EXPRESSION OF INTEREST (EOI)

Title of Consulting Service: TKJVC/078-79/EOI-1

Method of Consulting Service: International

Project Name : Consulting Services for Construction Management and Supervision of Tamakoshi V Hydroelectric Project

EOI: TKJVC/078-79/EOI-1

Office Name: Tamakoshi Jalvidhyut Company Limited

Office Address: Thapagaun, Okharbot Marg, New Baneshwor Kathmandu Kathmandu

Funding agency: Loan

Abbreviations

CV - Curriculum Vitae

DO - Development Partner

EA - Executive Agency

EOI - Expression of Interest

GON - Government of Nepal

PAN - Permanent Account Number

PPA - Public Procurement Act

PPR - Public Procurement Regulation

TOR - Terms of Reference

VAT - Value Added Tax

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A. Request for Expression of Interest

Request for Expression of Interest

Government of Nepal (GoN)

Name of Employer: Tamakoshi Jalvidhyut Company Limited

Date: 16-09-2021 00:00

Name of Project: Consulting Services for Construction Management and Supervision of Tamakoshi V Hydroelectric Project

Name of the Donor Agency: Loan

Donor Loan/Credit/Grant No:

- Government of Nepal (GoN) has received a Loan from Single Envelope Procedure toward the cost of Consulting Services for Construction Management and Supervision of Tamakoshi V Hydroelectric Project and intends to apply a portion of this loan/credit/grant to eligible payments under the Contract for which this Expression of Interest is invited for International consulting service
- 2. The Tamakoshi Jalvidhyut Company Limited now invites Expression of Interest (EOI) from eligible consulting firms ("consultant") to provide the following consulting services: Construction Management and Supervision of Tamakoshi V Hydroelectric Project and the scope of consulting services (the Services) include but not limited to:
 - a. Review, modify as required and finalize the Detailed Engineering Design Report and Bid/Contract Documents including Employer's/Client's requirements, specification, drawings, etc. for civil, Hydro-mechanical and Electromechanical works prepared by TKJVC.
 - b. To prepare/modify & finalize Geological/Geotechnical Baseline Report and Geological/Geotechnical Baseline Data from the geological/geotechnical report prepared by Tractebel Engineering GmbH and other available data.
 - c. Assist and recommend to the Client in evaluation of technical and financial proposals for selection of Contractors for the execution of TKVHEP and also in Contract negotiation;
 - d. Review with modification as required, approval and issuing of construction design/documents/drawings submitted by EPC contractor with consent from the client.
 - e. Review, check, modify and finalize the necessary design/documents/drawings in due course of the construction as required upon the request of the client.
 - f. Supervise the construction work and assure quality control of the project including contract administration.
 - g. Review, check and monitor the project construction schedule of different work packages and overall joint coordinated interface schedule (OJCIS) using state of the art technology and maintain the original schedule.
 - h. Ensure the timely completion of the project construction works within the specified time and contracted value.
 - i. Administer Construction Supervision and Contract administration of the Contract packages as provisioned in Contract.
 - j. Analyze and recommend variation, extension of times if required, liquidated damages to the client in contract administration.
 - k. All the project components being underground, the consultant shall review / finalize the risk sharing mechanism proposed in the Detailed Engineering Design with respect to quantity and different class of rock and modify if necessary before the contract signing and implement it during the construction period.
 - 1. Verification of the invoices submitted by the contractor and recommend to the client for payment.
 - m. Review and recommend the Testing and Commissioning plan and program of the facilities of the project (Civil, Hydro-Mechanical, Electro-Mechanical and Transmission line) for approval and assist Client for its execution.
 - n. Assist client/ owner in all aspect of project management and contract administration for Completion of the Project within the stipulated time and budget.
 - o. Ensure the health and environmental safety measures taken by the contractors in line with the contract document.
- 3. Interested eligible consultants may obtain further information and EOI document free of cost at the address Tamakoshi Jalvidhyut Company Limited, Tamakoshi Jal Vidhyut Company Limited

Thapagaun, Okharbot Marg, New Baneshwor

Kathmandu,

Bagmati Province

Nepal during office hours on or before 20-10-2021 12:00 or visit e-GP system www.bolpatra.gov.np/egp or visit the client's website https://nea.org.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 on or before 20-10-2021 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 30.0 %, Experience 60.0 %, 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 firm/ 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 63 Months. Expected date of commencement of the assignment is 20-12-2022.
- 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 Consulting Services for Construction Management and Supervision of Tamakoshi V Hydroelectric Project .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

Terms of Reference (TOR)

For

Consulting Services of Tamakoshi V Hydroelectric Project

1. BACKGROUND AND OBJECTIVES

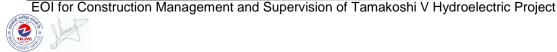
- a) Tamakoshi V Hydroelectric Project (the "Project") intends to apply a portion of its funds to engage Consulting Firm(s) (the consultants) to undertake the tasks given under the main objectives of the consulting services.
- b) Tamakoshi V Hydroelectric Project intends to construct the project in two Contract Packages; viz. Package I: Civil and Hydro-Mechanical works and Package II: Electro-Mechanical Equipment and Transmission Lines Works in Engineering, Procurement and Construction Model (EPC Contract). The Project is of 99.8 MW installed capacity and located approximately 170 km north east of Kathmandu, the capital of Nepal and approximately 40 km away from the district head-quarter of Dolakha District- Charikot Bazaar. The district head-quarter is connected with the capital by Arniko Highway upto Lamasangu which is approximately 90 km and by Lamasangu Jiri road which is approximately 40 km up to Charikot. The project site is connected with the Dolakha Lamabagar road recently constructed by Upper Tamakoshi HEP.
- c) The objectives of the consulting services shall be to ensure that the Project is constructed and completed with a high standard of workmanship and materials within the scheduled time and the budget, in accordance with the specifications and desirable quality as mentioned in the Contracts, in compliance with the environmental and social standards of Nepal Government, Multinational lending agencies and in accordance with the Client 1 's requirements. The Consultant shall carry out the Engineering Services of the Project throughout the entire contract period under and in close cooperation with the Client's Project Office. The Consultant shall act as the Client's Representative for EPC Contract to carry out all the duties fulfilling contractual responsibilities as mentioned in the contract agreement for consultancy services.

