

# **EXPRESSION OF INTEREST (EOI)**

**Title of Consulting Service:  
DOED/EOI/01/ICB/2075/76/S**

**Method of Consulting Service: International**

**Project Name : Feasibility and Environmental Impact Assessment Study of  
Khimti Those Siwalaya Storage Hydropower Project, Dolakha & Ramechhap  
District (326 MW)**

**EOI : DOED/EOI/01/ICB/2075/76/S**

**Office Name: Department of Electricity Development**

**Office Address: Thapagaun, Anamnagar Kathmandu Kathmandu Kathmandu**

**Funding agency : Government Budget**



## **ABBREVIATIONS**

CV	-	Curriculum Vitae
DoED	-	Department of Electricity Development
EA	-	Executive Agency
EOI	-	Expression of Interest
GON	-	Government of Nepal
MOFE	-	Ministry of Forest and Environment
MoEWRI-		Ministry of Energy, Water Resource and Irrigation
PAN	-	Permanent Account Number
PPA	-	Public Procurement Act
PPR	-	Public Procurement Regulation
PRoR	-	Peaking Run-off River
RoR	-	Run-off River
TOR	-	Terms of Reference
VAT	-	Value Added Tax

## **Table of Contents**

Section I.	A. Request for Expression of Interest	5
Section II.	B. Instructions for submission of Expression of Interest	7
Section III.	C. Objective of Consultancy Services or Brief TOR	9
Section IV.	D. Evaluation of Consultant's EOI Application	19
Section V.	E. EOI Forms and Formats	22

## **A. Request for Expression of Interest**

# Request for Expression of Interest

## Government of Nepal (GoN)

Name of Employer: Department of Electricity Development

Date: 24-04-2019 05:00

Name of Project: Feasibility and Environmental Impact Assessment Study of Khimti Those Siwalaya Storage Hydropower Project, Dolakha & Ramechhap District (326 MW)

1. Government of Nepal (GoN) has allocated fund toward the cost of Feasibility and Environmental Impact Assessment Study of Khimti Those Siwalaya Storage Hydropower Project, Dolakha & Ramechhap District (326 MW) and intend to apply portion of this fund to eligible payments under the Contract for which this Expression of Interest is invited for International consulting service
2. The Department of Electricity Development now invites Expression of Interest (EOI) from eligible consulting firms (“consultant”) to provide the following consulting services: Feasibility and Environmental Impact Assessment (EIA) Study of Khimti Those Siwalaya Storage Hydropower Project, Dolakha & Ramechhap District (326 MW)
3. Interested eligible consultants may obtain further information and EOI document free of cost at the address Department of Electricity Development, Department of Electricity Development Sanogaucharan, Kathmandu, Nepal during office hours on or before 14-05-2019 12:00 or visit e-GP system [www.bolpatra.gov.np](http://www.bolpatra.gov.np) or visit the client’s website <http://www.doed.gov.np/>
4. Consultants may associate with other consultants to enhance their qualifications.
5. Expressions of interest shall be delivered online through e-GP system [www.bolpatra.gov.np/egp](http://www.bolpatra.gov.np/egp) on or before 14-05-2019 12:00
6. In case the last date of obtaining and submission of the EOI documents happens to be a holiday, the next working day will be deemed as the due date but the time will be the same as stipulated.
7. EOI will be assessed based on Qualification 35.0 %, Experience 55.0 %, and Capacity 10.0 % of consulting firm and key personnel. Based on evaluation of EOI, only shortlisted firms will be invited to submit technical and financial proposal through a request for proposal.
8. Minimum score to pass the EOI is 60

## **B. Instructions for Submission of Expression of**

# Instructions for Submission of Expression of Interest

1. Expression of Interest may be submitted by a sole firm or a joint venture of consulting firms.
2. Interested consultants must provide information indicating that they are qualified to perform the services (descriptions, organization and employee and of the firm or company, description of assignments of similar nature completed in the last 7 years and their location, experience in similar conditions, general qualifications and the key personnel to be involved in the proposed assignment).
3. This expression of interest is open to all eligible consulting firms/company/ organization or Joint ventures of consulting firms/company/ organization.
4. In case, the applicant is individual consultant, details of similar assignment experience, their location in the previous 4 years and audited balance sheet and bio data shall be considered for evaluation.
5. The assignment has been scheduled for a period of 30 Months. Expected date of commencement of the assignment is September 2019.
6. A Consultant will be selected in accordance with the QCBS method.
7. Expression of Interest should contain following information:
  - (i) A covering letter addressed to the representative of the client on the official letter head of company duly signed by authorized signatory.
  - (ii) Applicants shall provide the following information in the respective formats given in the EOI document:
    - EOI Form: Letter of Application (Form 1)
    - EOI Form: Applicant's Information (Form 2)
    - EOI Form: Work Experience Details (Form 3(A), 3(B) & 3(C))
    - EOI Form: Capacity Details (Form 4)
    - EOI Form: Key Experts List (form 5).
8. Applicants may submit additional information with their application but shortlisting will be based on the evaluation of information requested and included in the formats provided in the EOI document.
9. The Expression of Interest (EOI) document must be duly completed and submitted in sealed envelope and should be clearly marked as "EOI Application for Short-listing for the Feasibility and Environmental Impact Assessment Study of Khimti Those Siwalaya Storage Hydropower Project, Dolakha & Ramechhap District (326 MW).The Envelope should also clearly indicate the name and address of the Applicant. Alternatively, applicants can submit their EOI application through e-GP system by using the forms and instructions provided by the system.
10. The completed EOI document must be submitted on or before the date and address mentioned in the "Request for Expression of Interest". In case the submission falls on public holiday the submission can be made on the next working day. Any EOI Document received after the closing time for submission of proposals shall not be considered for evaluation.

