



## **Nepal Investment Summit 2024**



**Government of Nepal  
Investment Board Nepal**

### **Request for Expression of Interest (EOI)**

**Project Name: Naumure Multipurpose Project**

**EoI No.:** NIS2024/IBN/EoI-07

**First Date of EoI Publication:** 28<sup>th</sup> April 2024



## ABBREVIATIONS

DOED	Department of Electricity Development
EM	Electromechanical
EoI	Expression of Interest
GoN	Government of Nepal
IBN	Investment Board Nepal
JV	Joint Venture
MoEWRI	Ministry of Energy, Water Resources and Irrigation
NIS	Nepal Investment Summit
OIBN	Office of the Investment Board Nepal
PPP	Public-Private Partnership
RfP	Request for Proposal



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## 1. BRIEF DESCRIPTION

Investment Board Nepal is a high-powered agency chaired by Rt. Hon. Prime Minister established as a nodal agency for Public Private Partnership (PPP) and investment promotion in Nepal. Since its establishment, IBN has played an instrumental role in implementing transformative infrastructure projects fundamental to bolstering socio-economic development of the country. IBN has provided investment approvals – for both Public-Private Partnership and direct Private Investment projects. Being guided by the long-term vision (2043), the 15<sup>th</sup> Plan, and other subsequent policies of the Government of Nepal; and international commitments such as Sustainable Development Goals, IBN has been developing credible and bankable projects to garner investment.

The Third Nepal Investment Summit is scheduled for 28<sup>th</sup> & 29<sup>th</sup> April 2024. The main objective of the Summit is to promote Nepal as a promising investment destination and to attract domestic and foreign direct investment in various sectors. The summit is expected to bring together prominent national and international speakers, dignitaries, sector specific experts and high-level government officials. During the Summit, various projects shall also be showcased to existing and new investors and developers.

A rigorous exercise has been undertaken to collect, evaluate, screen, and prepare projects for solicitation through EoI, market sounding, and showcasing other projects at different stages in pipeline. This expression of interest is issued at the NIS 2024 as per the Clause 16 of the Public Private Partnership and Investment Regulation 2077. The summit will also be an opportune venue for developers to meet potential investors for equity and debt portions in projects.

Among the projects selected for solicitation, **Naumure Multipurpose Project** is one of them. The project related studies were carried out by the Department of Electricity Development. The Naumure Multipurpose Project comprises three hydro schemes: Naumure (218.04 MW), Lamatal (8 MW), and Surainaka (54.7 MW), along with the Kapilvastu Irrigation System. Under the Naumure Multipurpose Project, the irrigation systems in Duekhuri Valley (10,800 ha) and Banke (42,766 ha), including the projected Kapilvastu Irrigation System (29,736 ha), are currently in place. The Naumure Hydro Scheme, located in Pyuthan district, proposes a 169m high Concrete Face Rockfill Dam (CFRD), with an installed capacity of 218.04 MW utilizing three Francis turbines in an underground powerhouse. In Arghakhanchi District, the Lamatal Hydro Scheme plans for a 15.5m high Reinforced Cement Concrete (RCC) barrage and an 8 MW power output from three units of Kaplan turbines in a semi-surface powerhouse. The Surainaka Hydro Scheme, situated in Kapilvastu District, will be connected to Lamatal scheme via an 18.2 km long circular pressure tunnel and will feature a semi-surface powerhouse housing two Francis turbines, with a total installed capacity of 54.7 MW. The Kapilvastu Irrigation System originates from the West Rapti River, facilitating water diversion for agricultural purposes. It encompasses a vast agricultural command area spanning 29,736 hectares, supporting diverse agricultural activities. (Based on Feasibility and EIA study of Naumure Multipurpose Project carried out by Department of Electricity Development (June 2022))

A brief introductory description of the projects is attached to this document.

## 2. BIDDING PROCESS SCHEDULE

The OIBN shall adhere (tentatively) to the following schedule to evaluate and shortlist from the EOI received for the Request for Proposal.