2. SCOPE OF CONSULTING SERVICES

2.1 Brief Description of Services

The selected Consultant shall provide the consulting services for approximately 63 calendar months (this includes 6 months of pre-award, 48 months of construction period, 9 months of post construction period i.e. during Defect Liability Period (12 months)). The main services to be provided by the Consultant but not limited to:

 Review, modify as required and finalize the Detailed Engineering Design Report and Bid/Contract Documents including Employer's/Client's requirements, specification,



- drawings, etc. for civil, hydromechanical and electromechanical works prepared by TKJVC.
- To prepare/modify & finalize Geological/Geotechnical Baseline Report and Geological/Geotechnical Baseline Data from the geological/geotechnical report prepared by Tractebel Engineering GmbH and other available data.
- Assist and recommend to the Client in Bid evaluation (Evaluation of Technical and Financial proposals) for selection of Contractors for the execution of TKVHEP and also in Contract negotiation.
- Review with modification as required, approval and issuing of construction design/documents/drawings submitted by EPC contractor with consent from the client.
- Review, check, modify and finalize the necessary design/documents/drawings in due course of the construction as required upon the request of the client.
- Supervise the construction work and assure quality control of the project including contract administration.
- Review, check and monitor the project construction schedule of different work packages and overall joint coordinated interface schedule (OJCIS) using state of the art technology and maintain the original schedule.
- Ensure the timely completion of the project construction works within the specified time and contracted value.
- Administer Construction Supervision and Contract administration of the Contract packages as provisioned in Contract.
- Analyze and recommend variation, extension of times if required, liquidated damages to the client in contract administration.
- All the project components being underground, the consultant shall review / finalize the
 risk sharing mechanism proposed in the Detailed Engineering Design with respect to
 quantity and different class of rock and modify if necessary before the contract signing and
 implement it during the construction period.
- Verification of the invoices submitted by the contractor and recommend to the client for payment.
- Review and recommend the Testing and Commissioning plan and program of the facilities
 of the project (Civil, Hydro-Mechanical, Electro-Mechanical and Transmission line) for
 approval and assist Client for its execution.
- Assist client/ owner in all aspect of project management and contract administration for Completion of the Project within the stipulated time and budget.
- Ensure the health and environmental safety measures taken by the contractors in line with the contract document.
 - The brief description of Consulting Services is as follows:

2.1.1 Consulting Services related to Contract Package – I: Civil and Hydro-Mechanical Works (EPC Contract):

- a. The Consultant shall review, modify as required and finalize the Detailed Engineering Design Report and Bid/contract Documents prepared by Client; assist and recommend to the Client in the bid evaluation (evaluation of Technical and Financial Proposal) for the contractor selection and in contract negotiation prior to signing the contract.
- b. The consultant shall review, check and monitor the project construction schedule proposed by EPC contractor and finalize it with the consent of client.
- c. The Consultant shall assist the Client for the implementation of the project by providing a comprehensive project management service. The Consultant shall review, verify check, modify as required and finalize the design/documents/drawings submitted by the EPC Contractor, and approve/issue the design/documents/drawings with the consent from the client. Furthermore, the Consultant shall produce, revise



- and modify the necessary design/documents/drawings in due course of construction upon request of client.
- d. The Consultant shall perform the assigned task to ensure smooth completion of the Project Construction work in accordance with the Contract agreement between the Client and Contractor and in conformity with internationally accepted standards and procedures as well as the state-of-the-art-technology prevailing in the Hydro Power Generation Construction industry.
- e. The selected Consultant shall provide the Consulting services for review of Detailed Engineering Design Report, Biding Documents, Design verification check, review and approve, Construction Supervision and contract administration and provide necessary guidance and advice to the Client before and during the implementation of the project construction works as well as in operation phase. The Consultant shall act on behalf of the Client as owners engineer during the execution of EPC Contract packages, carry out such duties and responsibilities as defined in the Agreement for Consulting Services. The Consultant shall recommend interim and final payments to be made to the Contractors.
- f. The selected Consultant shall review and recommend the Testing and Commissioning plan and program of the facilities for approval and assist Client for the Testing and Commissioning. Also assist the Client in Type Test/ Factory Acceptance Test of the Equipment and other necessary test required for the project.
- g. Shall provide all the services depicted in clause 2.1 "Brief Description of Services"
- h. Finalize As built drawing prepared by EPC contractor including the operation and maintenance manuals along with all the necessary documents.
- i. Assist in operation and maintenance of the facilities/equipment during the operation phase.

This Contract package of Civil and Hydro-mechanical Work in general consists of the following but not limited to:

a) <u>Civil Works</u>

- Smooth transection activities along the interfacing of different project components (Civil/Hydro-Mechanical/ Electro-Mechanical) including Head pond and constructed Tunnel Interconnection) without hampering the project schedule.
- ii. Preliminary Works (access road and bridge, camp, power supply, water supply, telecommunication etc.)
- iii. Head pond
- iv. Head pond Spillway
- v. Headrace tunnel (Modified horse shoe typed) and its support system
- vi. Surge Tank
- vii. Vertical Shaft
- viii. Underground Powerhouse



- ix. Tailrace Conduit
- x. Others as required for the performance of the works.

b) **Hydro-mechanical Works**

Design, Manufacture, Supply, Erection, Testing and Commissioning of all the hydromechanical equipment involved in the Client including:

- Gates
- Trashracks
- Stoplogs
- Valves
- Penstock
- Gantry Crane
- Others as required to complete the specified scope of the works.