## **C. Objective of Consultancy Services or Brief TOR**

## **A. OBJECTIVE OF CONSULTANCY SERVICES OR BRIEF TOR**

### **1. BACKGROUND**

The Government of Nepal intends to develop the hydropower potential of Nepal in an economically efficient and sustainable manner to meet the growing power demand in the country. In the line with the hydropower development policy Government of Nepal intends to carry out Feasibility Studies and Environmental studies (FS & IEE/EIA) of hydropower projects under *Hydropower Project Study Program* utilizing Nepal Government's resources. In this regard, Government of Nepal (GoN), Department of Electricity Development (DoED) has prepared planning and allocated budget for the Feasibility and Environmental Impact Assessment (EIA) Study of different hydropower projects. Khimti Those Siwalaya Storage Hydropower Project is also one of the projects that have been planned for Feasibility Study and EIA Study in fiscal year 2075/76.

The total generating electricity capacity of Nepal is only about 973 MW. Most of hydropower plants are run-of-river type, their output decreases seriously in dry seasons. To cope with these circumstances, it is absolutely necessary to construct storage type hydropower project which are able to supply electricity stably even in the dry seasons. But before construction of any hydropower projects, their Feasibility and Environmental Study has to be conducted. Hence, Department of Electricity Development (DoED), GoN, intends to appoint competent National or International Consultant or their Joint Venture (herein after referred as "Consultant") to perform Feasibility and EIA Study of the Khimti Those Siwalaya Storage Hydropower Project. Information of this project are given in next section below.

The services of the Consultant described in the following shall be performed in close co-operation with the DoED personnel. In general, the task to be performed by the Consultant has been outlined in this Terms of Reference (TOR). However, the Consultant shall bear in mind that the list of tasks and activities can by no means be considered as the complete and comprehensive description of the Consultant's duties. It is the Consultant's responsibility to critically verify the scope of services indicated and to extend, reduce or amend it wherever necessary according to professional judgment, experience and the knowledge. It is understood that the Consultant performs all work as necessary to fulfill the objectives of the Project Study.

### **2. PROJECT INFORMATION**

Some information about this project are described below based on desk study.

#### **Project Features**

The proposed Khimti Those Siwalaya Hydropower Project lies in the border between two districts namely, Ramechhap and Dolkha. The actual project boundary lies between the latitudes 27°-35'-14" N to 27°-39'-23" N and the longitudes 86°-13'-30" E to 86°-20'-15" E but it has been extended to latitudes 27°-28'-28" N to 27°-39'-23" N and the longitudes 86°-06'-00" E to 86°-20'-15" E for the study purpose. The actual project boundary covers Jiri, Mali, Shyama, Chuchure and Those VDCs while the extended project boundary includes Thulopatal, Bhirkot, Jhule, Chyama, Sahare, Duragaun, Bhuji, Gupteswor, Betali, Rasnal, and Priti VDCs. From Kathmandu, the project location is accessible from Dolkha via Jiri Bazar and from Ramechhap via Manthali-Khimti road. By distance, it is about 12 km from Jiri Bazar and 40 km from Manthali.

The project has been identified as storage hydropower project. The project utilizes river discharge flowing in the Khimti Khola. The tentative dam site location of proposed project lies in between 5 to 6 km

downstream from the confluence of Yelun Khola and Khimti Khola or in between 2 to 3 km upstream from the confluence of Jiri Khola and Khimti Khola. The elevation at the dam site is around 1710m and inundates till the elevation of 1915m. The reservoir volume has been calculated nearly to 633 Mm<sup>3</sup>.

The Khimti Those Siwalaya Storage (KTSS) Hydropower Project lies at the most upstream of Khimti-I Hydropower Project (60MW), constructed by Himal Power Company and Khimti-II Hydropower Project (48MW), under construction by Peoples' Hydro Company. These projects may be functionally dependent based on the result of optimization and analysis of proposed project. There is a possibility of inundation of the Hydropower Project (7MW), under construction by Himalayan Urja Company which lies at upstream from the dam axis. The powerhouse of this project lies in the proposed project reservoir.

KTSS project study mainly focuses on best optimized option including these two following options. In the first option, the powerhouse location is near the confluence of Khimti river and the Jiri river. The entire project components lie in the right bank of Khimti Khola within Jiri, Mali and Those Village development committee. Flow required for existing two projects downstream of the proposed project should be consider in this case. In the second option, the location of powerhouse is on the bank of Tamakoshi River near the Khimti-I powerhouse (Kirne). In this case flow shall not be released for the existing two projects downstream of the proposed project. The tentative location of the project is shown in Figure 1.

