<sup>3</sup>/sec</li> <li>■ Centre line of Turbine: 347 m</li> <li>■ Tail water Level : 352 m</li> </ul>
8	Tailrace	An 8 m diameter Inverted D type Tailrace tunnel discharging the flow back to the Tamor River.
9	Energy Generation	The powerhouse operates for 6 hour in dry season whereas 24 hour operation is proposed for wet season. Annual Electricity Generation= 3353.85 GWh <ul style="list-style-type: none"> <li>■ Wet Season: 2248.1 GWh</li> <li>■ Dry Season: 1105.75 GWh</li> </ul>
10	Power Evacuation	As proposed from NEA study, the power evacuation to be carried by 400 KV double circuit transmission line to proposed substation at Inaruwa, Sunsari district which is around 75Km long.

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#### DEVELOPMENT MODALITY

1	Development modality	Public Private Partnership
2	Role of the Government of Nepal	<ul style="list-style-type: none"> <li>■ Provision of government land, land acquisition, facilitation and project security</li> <li>■ Facilitating legal approvals/permits</li> <li>■ Review &amp; monitoring</li> </ul>
3	Role of the Private Sector	<ul style="list-style-type: none"> <li>■ Plan, design, build, finance and operate the facilities during the Concession Period</li> <li>■ Collection of revenues from the project during the Concession Period</li> <li>■ Handover to the Government after the Concession Period</li> </ul>

#### INDICATIVE FINANCIALS AS PER NEA STUDY 2016

1	Total Project Cost (for proposed Full supply level of 550 m (including interest during construction, finance cost and 75 km long 400 kV double circuit transmission line cost to Inaruwa)	USD 1217.4 Million
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# APPLICATION PROCEDURE

## PRE-QUALIFYING CRITERIA FOR THIS PROJECT

1. Minimum of 10 years of experience in field of energy project development, investment and management.
2. Evidence of Hydropower Projects Owned/Constructed/Operated Around the World. At Least Two Reference Projects Of At Least 500 MW (Out Of Which One Should Be Of Storage Operation), With Verifiable Evidence.  
or,  
Evidence Of Development And Operation Of Energy Projects With Aggregate Capacity Of Minimum 4000 Mw.
3. The combined Net worth of the applicant shall not be less than USD 1.5 Billion (United State Dollar One Billion Five Hundred Million) at the time of submission of bid.

## APPLICATION PROCEDURE

1. The developer/ investor who meet the above pre-qualifying criteria can make the application for this project.
2. Application may be made by a single entity or a group of entities (Consortium or JV) comprising up to three different companies/ parties, including a Lead member, coming together to implement the project.
3. A consortium/JV may fulfil the pre-qualifying criteria in a joint/cumulative manner, except for the number of years of work experience.
4. A fee of NRs 10,000 shall be payable for each application made (with application to one project counting as a single application).
5. The fee must be paid to OIBN (to the OIBN office or a dedicated desk at the Nepal Investment Summit), or by electronic transfer to the following bank account of OIBN:

**Office Code: 301003502**

**Office Name: Office of the Investment Board**

**Revenue Heading: 14229**

**Bank Name: Everest Bank Ltd.**

**Swift Code: EVBLNPKA**

Please use 'Company name\_Project name' as the reference code for the payment made in the case of an online payment.

6. After payment of the fee is made, the OIBN shall assign an engagement manager and may provide additional documents or information relevant to the project (if available).

7. Applicants should submit the detailed proposal with all required documents by 20th April 2019. Applications shall be submitted in physical copies to the OIBN or emailed to [projects@ibn.gov.np](mailto:projects@ibn.gov.np).
8. The Government of Nepal (OIBN or relevant government agency at the relevant level of government) shall review the proposal and ask additional information if required.
9. The Government of Nepal shall decide on your application by 31st May 2019.

## DETAILED PROPOSAL CHECKLIST

1. Detailed profile of the developers/ investors, including profile of senior management team, annual report and audited financial statements for at least past three years (2015, 2016 & 2017), and consortium agreement or JV agreement or Memorandum of Understanding in the case of consortiums or JV.
2. Project concept, plan, and information on financial, economic, technical and environmental feasibility.
3. Method of project implementation, project development modality and work schedule
4. Business plan with basic financial statements
5. Financial arrangement and source of investment
6. Socio-economic contribution to Nepal
7. Expected support from GoN
8. Other relevant information, if any

**APPLY NOW**



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## CONTACT DETAILS



### Office of the Investment Board

ICC Complex, New Baneshwor

Kathmandu, Nepal

Phone: 977-1-4475277, 977-1-4475278

Fax: 977-1-4475281

Email: [projects@ibn.gov.np](mailto:projects@ibn.gov.np)