2.1.2 Consulting Services related to Contract Package - II: Electro-Mechanical Equipment and Transmission Lines Works (EPC Contract):

- a. The Consultant shall review, modify as required and finalize the Detailed Engineering Design Report and Bid/Contract Documents prepared by the Client; assist and recommend to the Client in the bid evaluation (evaluation of Technical and Financial Proposal) for the contractor selection and in contract negotiation prior to signing the contract.
- b. The Consultant shall review, check and monitor the manufacturing and erection schedule proposed by EPC contractor and finalize it with the consent of client.
- c. The Consultant shall act as owner's Engineer to supervise the manufacturing and erection of equipment during the construction works. The Consultant shall review, check and finalize and approve the design/documents/drawings submitted by the Contractor/ Manufacturer with the consent from the client. Furthermore, the consultant shall produce, revise and modify the necessary design/documents/drawings in due course of the construction/erection of equipment upon request of the client.
- d. The Consultant shall perform the assigned task to ensure smooth completion of the Project Construction work in accordance with the Contract agreements between the Client and the Contractor and in conformity with internationally accepted standards and procedures as well as the state-of-the-art-technology prevailing in the Hydro Power Generation and Transmission Construction industry.
- e. The Consultant in the role of Engineer shall carry out such duties and assume such responsibilities as defined in the Agreement for Consulting Services. The Consultant shall recommend interim and final payments to be made to the Contractor and issue instructions as needed.
- f. The selected Consultant shall provide the Consulting services for review of Detailed Engineering Design Report, Biding Documents, Design verification check and review,



- Construction Supervision and Contract Administration and necessary guidance and advice to the Client before and during the implementation of the project construction works as well as in the operation phase.
- g. The selected Consultant shall review and recommend the Testing and Commissioning plan and program of the equipment or facilities or project (Electro-Mechanical and Transmission line) for approval and assist client for the Testing and Commissioning. Also assist the Client in Type Test/ Factory Acceptance Test of the Equipment and other necessary test required for the project.
- h. Shall provide all the services depicted in clause 2.1 "Brief Description of Services"
- i. Finalize the As built drawing prepared by EPC contractor including the operation and maintenance manuals along with all the necessary documents.
- j. Assist the operation and maintenance of the facilities/ equipment during the operation phase.
- k. The selected Consultant will be responsible for Testing, Commissioning and Approval of the equipment or facilities or project (Electro-Mechanical and Transmission line) in presence of the client.
- I. Ensure the Quality and Reliability of the supplied/ erected equipment.

2.2 Location of Services

In order to maintain close liaison between project management, design review and construction supervision, Tamakoshi V HEP requires that the Consultant's project management, construction supervision and design staff are all stationed at the Project site located in Dolakha district. However consultant's staff may also require to stay in Kathmandu office if necessary.

3. DETAILED DESCRIPTION OF CONSULTING SERVICES -

3.1 Review and finalize the Bid/Contract Documents and assist the Client in procurement of Contractors

Consultant's scope of services in this regard shall be including but not limited to the following:

- Review and recommend all the Bid/Contract Documents including Client's requirements, Specifications etc. prepared by the Client for the procurement of EPC Contractors.
- ii. Review and assist the Client for the finalization of Client's requirements, specifications etc. for contract packages.
- iii. Assist to finalize the evaluation (evaluation of Technical and Financial Proposal) of the contractors and recommend for the selection of Contractors.
- iv. Assist Client in contract negotiation for the signing of contract.

3.2 Review and Approval of Engineering and Detailed Design



Consultant's scope of services shall be but not limited to as under:

- Review, modify as required and finalize available Detailed Engineering Design Report.
- ii. Prepare Project Management & Contract Administration procedures for Communications & Meetings to the satisfaction of the Client.
- iii. Approval of all design, drawings and technical documents submitted by the Contractors with consent of the client. The Consultant shall analyze the adequacy of such designs, and shall advice/recommend in writing to the Client if any changes which the consultant feels necessary as per Contract Requirements before final approval. Copies of all reviewed/recommended drawings shall be retained by the Consultant & Client for information and records.
- iv. Review, check and modify the necessary design/documents/drawing in due course of the construction upon request of the client.
- v. Approval of construction design/documents/drawings submitted by EPC contractor with consent from the client.
- vi. Review and approval of quality assurance plan and procedures developed and submitted by the Contractors with consent from the client.
- vii. Assist the Client in writing contractual letters as required in due course of contract execution.
- viii. Carry out all necessary activity to support the project for the timely completion of construction within the contracted value.

3.3 Supervision of Construction Activities

The Consultant shall be responsible for monitoring and supervising all the construction activities to ensure that the work is carried out in accordance with the Contract and the quality of workmanship & the materials conform to the Client's requirements and specifications. The Consultant shall ensure that the work is carried out in accordance to the International EHS (Environment, Health and Safety) Standard Practice.

The tasks to be carried out by the Consultant shall include, but not limited to the following:

i. Programme Schedule

- a) The Consultant shall review, assess, analyze, update and approve the detailed work program comprising all the activities related to the contract execution submitted by the Contractors in periodic basis.
- b) The Consultant shall monitor the actual progress of work based on the base line program submitted by the Contractor(s). Monthly updates of the Contractor's program shall be monitored against the pre-approved program and all variations shall be noted. The future impact of major variations and necessary corrective



- measures shall be determined, analyzed, updated and submitted to Client with necessary recommendation.
- c) In the event the Contractor's programme fails to comply with the Contract works schedule or the actual progress is inconsistent with the Contractor's stated intentions, the Consultant shall inform the actual situation on time and advice the Client for necessary action accordingly with the Contractual provisions. The Consultant shall also review and assess the revised program submitted by the Contractor and take necessary actions as needed to correct/ speedup and catch with the original schedule.
- d) The Consultant shall carry out Budget and Cost Forecast (BCF) reports at an intervals of not more than 6 months or when major changes occur. The estimated cash flow and time required for the completion of the Contracts shall also be prepared based on the revised Contract costs.
- e) The Consultant shall also prepare a coordinated schedule of Civil, Hydro-Mechanical, Transmission line and Electro-Mechanical works in consultation with the Contractors based on their individual detail schedule (Considering the interface activities) ensuring the timely completion of the complete project work.

ii. General Activities of Supervision Works

To ensure that all the construction works are carried out in accordance with the Contracts, the Consultant shall undertake, among other tasks, the following activities but not limited to:

- Maintain a Master diary, including Contractor's daily records of labor and equipment employed, work in progress, weather conditions, instruction issued etc.
- Assess the Contractor's equipment and verify that it has adequate capacity to perform the works in accordance with the contract.
- Review monthly & weekly progress reports.
- Check the Contractor's surveys, control points and setting out as work proceeds based on the basic reference points provided by the Client and ensure accuracy of surveys and bench marks connecting various sites.
- Provide appropriate level of inspection/checking and witness testing where
 required, of work, materials & equipment including Hydro-Mechanical & ElectroMechanical equipment, communication and automobiles equipment prior to
 dispatch and after received at site as per contracts. The inspection services shall
 cover but not limited to:
 - Construction workmanship and acceptability of installation of all permanent work.
 - Materials and plants purchased- sources and quality etc.
 - Monitoring of all instrumentation installed.