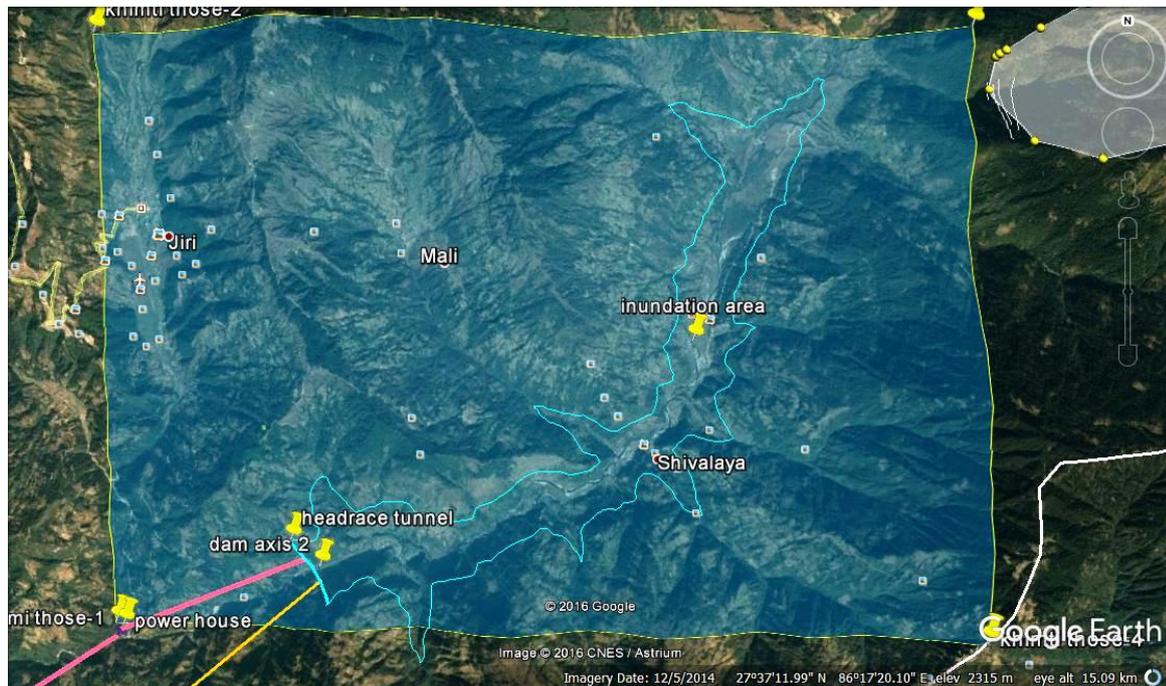


Figure 1 Proposed project location of Khimti Those Siwalaya Storage Hydropower Project in Google Map

## Hydrology

Khimti Khola is snow fed Perennial River being a major tributary of the Tama Koshi River. It originates from a glacier and has catchment area of 238 sq.km taking outlet at the dam site. Precipitation is in the range of 1500mm-2000mm. The nearby gauge station in this river established by DHM is located in Rasnalu VDC (DHM station number 650). Desk-study shows the annual average discharge of 27.42 cumecs.

## Layout

As per first option written above, KTSS is storage project with average head of 200m and design discharge of 158.79 cumecs. giving installed capacity of 326.4MW. The proposed Full supply level is at 1915m masl

and the tail water level at 1675m masl. Almost all the project component lies at right bank of Khimti Khola. The proposed project has following features (approximate as per preliminary study):

Full supply level=1915m
Tail water level=1675m
Gross head=240m
Average head=197.96m
Design discharge=158.79cumecs.
Length of water way (tunnel)=1.8 km
Power house of approx. size 30m wide, 130m length and 30m height

Second option is the increasing of head for increasing the power production. The location of power house is at the Tamakoshi bank near Khimti-I powerhouse. Design discharge for this option will be decided by considering two projects at downstream of this proposed project. The proposed Full supply level is at 1915m masl and the tail water level at 586m masl. Almost all the project component lies at left bank of Khimti Khola. The proposed project has following features in case of neglecting Khimti-I and Khimti-II Hydropower Projects.

Full supply level=1915m
Tail water level=586m
Gross head=1329m
Average head=1286.96m
Design discharge=158.79 cumecs
Length of water way (tunnel)=19.2km
Power house of approx. size 30m wide, 130m length and 30m height

## Energy

The calculation of energy has been done on the assumptions as follows:

- The plant is considered to operate 6 hrs per day.
- The power plant operates for 6 months (Dec-May).
- The head of the plant is assumed to be the difference between the average of maximum water level and minimum water level and the powerhouse level.

*Table: Approximate Energy Calculation (for option I)*

Month	Monthly Flow (m <sup>3</sup> /s)	Diverted Flow (m <sup>3</sup> /s)	Power (MW)	Energy (Gwhr)
Jan	4.38	158.79	310.06	57.67
Feb	3.63	158.79	291.67	49.00
Mar	3.44	158.79	269.62	50.15
Apr	3.75	158.79	241.66	43.50
May	6.21	158.79	202.36	37.64
Jun	23.91	0.00	0.00	0.00

Month	Monthly Flow (m <sup>3</sup> /s)	Diverted Flow (m <sup>3</sup> /s)	Power (MW)	Energy (Gwhr)
Jul	54.70	0.00	0.00	0.00
Aug	65.65	0.00	0.00	0.00
Sep	41.07	0.00	0.00	0.00
Oct	18.58	0.00	0.00	0.00
Nov	9.06	0.00	0.00	0.00
Dec	5.90	158.79	326.37	60.71
			<b>Total Energy</b>	<b>298.67</b>

Table: Approximate Energy Calculation (for option II)

Month	Monthly Flow (m <sup>3</sup> /s)	Diverted Flow (m <sup>3</sup> /s)	Power (MW)	Energy (Gwhr)
Jan	4.38	158.79	1836.78	341.64
Feb	3.63	158.79	1818.39	305.49
Mar	3.44	158.79	1796.34	334.12
Apr	3.75	158.79	1768.37	318.31
May	6.21	158.79	1729.08	321.61
Jun	23.91	0.00	0.00	0.00
Jul	54.70	0.00	0.00	0.00
Aug	65.65	0.00	0.00	0.00
Sep	41.07	0.00	0.00	0.00
Oct	18.58	0.00	0.00	0.00
Nov	9.06	0.00	0.00	0.00
Dec	5.90	158.79	1853.09	344.68
			<b>Total Energy</b>	<b>1965.84</b>

### Access

The project area is located at the north most stretch of Khimti Khola in between the boundary of Ramechhap and Dolkha and is accessible by motorable road. The proposed dam site of Khimti Those Siwalaya Storage Hydropower project lies nearly 12 km from the Jiri Bazar. Jiri bazaar can be reached from Katmandu through all-weather road which covers 176 km distance and by driving approximately 12 km on the earthen road, the proposed project location is reachable. Nowadays, the project area is also accessible from Kathmandu through Manthali-Khimti. The reservoir area lies in Those, Siwalaya and Garjhyang VDCs which has motorable access. The option I powerhouse is around confluence of Jiri Khola and Khimti Khola while the option II powerhouse lies in Kirne adjacent to Lamosangu-Ramechhap Highway near power house of Khimti-I Hydropower Project.