EOI issue Date: 28<sup>th</sup> April 2024, 12:00 AM (Nepal Standard Time)

Last date of submission of EOI: 12<sup>th</sup> June 2024, 12:00 PM (Nepal Standard Time)

EOI opening date and place: 12<sup>th</sup> June 2024, 12:00 PM (Nepal Standard Time), Office of the Investment Board Nepal

Application Evaluation result: 12<sup>th</sup> August 2024

*Interested parties are requested to submit their EOI along with all necessary documents online at [www.eoi.investinnepal.gov.np](http://www.eoi.investinnepal.gov.np).*

Contact Details:

Name of Agency: Office of Investment Board Nepal

Address: ICC Complex, New Baneshwor, Kathmandu

Phone no.: +977-01-4575277, +977-1-14575278; Fax: +977-1-4575281

Email address: [info@ibn.gov.np](mailto:info@ibn.gov.np); website: [www.ibn.gov.np](http://www.ibn.gov.np)

*The details of the project structuring will be done before the RfP is issued and the details will be provided with the RfP document. OIBN reserves the right to shortlist or not to shortlist any or all the applicant(s) without assigning any reasons whatsoever. A pre-bid conference shall be held only at the RfP stage.*

### 3. PRE-QUALIFYING CRITERIA

The applicants must meet the following pre-qualifying criteria to be considered for further evaluation and shortlisting.

- a) Minimum of 10 years of experience of the applicant or at least one of the partners in case of JV/consortium in development of hydropower projects.
- b) Must have successfully completed development of at least one Hydropower Projects in the past 5 years whose Power capacity should not be less than 211 MW. (*Completed development projects means: For domestic developer, at least Electro-Mechanical works-initiated projects for which letter issued from DOED regarding the custom facilities is required and for international developer, project completion/operation certificate is required*)

OR

Must have completed development of hydropower projects with aggregate capacity of 1686 MW in past 20 years.

- c) Must have completed development of at least one storage project with Dam of Height 85 meter in past 20 years.
- d) Must have completed development of at least one HPP with the significant amount (Minimum of 500 Person) of resettlement component in past 20 years.
- e) The net worth of the applicant or JV (in case of JV/consortium) should be equivalent to at least 431 million USD as per the last fiscal year audited balance sheet. In the case of JV/Consortium, the net worth will be calculated based on the percentage share as mentioned in the JV agreement or MOU. If no such share is indicated, the net worth of the lead firm will be considered.

*Note: The currency exchange rate of the first date of EOI publication will be considered for conversion of net worth and project scale if reported in currency other than USD.*



#### 4. APPLICATION PROCEDURE

The developer/investor who meets the above pre-qualifying criteria can make the application for the project.

- a) 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.
- b) A consortium/JV may fulfil the pre-qualifying criteria in a joint /cumulative manner, except for the number of years of work experience.
- c) A non-refundable fee of NPR 150,000 shall be payable for each application (PPPIR 2077, Clause 17 (3)) at the time of making the application. Any application submitted without the proof of payment of the fee will be considered non-compliant.
- d) The fee must be deposited or electronically transferred to the following bank account of OIBN:

Account No.: 1420100102100001

Account Name: OFFICE OF THE INVESTMENT BOARD

Bank name: Rastriya Banijya Bank (RBB)

Bank Branch: Baneshwor

SWIFT Code: RBBANPKA

- e) Please use "Company name\_Project name" as the reference code for the payment made in the case of the online payment.
- f) After payment of the fee is made, the OIBN shall assign a focal person and may provide additional documents or information relevant to the project (if available).
- g) Applicants should submit the EOI with all required documents online by 12<sup>th</sup> June 2024 (12:00 PM Nepal Standard Time).
- h) The Government of Nepal (OIBN or relevant government) shall review the proposal and ask additional information if required.

*Note: If the corruption case is being filed to Court against the Natural Person or Board of Director of the firm/institution /company or any partner of JV, such Natural Person or Board of Director of the firm/institution /company or any partner of JV such consultant's proposal shall be excluded during the evaluation.*

#### 5. CHECKLIST

Clause 17 of the PPPIR 2077 mentions that the interested investor shall acquire the request for expression of interest from the concerned agency or website and submit the documents as mentioned in the request for proposal document. Following documents and information must be submitted while submitting the EoI.

1. Notarized copy/ies of VAT/PAN registration certificate (for national developer) and official company registration certificate (for international developer).
2. Detailed profile of the developers/investors, including profile of senior management team, and annual report audited financial statements for at least past three years, latest tax clearance certificate.
3. Where the interested party is considering potential consortium partners, an indication of such intention and details of potential consortium partners (to the extent known). The interested party should clearly state the role of the consortium members and detail the scope they would intend

to deliver, for example, design services, construction and commissioning services, facilities management services.