- All construction activities, including preparatory work, materials production and final finish.
- Organizing the regular site coordination meetings to review construction progress and actual status.
- Consultant is responsible for issuance of instructions and day to day correspondences with the EPC Contractors in writing and with a copied to the client.
- Keep records of all the work authorized to be undertaken by the Contractors as dayworks.
- Check and certify the monthly statements of payment submitted by the Contractors in accordance with the Contract for approval by the Client.
- Check and certify the final statement for payment submitted by the Contractors in accordance with the Contracts.
- Prepare and issue Taking-over Certificates and Performance Certificates in accordance with the Contract requirements with consent from the client.
- Check, review and approve the detailed "Operation & Maintenance Manuals and As Built Drawings" prepared and submitted by the Contractors for use of the Client in the operation of the works.
- Ensure that all submittals/deliverables of the Contractors, upon completion of the works, in the forms and numbers set out in the Contract, are well received by the Client.
- Prepare a "Completion Report" for the works under the Contract, including a summary of final costs and submit them to the Client for future reference.

iii. Extension, Variations, Claims and Disputes

The Consultant shall assist and recommend the Client including but not limited to the following aspects:

- Maintain records of all field instructions.
- Promptly notify the Client of any unusual events leading to Claims and Disputes.
- Assist Client to take action to resolve problems or conflicts.
- Assist the Client in preparing the required documents to be submitted to the Dispute Adjudication Board (DAB) and/or Arbitration.
- Carryout and maintain effective contract management and claim control.
- Notify the Client of any requirement for a variation and estimate the cost of the variation order.
- Analyze and Recommend client for the contractor's claim of extension of contract completion period.
- Prepare the Variation Orders and recommend to the Client for approval.



- Provide available information and support in assisting Client in the assessment and resolution of claims of the Contractor and provide necessary determinations thereof as per the Contract.
- Obtain approval of the Client before certifying any claim amount of the Contractors.
- Other assistance and recommendation as required in contract administration.

iv. Monitor Contracts Costs

The Consultant shall monitor contract Costs and shall update the cost of contract works every 6 months incorporating actual and projected expenses including costs of variation orders if any, potential costs of claims and provisional sums. The estimated cash flow for the completion of the project Contracts shall also be projected based on the revised Contract Costs.

The Consultant shall ensure that the Client is well advised in advance of any additional funds required for completion of the project.

v. Testing and Commissioning:

The consultant shall review and recommend the Testing and Commissioning Plan and program of the facilities submitted by the contractors for approval from the client and assist Client for Testing and Commissioning. The Consultant shall fully involve in Testing and Commissioning of the facilities (Civil Work, Hydro-Mechanical equipment, Electro-Mechanical Equipment and Transmission line and other necessary tests required for the project) and ensure quality of the works and services. The consultant shall assist the client in Type Test/ Factory Acceptance Test (FAT) of the equipment and all the necessary tests at site after the delivery of equipment.

3.4 Project Management

i. Contract Procedures

The Consultant shall formulate and establish procedures for the proper management, administration and quality assurance/ control of the contract as well as the Consultant's own services, and shall have effective monitoring and control of these procedures. The Consultant shall provide Manual of Project Implementation Procedures for approval within 90 days from the date of signing of the Consulting Services Contract.

ii. Reports

The Consultant shall prepare and submit the following reports which shall be in a format agreed with the Client and or the Financing body in number of copies as



mentioned below:

- a) 2 copies of Daily and shift reports by inspectors, etc., within four working days, recording weather conditions, crews and equipment working, areas being worked on, production, resource allocation, compliance with approved procedures, any special or unusual occurrence, etc.
- b) 2 copies of Weekly reports by Resident Engineer, within one week of the end of the report period, recording progress during the month on a quantity and cost basis with appropriate graphical presentations comparing progress with program and giving reasons for any discrepancies if any.
- c) 6 copies of Monthly report comprising the work progress.
- d) 20 copies of Project Completion Reports including electronic copies(in word and pdf format) for all major structures or elements of the contract works, incorporating design calculations, as-built records and drawings (Auto-cad format) submitted by the Contractors, within 60 days of issue of any Taking-Over Certificate. Completion Reports shall also include but not limited to the following:
 - Details of construction methodology, concrete quality, hydrological, sedimentation, geological and geotechnical conditions etc,
 - Underground support system, support type with respect to Rock type.
 - Details of hydro mechanical works.
 - Details of Electro-Mechanical works etc.
 - details of the transmission line works
 - Details of the Cost.
 - Progress of the month in comparison with the agreed schedule.
 - Detail programme of next month.
 - Comparison of overall progress in respect to the agreed schedule
 - Catchup plan if any
- e) 5 copies of Testing and Commissioning Reports.
- f) Provide any special reports as requested by the Client.

iii. Monitor Environmental Requirements

The Consultant shall be responsible for monitoring all the activities of the Project, under the contractor's control, are compliant:

- · In general with:
 - the prevailing laws in Nepal
 - o the Project's national/international lenders E&S (Environmental



- and Social) policies and standards
- the Project's national/international lenders EHS (Environmental, Health and Safety) policies and standards

in particular with:

- the Project's Environmental and Social documents, including but not limited to the Environmental Impact Assessment Report, Environmental and Social Management / Action Plans, Resettlement Action Plan.
- the Contract Documents
- the requests for corrective actions emitted by the competent Nepalese authorities or the national/international lenders;

iv. Project Relations

The Consultant shall promote good project relations and in doing so shall monitor project labour relations, living conditions, health and safety programs to identify potential problems and assist the Client to resolve them promptly. Problems that cannot be resolved promptly by the Consultant shall be reported forthwith to the Client for action.

v. Monitor Environment, Health and Safety

The Consultant shall monitor, inspect and ensure that the Contractors comply with the requirements of the working conditions for laborers as directed in the construction Contract and as specified in the Nepali labor code as well as following the international practices. The Consultant shall assist the Client to take initiative to address and correct any deleterious effects arising from the implementation of the Contract.

vi. Commissioning of the Works

The Consultant shall be responsible for supervision of the commissioning of all works/structures of the Project. The Consultant shall be responsible for, but not limited to the following:

- Liaise with the Client when establishing the overall requirements for project commissioning, coordinate Testing and Commissioning programs.
- Establish specific commissioning requirements in relation to the overall requirements for the project as per the contract document and international practice.