### Transmission

The transmission line shall be taken to either new substation (220KVA) at Khimti-I HP or a separate bay of substation shall be installed near the substation of Khimti-I HP for higher power carrying transmission line. Length of transmission line is about 20 km for option I while for option II it is about 500m.

## **B. OBJECTIVE OF STUDY**

The main objective of the consulting services is to conduct the Feasibility and EIA Study of the Khimti Those Siwalaya Storage Hydropower Project. The current consulting service seeks the attractiveness of the Project for development. The Consultant needs to evaluate the viability of the project in technical, financial, socio-economic, institutional, and environmental along with other relevant aspects of project development based on detailed field surveys, investigations analysis, design, cost estimate and economical & financial analysis. The study shall contain high dam on the Khimti Khola focusing on power benefits including other benefits the possibility of fisheries development, tourism as well. However, Consultant shall carry out all alternative studies to find optimum layout, location and height of dam for power, and other benefits. Also, Consultant shall carry out resettlement study and its plan. The Consultant shall also conduct the optimization study, cost estimates and economic/financial of this project by considering the regulation of flow for the two downstream projects (Khimti-I and Khimti-II) and the power house location is within the project area while in other option it shall consider the location of power house of this proposed project shall be nearby at the existing Khimti I power plant stretches or nearby stretches of Tamakoshi banks for maximizing power production. In this option, the Consultant shall consider the complete or partial storage of flow in different dam height of reservoir and also considering and not considering the regulation of flow for the two downstream projects. The Consultant shall conduct the analysis to find out optimum scenario of operation with layout including these two options and recommend the best option that may be different from these two options. Alternative analysis report of options of dam and power house location shall be submitted for selection of dam and power house location before geophysical and geotechnical investigation work.

The Feasibility Study shall include collection of secondary data, literature review, reconnaissance of project area, relevant baseline investigations, assessments and plans, alternative layout, optimization and cost estimates regarding technical, economic/financial, environmental, and socio-economic aspects, preparation of drawings, carry out economic and financial analysis within the stipulated time.

The objective is also to conduct an Environmental Impact Assessment (EIA) Study based on the plan and design of the project proposed at feasibility level including social safeguard related studies. The output should be in the form of a bankable report that will analyze and document all important aspects required for the formal approval of the project by concerned government authorities of Nepal as well as potential financing partners.

The Consultant shall follow National/International best practice during survey, design and report preparation in close coordination with DoED.

## **C. SCOPE OF WORKS**

The Consultant shall collect and review all available, relevant reports, data and information. The Consultant shall then identify and recommend the extent of studies that will be necessary to complete the full feasibility study and EIA study of the project. The Consultant shall submit all the drawings, formats, engineering calculations and reports to DoED for review. If DoED requires any changes, they shall be incorporated accordingly. However, the Inception Report must be accepted by DoED before any further work is embarked upon. The plant capacity should be designed based on the optimization study.

Topographic surveys and field investigations shall be described in the proposal and a program for this work shall be further detailed and updated in the Inception Report. The work plan prepared as part of the

proposal shall be updated in light of the information collected and program for surveys and field investigations shall be updated. The work plan shall show all contemplated activities which will be performed during the course of the study work. The work shall be broken down into discrete elements and the duration, scheduling, and resources required for each element shall be displayed on Critical Path Method Scheduling.

The Consulting Service is divided into two components:

- Feasibility Study, and
- Environmental Impact Assessment (EIA) study including social safeguard related studies

Both of those services shall be carried out simultaneously. The Feasibility Study report shall contain, apart from other studies a short description of the EIA component, while the detailed report on EIA shall be presented separately. The Feasibility Study shall be carried out in accordance with this TOR. For any other matters not covered in the TOR, the Consultant should refer the Guidelines for Study of Hydropower Projects, 2018 or equivalent study guideline for similar works and Design Guidelines, published by GoN. The EIA study will be carried out by the EIA team of the Consultant as per EPA and EPR in conjunction with the technical team of experts for the feasibility study. The study shall be carried out in accordance with the TOR and scope approved by the Ministry of Forest and Environment (MoFE), as per requirements of the prevailing Environment Protection Act, 2053 and the Environment Protection Rule, 2054 and its amendments.

The scope of works and details of the work for the Feasibility Study and Environmental Impact Assessment are described in the following section:

### **Scope of Work of Feasibility Study**

The scope of Consulting Services for the Feasibility Study shall include, but not necessarily limited to the following;

1. Collect and review of previous study reports, manuals, standards, guidelines, legislations, policies & plans, maps, drawing etc.
2. Conduct desk study and field reconnaissance survey, analyze the available data and identify data gap of previous study & recommend the further additional study needed with justification.
3. Prepare preliminary project layout and configuration based examine alternative configuration of project component in inception survey for further field survey and investigation.
4. Conduct engineering survey and field investigation for
  - i. Topographical surveys including L-section & X-section survey,
  - ii. Hydrological studies, sediment studies and hydro-metrological surveys
  - iii. Geological survey, engineering geological mapping, geophysical & geotechnical investigations including drilling, seismicity/seismic study,
  - iv. Construction materials survey and testing
  - v. Communication surveys for transportation of equipment
  - vi. Construction power survey,
  - vii. Power evacuation survey,
  - viii. Alignment survey of transmission line surveys
  - ix. Feasibility survey of access and project road