4. Evidence of power of attorney.
5. Project concept, plan, and information on financial, economic, social, technical, and environmental feasibility.
6. Method of project implementation, project development modality and work schedule.
7. Business plan with basic financial statements
8. Financial arrangement and source of investment
9. Self-declaration letter on validity and accuracy of the projects and details submitted and against corruption charges
10. Expected support from GoN, if any.
11. All the documents need to be properly signed and stamped.
12. Other relevant information, if any.

### Brief Project Description

Districts	: Pyuthan/Arghakhanchi
Catchment Area	: 3414 km <sup>2</sup>
Installed Capacity	: 218.34 MW
Gross Head	: 164 m
Net Head	: 160.3m
Design Discharge	: 154 m <sup>3</sup> /s
Full Supply Level (FSL)	: 524 masl
Minimum Operating Level (MOL)	: 473 masl
Reservoir/ Submergence Area	: 18.03 km <sup>2</sup>
Dam Type	: Concrete Face Rockfill Dam (CFRD)
Dam Height (from the river bed)	: 169 m
Dam Crest Level	: 531 masl
Minimum Drawdown Level	: 473 masl
Concrete Chute Spillway Crest Level	: 493 masl
No. of Spillway bays	: 5 (11 m x 16.5 m gates)
Spillway Design Flood	: 12140 m <sup>3</sup> /s (PMF flood)
Power Intake Nos	: 2
Intake Tunnel Dia.	: 4.5 m x 2
Pressure Shaft Dia.	: 6.35 m
Pressure Shaft Length	: 592 m
Powerhouse	: Underground Cavern type
Turbine Centre Line	: 356.4 masl
Turbine	: Francis (3 nos.) 300 rpm
Tail Water Level	: 360 masl
Tailrace Tunnel Length	: 1.2 km
Tailrace Tunnel Dimension	: D-shaped 8m x 8m
Average Annual Energy	: 874 GWh (after deduction of outages/losses)
Average Annual Dry Energy	: 305.90 GWh (35 %)
Average Annual Wet Energy	: 568.10 GWh (65 %)
Access Road Length	: 22.94 km from Jhilibang to project area (total)
Transmission Length	: 55 km (220 kV) Up to New-Lamahi Substation
Gross Storage	: 1066.85 MCM
Active Storage	: 694.33 MCM
Dead Storage	: 259.29 MCM
Average River Bed Elevation	: 362 masl
Turbine Efficiency	: 92%
Generator Efficiency	: 98%
Generator Equipment Type	: 3 Phase Synchronous, 85.62 MVA, 11 kV, 300 rpm
Transformer Efficiency	: 99%
Project Cost	: 91,922.937 Million NRs. (including costs from EIA)
Per MW Cost	: 375.05 Million NRs.



### Lamatal Hydropower Scheme:

District	:Pyuthan/Arghakhanchi
Catchment Area	:3572 Km <sup>2</sup>
Installed Capacity	:8 MW
Gross Head	: 7 m
Net Head	: 6.65m
Design Discharge	: 136.20m <sup>3</sup> /s
Tailrace Water Level:	: 352 masl
Full Supply Level (FSL)	: 359 masl
Minimum Operating Level (MoL)	: 356 masl
Barrage Crest Elevation	: 360.5 m (1.5m freeboard)
Reservoir/ Submergence Area	: 1.22 km <sup>2</sup>
Power Intake Type	: 3 Submerged Bellmouth Type Intakes
Intake diameter	: 5.6 m
Spillway Type	: Orifice Type Spillway equipped with Radial Gates
No. of Spillway Bays	: 22 (10m x 4m gates)
Spillway Design Discharge	: 7873 m <sup>3</sup> /s (1000 yrs Return Period Flood)
Energy Dissipator	: Hydraulic-jump type Stilling basin
Barrage Height	: 15.5 m
Powerhouse	: Semi-Surface Powerstation at Barrage Toe
Penstock diameter	: 4m
Turbine Centre Line	: 345 masl
Turbine	: Kaplan (3 nos.) 150 rpm
Tail Water Level	: 352 masl
Annual Gross Energy	: 38.90 GWh (after deduction of outages/losses)
Gross Dry Season Energy	: 14.61GWh (37%)
Gross Wet Season Energy	: 24.29GWh (63 %)
Access Road Length	: 22.94 km from Jhilibang to project area (total)
Transmission Length	: 4.6km (33kV) to Naumure Switchyard
Gross Storage	: 6.46 MCM
Active Storage	: 3.02 MCM
Average River Bed Elevation	: 345 masl
Site Coordinates	: 82°53'22" E and 27°54'30" N
Irrigation Facilities	
Deukhuri	:10,800 ha with 310.96Mm <sup>3</sup> of annual water demand
Banke	:42,766 ha with 959.55Mm <sup>3</sup> of annual water demand
Kapilvastu	:29,736 ha with 647.02 Mm <sup>3</sup> of annual water demand
Total=	:83,302 ha with total 1917.53 Mm of annual water demand
Turbine Efficiency	: 92%
Generator Efficiency	: 98%
Generator Equipment Type	: 3 Phase Synchronous, 3.14 MVA, 6.6 kV, 150 rpm
Transformer Efficiency	: 99%
Project Cost	: 5,652.595 Million NRs. (including costs from EIA)
Per MW Cost	: 655.94 Million NRs.