- Submit, with prior approval with the Client, the commissioning requirements to the Contractor to enable him to prepare his detailed commissioning procedures.
- Liaise with the Client to achieve the desired level of involvement by the Client's operating staff and other personnel assigned.
- Review and approval of commissioning procedures prepared by the Contractor(s) to provide assurance that design requirements are complied with, that all necessary observations will be made, that the proposed methods are adequate to maintain control of the operation and that the Contractor is fully cognizant of any criteria which may require the commissioning to be discontinued,
- Carry out/ check evaluations of observed data during the course of commissioning and advise the Contractor accordingly,
- Review and approve commissioning reports to be prepared by the Contractor as required by the construction Contracts.

vii. Review and Approval of Operation and Maintenance Manuals

The Consultant shall check, review and finalize the detailed Operation and Maintenance (O & M) manuals for structures and plants submitted by the Contractors. The Consultant shall ensure that uniform, complete, high quality O & M manuals are prepared by the Contractors for the whole Project.

The Consultant shall ensure that the O&M manual shall include, among others:

- references to all relevant design and other reports, in order to provide a complete bibliography on the structures and plant,
- specifications, data and statements on design for operation and maintenance staff to understand the basis of their functions,
- drawings, diagrams, charts, etc. to facilitate understanding of the O&M requirements,
- complete list of components particularly plant and instrument parts and spares,
- standard forms for O&M functions and step-by-step instruction.

viii. Technology Transfer

The Consultant shall involve the Client's Engineers in various activities including Design works and Construction Supervision. The Consultant shall provide capacity building to five (5) number of Client's executives for a period of 10 days in its home office. Capacity building shall focus on observation tour acceptable to the Client.

The Consultant shall also conduct capacity building training in its home office for 10



days duration to thirteen (13) number of Client's Engineers and two (2) numbers of client's non-technical staff. The training material shall be fixed on mutual discussion.

All training costs including travel, boarding and lodging expenses in connection with the training and visit to the consultant's home office will be covered from the provisional sum allocated for the observation tour and trainings. The training materials and software shall also be supplied.

ix. Other Assistance to the Client

As directed by the Client from time to time, the Consultant shall assist the Client in carrying out specific tasks directly or indirectly related to the project, such as, but not limited to, the following:

 Assist in conducting meetings and site visit for dignitaries, representatives of financial institutions, etc.

In the event that the Consultant is required to deal with any dispute pursuant the Contract Clause for Contracts, the services required and the remuneration for such services shall be additional to the scope of the agreement, provided that the dispute does not arise from any failure of the Consultant to perform properly his duties under this agreement.

x. Inputs and Facilities provided by the Client

All the available documents that includes Detail Design Reports, Drawings etc shall be provided to the consultant. Also, Client will provide Office space and Accommodation space including basic furniture to the Consultant.

4. CONSULTANT'S STAFF

4.1 General

To provide the consulting services for the duration of the Project, the Consultant shall ensure a team of engineers and other specialists, experienced in the detail designing and supervision of construction of the Project.

Emphasis is placed on the need for relevant design and construction supervision engineers to have knowledge and previous experience of similar works to work at the Project site. In particular, the Engineers concerned with the design review and construction supervision of the Civil works, Hydro-Mechanical and Electro-Mechanical works shall have previous experience in similar type of construction. It is particularly important that the Team Leader and Resident Engineer shall have substantial previous experience in dealing with contractual matters and



contract claims under Conditions of Contract for EPC/Turnkey Projects ,FIDIC (1999, First Edition).

Responsibility for management of all services as per the Contract shall be with the Consultant's Team Leader. The Team Leader shall provide overall technical direction and coordination of the Services. The Consultant's Team Leader shall efficiently manage the staffs/experts manmonth and ensure the project completion at the initial contract price. The Consultant's Team Leader shall also manage and coordinate the assignment of pool of experts that may be required from time to time, with prior approval of the Client.

4.2 Required Person-Months of Consulting Services

The estimated requirement of Consulting Services are:

Key Expatriate Staff (International) with 143 Man Month

1	Team leader / Project Manager/ Contract Specialist
2	Contracts Engineer
3	Cost and Quality Engineer
4	RE-Tunnel / Rock Engineer/geotechnical
5	Structure Engineer
6	Hydraulic design Engineer
7	Engineering Geologist
8	Electro-Mechanical Engineer
9	Hydro-Mechanical Engineer
10	Electrical Engineer
11	Transmission line Engineer
12	Scada & Communication Engineer
13	Pool of Expert

Note: National Staff/Expert may be supplied from NEA/NEA Subsidiary Company/Companies which will work as an associated partner of the Consultant.

5. COUNTERPART STAFF

Tamakoshi V HEP, in consultation with the Consultant, may provide its own professional staff to work closely with the Consultant as counterpart staffs in the capacity of trainee engineer. The Consultant shall work in close coordination with them in executing their responsibilities. The consultant shall manage to complete the contracted work even in case, NEA fails to provide their counterpart staffs, using the local/National experts.



A. Additional Project Information

Project information:

Tamakoshi-V Hydropower Project is a cascade development of the Upper Tamakoshi HEP with tandem operation. The project area is located on the right bank of Tamakoshi River. It takes the discharge from the tailrace of the Upper Tamakoshi Project through an underground inter connection arrangement and conveys to headrace tunnel of this Project. An underground powerhouse is proposed at Suri Dovan. The design discharge of the project is 66 m3/ sec and has installed capacity of 99.8 MW.