5. Survey and design of re-regulating dam (if needed).
6. Compile, analyze outcome of field survey & investigation tests
7. Prepare and establish design criteria for the design of all major project components and associated structures as per recognized best practices and applicable standards
8. Prepare conceptual/preliminary layout & design considering alternative configuration of project component and conduct optimization of the components & associated structures of hydropower project for the best option and optimum use of resources
9. Conduct the optimization study, cost estimates and economic/financial of this project at all the possible options of project layout and flow regulation from dam. Optimization of project should consider dam location, power house location, flow regulation, storage capacity, peaking scenario, downstream projects etc. The Consultant shall analyze with these parameters by considering the cost & benefits and recommend the best option.
10. Assess power and energy, fisheries, recreational, rehabilitation and resettlement cost and benefits from the project.
11. Conduct power evacuation study to the Integrated Nepal Power System.
12. Carry out project layout and design. Conduct hydraulic and structural design of civil structures such as dam/weir, intake, waterways (diversion tunnel, power tunnel, surge tank, drop shaft), powerhouse with tailrace and switchyard.
13. A numerical model shall be developed for the river stretches which can be used as a tool for optimizing the project layout, flow regulation, installation and mode of operation.
14. Conduct planning and design of switchyard, transmission line and associated substation
15. Design hydraulic steel structures such as gates, valves and penstock pipes.
16. Conduct feasibility study of the access road, project road, ropeway, bridges and cross drainage structures
17. Conduct planning of office complex, camp site and their required facilities such as water supply system, power supply
18. Prepare construction plan and schedules for project implementation.
19. Prepare cost estimates derived from rate analysis and quantity estimate, including cash flows in local and foreign currencies.
20. Carry out economic and financial analysis of the project and also perform the sensitivity analysis of the project, including cost allocation and cost sharing among project components.
21. The Consultant should prepare a report of preliminary design, cost estimate and financial & economic analysis of the alternatives of project layout & mode of operation for the selected alternatives in approved inception report after the geophysical investigation (2D-ERT/SRT). After the finalization of best alternative based on this report Consultant should conduct geotechnical investigation (Core Drilling) and further detail design works.
22. Planning and design of Fisheries development plan.
23. Planning and design of Recreation and Tourism development plan.
24. Prepare Rehabilitation and Resettlement plan and associated costs.
25. Prepare feasibility study report with full documentation on the actual design including all design principle criteria, parameters and standards to which the project has been designed; all major calculations and analysis including all the drawings are to be handover to DoED in the form of hard and soft copies along with working format.

The details of works to be carried out as per the scope of work are as under:

## **ENVIRONMENTAL IMPACT ASSESSMENT (EIA) STUDY**

The Consultant shall make a detail study of the project area and project affected area for the environmental impact (EIA) study including social safeguard related studies. The EIA study will be carried out by the EIA team of the Consultant in conjunction with the technical team of expert for the feasibility study. A separate detailed report of EIA shall be submitted to DoED. The Consultant shall be responsible to incorporate comments from DoED/MoEWRI/MoFE on behalf of DoED upto the final approval from MoFE.

### **Objective of EIA Study**

The objective of the Environmental Impact Assessment of the Project is to conduct the Environmental Impact Assessment of the Project in accordance with the requirements of the Environmental Protection Act, 2053 and Environmental Protection Rules, 2054 (with amendments) and safeguard policies with regard to environmental protection, resettlement and rehabilitation. The Consultant shall indicate in their proposal which practice and policy they intend to follow in the study. In general, Consultant shall adopt National/international best practice including ADB/WB Guidelines on social analysis.

### **Scope of Work of EIA Study**

The scope of work of the Environmental Impact Assessment study including social safeguard related studies of the Khimti Those Siwalay Storage Hydropower Project component, Resettlement Study, Fisheries and Recreational perspectives includes detailed field surveys, analyses and preparation of Scoping Report, TOR for EIA and EIA Report as per the Environmental Protection Act, 2053 and Environmental Protection Rules, 2054 (with amendment). The EIA study is to be carried out in two phases as follows:

- A. Preparation of Scoping Document and Terms of Reference
- B. Environmental Impact Assessment.

The scope of work to be covered under the Environmental Impact Assessment shall include, but not necessarily be limited to, the following:

- Collect and review previous studies, existing project reports, drawings, maps, related legislation, policies, manuals etc.
- Conduct desk study and preliminary reconnaissance survey, analyze the available data and identify data gap of previous study & recommend
- Delineate the project areas to be covered in the EIA study.
- Evaluate and analyze environmental and related legislation, environmental standards, policies, plans and international conventions for the EIA study.
- Identify the concerned authorities, interested organizations, affected communities and stakeholders to be consulted during the study.
- Collect baseline environmental data (physical, biological, socio-economic and cultural environment).
- Identify key environmental issues/impacts on physical, biological, socio-economic and cultural environment associated with project implementation.
- Analyze the significance of environmental impacts in terms of magnitude, extent and duration.

- Identify and analyze the various alternatives in planning and design of the projects from environmental considerations.
- Enable the authorities, stakeholders, local people, and affected communities to adequately participate in discussions/ hearings that dwell on the acceptability of the project, availability of alternatives, potential impacts and possible mitigation measures.
- Assess and estimate the number of families to be affected and displaced, and study their socio-economic conditions as well as ways for the betterment of their living status.
- Delineate the submergence areas due to the creation of reservoirs.
- Assess and estimate the loss of natural resources due to the creation of reservoirs; assess impacts on the physical, biological, socio-economic, cultural, infrastructure and livelihood aspects at different dam heights.
- Propose pragmatic, specific and cost-effective mitigation measures to avoid or minimize potential adverse environmental impacts and suggest enhancement measures to enhance the beneficial impacts.
- Prepare an environmental management plan to implement the proposed mitigation measures.
- Prepare environmental monitoring plans.
- Prepare environment auditing plans.
- Monitor water quality, air quality, and noise levels for establishment of baseline monitoring data.
- Identify the potential areas for resettlement of the displaced families.
- Prepare resettlement and rehabilitation plans for project affected and displaced families.
- Carry out soil suitability survey and plant species survey from agriculture perspective for implementation of possible agricultural livelihood enhancement programs.
- Conduct public hearings at least two in locations within the project areas.
- Inform decision-makers and interested parties about the environmental implications of the proposed projects.
- Prepare and submit Scoping, ToR and EIA Reports as per the requirements set forth in the environmental legislation.
- Present the Scoping Report, ToR and EIA Reports to TAG/DoED and Review Committees.
- Incorporate the comments provided by the Client and agencies in authority.
- Organize workshops to disseminate the outcomes of the study.
- Meet the reporting requirement as specified in this ToR and environmental legislation.