### Surainaka Hydropower Scheme:

District	: Arghakhanchi/Kapilvastu
Catchment Area	: Not relevant as water will be conveyed from Lamatal Tailrace
Installed Capacity	: 54.7 MW
Gross Head	: 160 m
Net Head	: 148.66 m
Water Level at Headpond	: 351.5 masl
Tailrace Water Level	: 191.5 masl
Design Discharge	: 41.6 m <sup>3</sup> /s
Intake Orifice nos	: 4 (Q = 45.76m <sup>3</sup> /s, including 10% flushing)
Intake Orifice Size	: 4m (W) x 2.75m (H)
Approach Canal after Intake Size	: 4m (W) x 5m (H), 2nos
Length of Canal	: 28.23 m
Settling Basin effective length:	: 100 m
No. of bays	: 2, 25m width each
Approach Canal after Settling Basin	: 1 nos.
Approach Canal after Settling Basin size	: 6m (W) x 5m (H)
Length of Canal	: 259.67 m
Headpond before Tunnel	: 6m (W) x 35m (L)
Tunnel Length	: 18 km
Tunnel Diameter	: 5.5 m (Finished Dia.)
Tunnel Slope	: 1:500
Surge Tank Type	: Orifice type (4.5 m dia. Orifice)
Surge Tank Diameter	: 12 m
Penstock Diameter	: 3.8 m
Penstock Length	: 1172.65m (including bifurcation)
Powerhouse	: Semi-Surface Type, 36.9m (L) x 17m (W) x 30m (H)
Turbine Centre Line	: 180.5 masl
Turbine	: Francis (2 nos.) 500 rpm
Tailrace Canal	: 6m (W) x 2.9m (H), 1: 1000 slope
Average Annual Energy	: 362.81 GWh (after deduction of outages/losses)
Gross Dry Season Energy	: 173.92 GWh (48 %)
Gross Wet Season Energy	: 188.88 GWh (52 %)
Access Road Length	: 5.17 km from East-West Highway up to Surge tank
Transmission Length	: 22 km (220 kV) to Naumure Switchyard
Irrigation Facilities	
Kapilvastu	: 29,736 ha
Turbine Efficiency	: 92%
Generator Efficiency	: 98%
Generator Equipment Type	: 3 Phase Synchronous, 32.175 MVA, 11 kV, 500 rpm
Transformer Efficiency	: 99%
Project Cost	: 18,141.507 Million NRs. (including costs from EIA)
Per MW Cost	: 327.91 Million NRs.

### Kapilvastu Irrigation System:

Name of Project:	: Kapilvastu Irrigation System
District	: Kapilvastu District
Administrative Coverage:	: Shivaraj Municipality (1 to 11) Krishnanagar Municipality (1 to 12) Bijayanagar VDC (Ward no. 2 to 7) Buddhabhumi (ward no. 7) Maharajgunj (ward no. 1 to 11)
Cultural Command Area (CCA)	: 29,736 ha (20,243 ha on eastern side & 9,493ha on western side)
Source of Water:	: West Rapti River
Proposed Major Crop Type:	: Paddy, Wheat, Pulses, Vegetables, Maize, Oilseed
Proposed Cropping Intensity	:180%
Maximum Design Discharge:	:43.2 m <sup>3</sup> /s (29.5 m <sup>3</sup> /s for East Main Canal & 13.7 m <sup>3</sup> /s for West main Canal)
Diversion Type	: Slice gate-controlled intake from Pondage with water supplied from tailrace (NTRL=191.5masl) of Surainaka hydropower
Normal Pond Level at Diversion Pond 2:	:186.75 masl
Length of Main Canal:	: 65.729 km (23.99km in East & 41.73km in the West)
Length of Secondary Canal:	: 152.24km (85.26km in the East & 67.08km in the West)
Length of Tertiary Canal:	: 273.66km (134.32km in the East & 138.33km in the West)
Project Costs	: NRs. 9120.76 (x 10 <sup>6</sup> ) Excluding VAT