The general arrangement of the project comprises of underground interconnection arrangement of headrace tunnel with the tailrace tunnel of Upper Tamakoshi HEP. The interconnection system consists of connecting tunnel, a head pond required to maintain suction head at the pressurized head race tunnel entrance, spillway and spillway tunnel. The water from tailrace of Upper Tamakoshi HEP is diverted to this interconnection system and conveyed to the 8.09 Km long (7.098 km concrete lined and 1 Km Shotcrete lined) headrace tunnel, a 152.72m (length including bends) long vertical shaft, 404.36 m long tailrace tunnel and underground powerhouse containing four Francis turbines, from where it is released into the Tamakoshi river at about 0.2 km downstream from the confluence of Tamakoshi River and Khari Khola at Suri Dovan.

The interconnection system has already been constructed to avoid the delay in project construction and smooth operation of Upper Tamakoshi HEP without any interruption.

Location and Access:

Tamakoshi-V is located in the Central Development Region of Dolakha District of Janakpur Zone. The project area is situated within Longitude 86°14'30" to 86°10'30" East and Latitude 27°49'50" to 27°45'00" North. The whole project area lies in Khare, Orang and Lamabagar Village Development Committees. As per new provincial provision of Nepal, the project area lies on Gaurisankar and Bigu village councils. This project is conceptualized to develop as a tandom operation project with Upper Tamakoshi HEP. The intake site / underground interconnection system with Upper Tamakoshi tailrace outlet is located in Lamabagar VDC at an elevation of 1155.02 masl whereas the underground powerhouse lies at the right bank of Tamakoshi River just downstream of the Suri River confluence with Tamakoshi River.

The Tamakoshi-V Hydropower Project is located approximately 170 km north east of Kathmandu, the capital of Nepal and approximately 40 km away from the district head-quarter of Dolakha District-Charikot Bazaar. The district head-quarter is connected with the capital by Arniko Highway upto Lamasangu which is approximately 90 km and by Lamasangu – Jiri road which is approximately 40 km up to Charikot. A gravel road of about 33 km is available from Charikot to Singate Bazaar is recently



upgraded for the construction of Upper Tamakoshi Project. The newly constructed road connecting Singate Bazaar and Lamabagar for the construction of Upper Tamakoshi HEP passes from the both powerhouse and the headwork sites of this project. This road is recently constructed.

Tamakoshi Jal Vidhyut Company has already started the construction of Permanent Camp Facility required for the Tamakoshi V Hydroelectric Project that is expected to get completed by May, 2022.



Salient Features of the Project

Location

Type of project Cascade development of Upper Tamakoshi HEP

Zone Janakpur District Dolakha

Village Development Committee Khare, Orang and Lamabagar VDCs

Province (New provision) Bagmati

Village council (New provision)

Gaurishankar and Bigu village councils

Headworks site

Between Purano Jagat and Gongor village

Powerhouse site Jamune and Suri Dovan. Approx. 7.0 Km upstream

fromthe present road head at Singate Bazar

Name of the River Tamakoshi River

Hydrology

Design Discharge 66 m³/sec
Annual average flow 69.51m³/sec

Access Road

Existing Road Access Road is available on both Powerhouse and

Headwork interconnection area

Interconnection with UTHEP

Type Tailrace tunnel of UTHEP is interconnected with the

headrace tunnel of Tamakoshi-V

The interconnection system is being constructed
Interconnection Tunnel 103.20m length; invert level of starting point = EL

1155.02 masl

Head Pond Width = 12.77m to 6.80m, Length = 74.01m,

Maximum water depth = 14.00 m

Headpond Spillway

Type Free overflow concrete weir

Length of the crest 55.50 m

Crest Level El. 1158.20 amsl Outlet of Spillway Tunnel El.1150.21 amsl

Headrace Tunnel

Type Circular type, Length 8.09 Km

Finished Diameter Concrete Lining=5.60 m and Steel lining=4.20 m

Surge Tank

Type Circular Type

Effective Size 15.0 m internal diameter Orifice Diameter =2.50m

Vertical Shaft



length including bends 152.72 m
Internal Diameter 4.2 m

Thickness of Shaft Steel Lining 17 mm to 36 mm

Powerhouse

Type Underground Cavern

Dimension L=69.00m, W=18.0m, H=33.14m.

Generator Floor Level El. 978.51masl
Turbine Setting Level El. 975.15 masl

Type of Turbine Francis (3*Vertical Axis & 1*horizontal axis)

No. of unit 4 units (3 units of 31.6 MW & 1 unit of 5.0 MW)

Switchyard

Type Cavern Type

Dimensions L=47.60m, W=13.0m, H=17.95m

Tailrace Tunnel

Type Circular type
Length 404.36 m
Finished Diameter Circular 5.60m

Transmission Line

Voltage of Transmission Line 220 KV double circuit

Length of Transmission line 2*1.7 Km upto nearest point of Tamakoshi-Khimti

TRL

Power and Energy Generation

Rated Gross Head 174.00 m
Rated Net Head 159.10 m
Installed Capacity 99.8 MW

Annual Energy 543.494 GWh (Rolwaling Considered)
Dry Season Energy 159.454 GWh (Rolwaling Considered)
Wet Season Energy 370.502 GWh (Rolwaling Considered)

Annual Energy 495.148 GWh (Rolwaling Not Considered)
Dry Season Energy 64.362 GWh (Rolwaling Not Considered)
Wet Season Energy 371.658 GWh (Rolwaling Not Considered)

Cost Estimates (Approximate)

Total Project Cost in US \$ 137.16 million



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	
3	VAT/PAN Registration	
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	
9	In case of a natural person or firm/institution/company which is already declared blacklisted and ineligible by the GoN, any other new or existing firm/institution/company owned partially or fully by such Natural person or Owner or Board of director of blacklisted firm/institution/company; shall not be eligible consultant.	
10	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 shall not be eligible to participate in procurement process till the concerned Court has not issued the decision of clearance against the Corruption Charges.	
11	process till the concerned Court has not issued the decision of clearance against the Corruption	