The Consultant has to cover all these scopes of work for field survey and investigation and preparation of reports.

## **D. Evaluation of Consultant's EOI Application**

# Evaluation of Consultant's EOI Application

Consultant's EOI application which meets the eligibility criteria will be ranked on the basis of the Ranking Criteria.

## i) Eligibility & Completeness Test

Sl. No.	Criteria Title	Compliance
1	Corporate Registration	
2	Tax Clearance/Tax Return Submission (for National Firms only)	
3	VAT/PAN Registration (for National Firms only)	
4	EOI Form 1: Letter of Application	
5	EOI Form 2: Applicant's Information Form	
6	EOI Form 3: Experience (3(A) and 3(B))	
7	EOI Form 4: Capacity	
8	EOI Form 5: Qualification of Key Experts	

## ii) EOI Evaluation Criteria

### A. Qualification

Sl. No.	Criteria	Minimum Requirement
1	Qualification of Key Experts	Minimum Masters Degree in relevant subjects
2	Experience of Key Experts	For Team Leader - Minimum 20 years of experience after graduation For Deputy Team Leader/ EIA Team leader/ International Experts - Minimum 15 years of experience after graduation For Other Experts - Minimum 10 years of experience after graduation

Score: 35.0

### B. Experience

Sl. No.	Criteria	Minimum Requirement
1	General Experience of consulting firm	Minimum 5 years of General Work Experience of the firm (Lead firm in case of JV) in Engineering Discipline
2	Specific experience of consulting firm within last 7 years. In case of person, specific experience of the person within last 4 years.	1. Work experience of the firm in Feasibility Study or Detailed Engineering Design (studies)/Detail Project Report (DPR) of ROR/PROR Hydropower Projects in the last 7 Years. At least one project must be of more than 175 MW. Capacity of a project less than 35 MW will not be counted for cumulative addition. 2. Work experience of the firm in EIA/ESIA/CIA Study of hydropower projects in the last 7 Years. Only the projects having capacity more than 50 MW will be considered for evaluation. 3. Work experience of the firm in Feasibility study/Detail Engineering Design/Detail Project Report (DPR) of Storage Hydropower Projects in the last 7 Years. At least one storage project must be of more than 100 MW. Only the storage projects having capacity more than 50 MW will be counted for calculating cumulative capacity.
3	Similar Geographical experience of consulting firm	Work experience of the firm in Feasibility study/Detail Engineering Design/Detail Project Report (DPR) of Hydropower

Sl. No.	Criteria	Minimum Requirement
		Projects in SAARC Countries excluding home country of the respective firm having the capacity more than 35 MW.

**Score: 55.0**

**C. Capacity**

Sl. No.	Criteria	Minimum Requirement
1	Financial Capacity	Average Annual Turnover (AAT) in million NRs for best three years of last seven consecutive fiscal years. For single National firm: minimum 50 million For single International firm: minimum 75 million For JV of firms: minimum 100 million (cumulative)
2	Infrastructure/equipment related to the proposed assignment.[This Evaluation criteria should be deleted if infrastructure/equipment are not the part of the proposed assignment]	Not applicable

**Score: 10.0**

**Minimum score to pass the EOI is: 60**

## **E. EOI Forms & Formats**

## **E. EOI Forms & Formats**

Form 1. Letter of Application

Form 2. Applicant's information

Form 3. Experience (*General, Specific and Geographical*)

Form 4. Capacity

Form 5. Qualification of Key Experts

**Standard EOI Document**

**1. Letter of Application**

*(Letterhead paper of the Applicant or partner responsible for a joint venture, including full postal address, telephone no., fax and email address)*

Date: .....

To,

Full Name of Client: \_\_\_\_\_

Full Address of Client: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Fax No.: \_\_\_\_\_

Email Address: \_\_\_\_\_

Sir/Madam,

1. Being duly authorized to represent and act on behalf of (hereinafter "the Applicant"), and having reviewed and fully understood all the short-listing information provided, the undersigned hereby apply to be short-listed by **[Insert name of Client]** as Consultant for **[Insert brief description of Work/Services]**.
2. Attached to this letter are photocopies of original documents defining:
  - a) the Applicant's legal status;
  - b) the principal place of business;
3. **[Insert name of Client]** and its authorized representatives are hereby authorized to verify the statements, documents, and information submitted in connection with this application. This Letter of Application will also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information, to provide such information deemed necessary and requested by yourselves to verify statements and information provided in this application, or with regard to the resources, experience, and competence of the Applicant.
4. **[Insert name of Client]** and its authorized representatives are authorized to contact any of the signatories to this letter for any further information.<sup>1</sup>
5. All further communication concerning this Application should be addressed to the following person,  
  
*[Person]*  
  
*[Company]*  
  
*[Address]*  
  
*[Phone, Fax, Email]*
6. We declare that, we have no conflict of interest in the proposed procurement proceedings and we have not been punished for an offense relating to the concerned profession or

---

<sup>1</sup> Applications by joint ventures should provide on a separate sheet, relevant information for each party to the Application.