### Overall Economic and Financial Parameter of Naumure MPP:

Total Project Cost (HP, irrigation and EIA costs)	: 113378.2802 Million NRs (Without VAT)
Total Project Cost (HP, irrigation and EIA costs)	: 125,564.434 Million NRs (with VAT)
EIRR	: 10.446 %
FIRR	: 9.49 %
NPV	: 35994.19 Million NRs.
B/C Ratio	: 1.31
Payback Period	:13.89 years
Specific Energy Cost	:14.59
DSCR (Avg)	:1.31

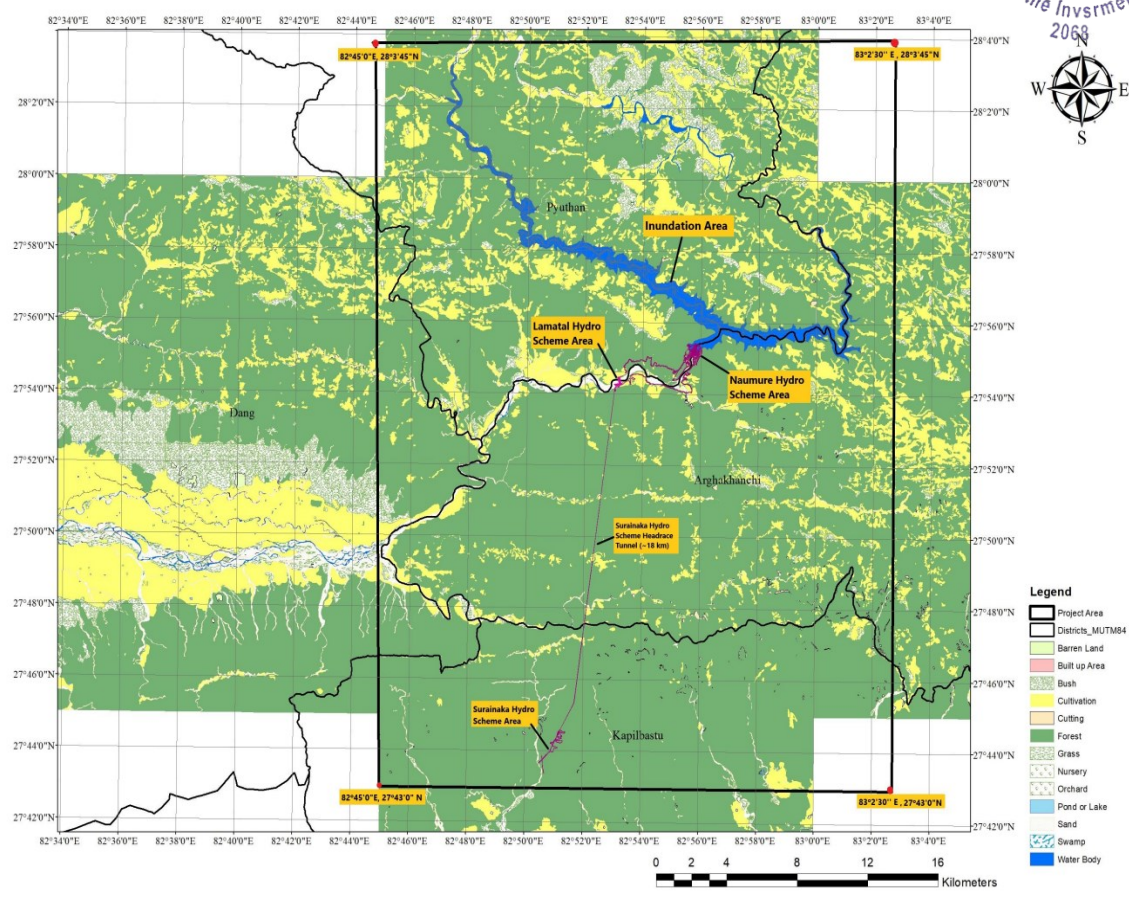


Figure: Layout of the Project