Sl. No.	Criteria Title	Compliance
12	B. Technical Threshold Criteria Evaluation under these criteria will be based on Hydropower Projects which are successfully constructed and commissioned during last seven (7) years preceding from the last date of submission of EOI. Ongoing projects will not be considered for evaluation. All of the criteria listed below should be fulfilled by single or separate projects. (i) Consulting Firms must have experience in construction supervision of EPC contract in at least one (1) Hydropower Projects having installed capacity not less than 25 MW. (ii) Consulting Firms must have experience in detailed design of at least one (1) Hydropower Projects having installed capacity not less than 80 MW	
	(iii) Consulting Firms must have experience in Construction Supervision of at least one (1) Hydropower Projects having installed capacity not less than 80 MW (iv) Consulting Firms must have experience in Construction Supervision of at least one (1) Hydropower Project having tunnel length not less than 4km in a single stretch in a single project, (v) Consulting Firms must have experience in Construction Supervision of at least one (1) Hydropower project having underground cavern of width not less than 12m, (vi) Consulting Firms must have experience in design and construction supervision of Hydro-Mechanical and Electro-Mechanical equipment in at least one(1) Hydropower project having installed capacity not less than 80 MW,	
13	C. Threshold Criteria for Joint Venture Firms (i) Maximum number of JV partners shall be three (3). The lead partner of the Joint Venture firm must have majority and not less than 40% share and each of the other partner must have at least 25% of share, (ii) Each partner of JV shall meet General Threshold Criteria (i), (ii), (iii) and (iv), (iii) Each partner of JV shall meet at least one of the Technical Threshold Criteria above. If any of the partners of the JV does not meet any one of the above Technical Threshold criteria, the entire JV will not be considered for evaluation. (iv) Combined experience of the JV must meet all the Technical Threshold Criteria, (v) Joint Venture firms shall submit the Joint Venture Agreement or MOU of JV Agreement or intended JV Agreement along with their EOI proposal, (vi) Consulting firms shall submit only one (1) EOI proposal as a single entity or partner in JV and/or associated partner. However associate partner may associate with more than one consulting firm during EOI submission but shall not associate with more than one (1) shortlisted consulting firm in RFP submission. If submitted/participated with more than one (1) shortlisted consulting firm in RFP then such proposal will be rejected/disqualified, (vii) In case that the JV partners are from different countries, the nationality of the lead partner shall determine the nationality of the JV firm. This principle will be applied in determining the firm from the developing country as well. Note: In Case, a 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 Firm's or JV EoI shall be excluded from the evaluation, if public entity receives instruction from Government of Nepal.	
14	D. Management competency of Consulting Firm Management competency of Consulting Firm will be assessed based on following sub-criteria: i. Standard policies, procedures and practices to assure quality, interaction with clients and outputs including ISO registration ii. Complaint handling mechanism concerning performance of experts or quality of the reports and internal controls to address ad resolve complaints iii. Strategy to improve quality of firm/association's performance for the assignment iv. Firm/association's standard policies, procedures and practices to avoid changes/replacements of personnel and continuity of professional services v. Firm/association social protection practices to safeguard the well-being of proposed experts vi. Firm/association practices towards the implementation of International Environmental and Social (E&S) policies and standards vii. Firm/association practices towards the implementation of International Environmental, Health and Safety (EHS) standards.	

ii) EOI Evaluation Criteria

Sl. No.	Criteria	Minimum Requirement
		The Team Leader must have at least 15 years of professional experience with fluent communication skill in English language. Evaluations of the Expert will be on the basis of the following three sub-criteria: 1. Academic Qualifications. 1.1 Master degree in Water Resources Engineering/Hydropower Engineering/ Construction Management.
		1.2 Bachelor degree in Civil/Electrical/Mechanical/Hydropower Engineering.
1	Team leader / Project Manager/ Contract Specialist	2. Professional Experience in Similar Job. 2.1 Professional experience in Construction Supervision of successfully completed (Constructed and Commissioned) Hydropower Projects within last 10 years with capacity not less than 80 MW as Team Leader/Project Manager 2.2 Professional experience in Construction Supervision of successfully completed (Constructed and Commissioned) Hydropower Projects within last 10 years with capacity not less than 80 MW as a Contract Specialist
		3. Regional Experience (Outside Home Country/within Hindu Kush Himalayan Region). 3.1 Regional experience in Construction Supervision of at least one successfully completed (Constructed and Commissioned) hydropower project within last 10 years with capacity not less than 50 MW as Team Leader
		The Contract Engineer must have at least 10 years of professional experience with fluent communication skill in English language. Evaluations of the Expert will be on the basis of the following three sub-criteria: 1. Academic Qualifications.
		1.1 Master degree in Construction /Contract Management or Contract Law.
		1.2 Bachelor degree in engineering
3	Contract Engineer	2. Professional Experience in Similar Job. 2.1 Professional experience in Construction Supervision of successfully completed (Constructed and Commissioned) Hydropower Projects within last 10 years with capacity not less than 80 MW as Contract Engineer.
		3. Regional Experience (Outside Home Country/within Hindu Kush Himalayan Region). 3.1 Relevant experience in Construction Supervision of at least one successfully completed (Constructed and Commissioned) hydropower project outside home country, within last 10 years with capacity not less than 50 MW as Contract Engineer
		The Cost and Quality Engineer must have at least 10 years of professional experience with fluent communication skill in English language. Evaluations of the Expert will be on the basis of the following three sub-criteria: 1. Academic Qualifications.
	Cost and Quality Engineer	1.1 Master degree in Civil Engineering or equivalent in related field.
		1.2 Bachelor degree in civil engineering.
		2. Professional Experience in Similar Job.