**Standard EOI Document**

business and our Company/firm has not been declared ineligible.

7. We further confirm that, if any of our experts is engaged to prepare the TOR for any ensuing assignment resulting from our work product under this assignment, our firm, JV member or sub-consultant, and the expert(s) will be disqualified from short-listing and participation in the assignment.
8. The undersigned declares that the statements made and the information provided in the duly completed application are complete, true and correct in every detail.

**Signed** :

**Name** :

**For and on behalf of (name of Applicant or partner of a joint venture):**

**Standard EOI Document**

**2. Applicant's Information Form**

*(In case of joint venture of two or more firms to be filled separately for each constituent member)*

1. Name of Firm/Company:
2. Type of Constitution (*Partnership/ Pvt. Ltd/Public Ltd/ Public Sector/ NGO*)
3. Date of Registration / Commencement of Business (*Please specify*):
4. Country of Registration:
5. Registered Office/Place of Business:
6. Telephone No; Fax No; E-Mail Address
7. Name of Authorized Contact Person / Designation/ Address/Telephone:
8. Name of Authorized Local Agent /Address/Telephone:
9. Consultant's Organization:
10. Total number of staff:
11. Number of regular professional staff:

*(Provide Company Profile with description of the background and organization of the Consultant and, if applicable, for each joint venture partner for this assignment.)*

**Standard EOI Document**

**3. Experience**

**3(A). General Work Experience**

*(Details of assignments undertaken. Each consultant or member of a JV must fill in this form.)*

<b>S. N.</b>	<b>Name of assignment</b>	<b>Location</b>	<b>Value of Contract</b>	<b>Year Completed</b>	<b>Client</b>	<b>Description of work carried out</b>
1.						
2.						
3.						
4.						
5.						
6.						
7.						

**Standard EOI Document**

**3(B). Specific Experience**

**Details of similar assignments undertaken in the previous seven years**

*(In case of joint venture of two or more firms to be filled separately for each constituent member)*

Assignment name:	Approx. value of the contract (in current NRs; US\$ or Euro) <sup>2</sup> :
Country: Location within country:	Duration of assignment (months):
Name of Client:	Total No. of person-months of the assignment:
Address:	Approx. value of the services provided by your firm under the contract (in current NRs; US\$ or Euro):
Start date (month/year): Completion date (month/year):	No. of professional person-months provided by the joint venture partners or the Sub-Consultants:
Name of joint venture partner or sub-Consultants, if any:	Narrative description of Project:
Description of actual services provided in the assignment:  <b>Note: Provide highlight on similar services provided by the consultant as required by the EOI assignment.</b>	

Firm's Name: \_\_\_\_\_

<sup>2</sup> Consultant should state value in the currency as mentioned in the contract

**Standard EOI Document**

**3(C). Geographic Experience**

**Experience of working in similar geographic region or country**

*(In case of joint venture of two or more firms to be filled separately for each constituent member)*

<b>No</b>	<b>Name of the Project</b>	<b>Location (Country/ Region)</b>	<b>Execution Year and Duration</b>
<b>1.</b>			
<b>2.</b>			
<b>3.</b>			
<b>4.</b>			
<b>5.</b>			
<b>6.</b>			
<b>7.</b>			

**Standard EOI Document**

**4. Capacity**

**4(A). Financial Capacity**

*(In case of joint venture of two or more firms to be filled separately for each constituent member)*

<b>Annual Turnover</b>	
<b>Year</b>	<b>Amount Currency</b>

- **Average Annual Turnover**

--

*(Note: Supporting documents for Average Turnover should be submitted for the above.)*

**Standard EOI Document**

**4(B). Infrastructure/equipment related to the proposed assignment<sup>3</sup>**

<b>No</b>	<b>Infrastructure/equipment Required</b>	<b>Requirements Description</b>
<b>1.</b>		
<b>2.</b>		
<b>3.</b>		
<b>4.</b>		
<b>5.</b>		

---

<sup>3</sup> Delete this table if infrastructure/equipment for the proposed assignment is not required.

**Standard EOI Document**

**5. Key Experts** *(Include details of Key Experts only)*

*(In case of joint venture of two or more firms to be filled separately for each constituent member)*

<b>SN</b>	<b>Name</b>	<b>Position</b>	<b>Highest Qualification</b>	<b>Work Experience (in year)</b>	<b>Specific Work Experience (in year)</b>	<b>Nationality</b>
1						
2						
3						
4						
5						

(Please insert more rows as necessary)

**ADDITIONAL INFORMATION**

- a. The information furnished by the Firm(s) in the EOI document should be realistic. If any faulty information is found, legal action may be taken as per prevailing rules and regulations.
- b. The Consultant must put the signature of authorized representative and stamp of company on each and every page of the EOI. In absence of signature of authorized representative and stamp of company, the particular page will not be considered for evaluation.
- c. The relevant figures/numbers of each members of joint venture shall be added together to calculate cumulative figures/numbers of the joint ventures for the purpose of evaluation of experience and turnover of the firm(s).
- d. The projects listed in Form - 3 (Experience) for work experience of the firm will be considered for evaluation. The experience of the projects not listed in Form - 3 will not be considered for evaluation.
- e. In case of the firm's experience, if the completion certificate is issued by a private Client, the firm should mention the name of the public entity where the study reports were submitted; otherwise the experience will not be accounted for evaluation
- f. The experience of the firm shall be supported with **notarized copies/ true copy of original certification** of experience/completion certificates in the form of experience/ completion certificates showing the name & type of consulting service, project size and date of completion of the assignment as given in Form -3. The experience of the firm without evidence/proof or experience certificate will not be considered for evaluation. The data/figure such as name & type of consulting service, project size and date of completion of the assignment mentioned in experience/ completion certificates will only be considered as authentic and will only be considered for evaluation purpose. If these required data/figures are not mentioned in experience/ completion certificates, these data will not be considered from elsewhere such as data sheet. If copy of experience/ completion certificate is not notarized, the particular non-notarized copy document will not be considered for evaluation.
- g. For experience of the firms in EIA study projects, the EIA study of projects which were approved as per the prevailing Environmental Protection Act, 1997 and the Environmental Protection Rule 1997 will only be considered for evaluation. For the evidence of EIA approval, firms should submit EIA approval letter issued by public entity. Otherwise such experience will not be accounted in evaluation.
- h. Only study completed project will be considered for evaluation. The ongoing study or partially study completed project will not be considered for evaluation.
- i. Marks will be given only to the key professionals considered for evaluation as specified in Note under List of key personnel. If Consultant propose alternate professional in designated post, minimum marks obtained of professional will be considered for evaluation.
- j. Public/Semi-public entities' employees need to submit official no objection letter to provide consultancy services. In absence of official no objection letter, such professional will not be evaluated.
- k. Pass year and month of educational degree of the key professional shall also be mentioned in Form -5. If the month of degree is not mentioned, the month of December of mentioned year will be considered for evaluation. If pass year of education is not mentioned, the education degree will not be considered for evaluation.
- l. Firm shall not propose the same key professional for more than one designation for the same job. If so proposed, the respective person will not be accounted in the evaluation for any designation.

- m. Any key-professionals should not be proposed more than one time either by same firm or different firms (entity) for same job. If proposed more than one time, that professionals will not be considered for evaluation in any of the firm.
- n. Any key personnel should not be proposed more than two times either by same firm or different firms (entity) for the any assignment of specified Jobs in the EOI notice published in **The Rising Nepal daily on April 24, 2019 (2076/01/11)** of this EOI notice and upcoming EOIs in the current fiscal year. If proposed more than two times the respective professionals will not be considered for evaluation in any of the EOIs.
- o. The average annual turnover of the Firm/Company shall be calculated in Net Present Value using inflation index of Nepal Rastra Bank. Exchange rate shall be considered the rate as on the last date of submission of EOI.
- p. If DoED finds the proposed key professional doubtful regarding education, experience or any issues then such professional may be asked to appear in DoED for verification. Failing to appear in such verification will lead to disqualification of the respective firm or JV of the firms.
- q. In case of a joint venture, the Consultant must submit the joint venture agreement duly signed by authorized signatories & stamped with company seal of each member of joint venture in every page of JV agreement & clearly mentioning name of the lead firm, name of JV partners, role and responsibility of each member, share percentage, name of the authorized signatories. In case of failure to submit joint venture agreement between each JV partner, the EOI will be considered as non-responsive and will not be considered for evaluation. Similarly, the JV agreement should be signed by authorized representative having power of attorney to sign the JV agreement. The signature of authorized representatives & stamp of companies should be in each page of JV agreement. If JV agreement is not signed with by authorized representative having power of attorney, the EOI will be considered as non-responsive and will not be considered for evaluation.
- r. The Consultant must submit power of attorney of authorized signatories to sign JV agreement and submit the EOI from their respective firm with signature & stamp of each member of JV. Such Power of attorney of authorized signatories of JV shall have been issued by executive head of organization such as Board, Managing Director, CEO or Chairperson, etc. If otherwise, the EOI will be considered as non-responsive and will not be considered for evaluation.
- s. Each and every document submitted by applicants should be duly translated in English language. However, the documents submitted by local consultant or expert in Nepali language shall be subjected to consider for evaluation purpose.
- t. **In addition to above notes:** The professional proposed by the firm if found being involved in ongoing jobs either through same firm or different firm(s) such professional will not be considered in evaluation.
- u. The number of consulting firms in a JV should not exceed three including the lead firm. In addition, same consulting firm is not allowed to enter into more than one association/JV for the same Job.

**List of Key Personnel/Professionals**

**FEASIBILITY STUDY**

1. Team Leader (Hydropower Engineer) (National/ International)
2. Deputy Team Leader (Hydropower Engineer)
3. Hydropower Engineer (International)
4. Dam Engineer (International)
5. Geophysist/ Seismologist (International)
6. Reservoir Operation Expert (International)
7. Hydromechanical Engineer (International)
8. Hydrologist/ Sedimentologist (National)
9. Structural Engineer (National)
10. Geotechnical Engineer (National)
11. Engineering Geologist (National)
12. Hydraulic Engineer (National)
13. Electrical Engineer (National)
14. Mechanical Engineer (National)
15. Fishery Development Expert (National)
16. Tourism Expert (National)
17. Economic/Financial Analyst (National)
18. Construction Planner/ Proc. Exp. (National)
19. Highway/Road Engineer (National)
20. Senior Surveyor (National)
21. Cost/Quantity Estimator (National)

**EIA STUDY**

1. EIA Team Leader (National)
2. Env. Eng./Environmentalist (National)
3. Sociologist/Anthropologist (National)
4. Zoologist/Aquatic Life Expert (National)
5. Botanist/Ecologist/Forest Expert (National)
6. EMP Expert (National)
7. Resettlement Expert (National)

**Note: Only the following experts will be considered for evaluation.**

Team Leader, EIA Team Leader, Deputy Team Leader (Hydropower Engineer), Hydropower Engineer (International), Dam Engineer (International), Geophysist/ Seismologist (International), Reservoir Operation Expert (International), Hydromechanical Engineer (International), Hydrologist/ Sedimentologist, Structural Engineer, Geotechnical Engineer, Engineering Geologist, Hydraulic Engineer, Economic/Financial Analyst, Env. Eng./Environmentalist, Sociologist/Anthropologist