Sl. No.	Criteria	Minimum Requirement
		2.1 Professional experience in Construction Supervision of successfully completed (Constructed and Commissioned) Hydropower Projects within last 10 years with capacity not less than 80 MW as Cost and Quality Engineer
		3. Regional Experience (Outside Home Country/within Hindu Kush Himalayan Region). 3.1 Relevant experience in Construction Supervision of at least one successfully completed (Constructed and Commissioned) hydropower project outside home country, within last 10 years with capacity not less than 50 MW as Cost and Quality Engineer
		The RE-Tunnel/Rock/Geotechnical Engineer must have at least 10 years of professional experience with fluent communication skill in English language. Evaluations of the Expert will be on the basis of the following three sub-criteria: 1. Academic Qualifications.
		1.1 Master degree in Tunnel/Rock /Geotechnical Engineering or equivalent in related field.
		1.2 Bachelor degree in Geotechnical Engineering/Rock Engineering/Engineering Geology.
4	RE- Tunnel/Rock/Geotechnical Engineer	2. Professional Experience in Similar Job. 2.1 Professional experience in Construction Supervision of successfully completed (Constructed and Commissioned) Hydropower Projects within last 10 years with capacity not less than 80MW and headrace tunnel of 4 km or more length in a single tunnel as Tunnel/Rock /Geotechnical engineer
		3. Regional Experience (Outside Home Country/within Hindu Kush Himalayan Region). 3.1 Relevant experience in Construction Supervision of at least one successfully completed (Constructed and Commissioned) hydropower project outside home country, within last 10 years with capacity not less than 50 MW as Tunnel/Rock Engineer/Geotechnical engineer
		The Structural Engineer must have at least 10 years of professional experience with fluent communication skill in English language. Evaluations of the Expert will be on the basis of the following three sub-criteria: 1. Academic Qualifications.
		1.1 Master degree in Structural Engineering.1.2 Bachelor degree in Civil Engineering.
5	Structural Engineer	2. Professional Experience in Similar Job. 2.1 Professional experience in Construction Supervision of successfully completed (Constructed and Commissioned) Hydropower Projects within last 10 years with capacity not less than 80 MW as Structural Engineer.
		3. Regional Experience (Outside Home Country/within Hindu Kush Himalayan Region). 3.1 Relevant experience in Construction Supervision of at least one successfully completed (Constructed and Commissioned) hydropower project outside home country, within last 10 years with capacity not less than 50 MW as Structure Engineer
6	Hydraulic Design Engineer	The Hydraulic Design Engineer must have at least 10 years of professional experience with fluent communication skill in English language. Evaluations of the Expert will be on the basis of the following three sub-criteria: 1. Academic Qualifications.

Sl. No.	Criteria	Minimum Requirement
		1.1 Master degree in Water Resources Engineering/Hydropower Engineering or equivalent in related field.
		1.2 Bachelor degree in Civil Engineering.
		2. Professional Experience in Similar Job. 2.1 Professional experience in Construction Supervision of successfully completed (Constructed and Commissioned) Hydropower Projects within last 10 years with capacity not less than 80 MW as Hydropower/Hydraulic Design
		3. Regional Experience (Outside Home Country/within Hindu Kush Himalayan Region). 3.1 Relevant experience in Construction Supervision of at least one successfully completed (Constructed and Commissioned) hydropower project outside home country, within last 10 years with capacity not less than 50 MW as Hydropower/Hydraulic Design engineer
		The Engineering Geologist must have at least 10 years of professional experience with fluent communication skill in English language. Evaluations of the Expert will be on the basis of the following three sub-criteria: 1. Academic Qualifications.
		1.1 Master degree in Engineering Geology.
		1.2 Bachelor degree in Geology.
7	Engineering Geologist	2. Professional Experience in Similar Job. 2.1 Professional experience in Construction Supervision of successfully completed (Constructed and Commissioned) Hydropower Projects within last 10 years with installed capacity not less than 80 MW and headrace tunnel of at least 4 km length in single tunnel, as Geologist
		3. Regional Experience (Outside Home Country/within Hindu Kush Himalayan Region). 3.1 Relevant experience in Construction Supervision of at least one successfully completed (Constructed and Commissioned) hydropower project outside home country, within last 10 years with capacity not less than 50 MW as geologist.
		The Electro-Mechanical Engineer must have at least 10 years of professional experience with fluent communication skill in English language. Evaluations of the Expert will be on the basis of the following three sub-criteria: 1. Academic Qualifications.
		1.1 Master degree in Mechanical Engineering or equivalent in related field.
		1.2 Bachelor degree in Mechanical Engineering.
8	Electro-Mechanical Engineer	Professional Experience in Similar Job. 2.1 Professional experience in Construction Supervision of successfully completed (Constructed and Commissioned) Hydropower Projects within last 10 years with capacity not less than 80 MW as Electro Mechanical Engineer
		3. Regional Experience (Outside Home Country/within Hindu Kush Himalayan Region). 3.1 Relevant experience in Construction Supervision of at least one successfully completed (Constructed and Commissioned)

Sl. No.	Criteria	Minimum Requirement
		hydropower project outside home country, with in last 10 years with capacity not less than 50 MW as Electro Mechanical Engineer
9	Hydro-Mechanical Engineer	The Hydro-Mechanical Engineer must have at least 10 years of professional experience with fluent communication skill in English language. Evaluations of the Expert will be on the basis of the following three sub-criteria: 1. Academic Qualifications.
		1.1 Master degree in Mechanical Engineering or equivalent in related field.
		1.2 Bachelor degree in Mechanical Engineering.
		2. Professional Experience in Similar Job. 2.1 Professional experience in Construction Supervision of successfully completed (Constructed and Commissioned) Hydropower Projects within last 10 years with capacity not less than 80 MW as Hydro Mechanical Engineer
		3. Regional Experience (Outside Home Country/within Hindu Kush Himalayan Region). 3.1 Relevant experience in Construction Supervision of at least one successfully completed (Constructed and Commissioned) hydropower project outside home country, with in last 10 years with capacity not less than 50 MW as Hydro Mechanical
	Electrical Engineer	The Electrical Engineer must have at least 10 years of professional experience with fluent communication skill in English language. Evaluations of the Expert will be on the basis of the following three sub-criteria: 1. Academic Qualifications.
		1.1 Master degree in Electrical Engineering or equivalent in related field.
		1.2 Bachelor degree in Electrical Engineering.
10		2. Professional Experience in Similar Job. 2.1 Professional experience in Construction Supervision of successfully completed (Constructed and Commissioned) Hydropower Projects with in last 10 years with capacity not less than 80 MW as the Electrical engineer
		3. Regional Experience (Outside Home Country/within Hindu Kush Himalayan Region). 3.1 Relevant experience in Construction Supervision of at least one successfully completed (Constructed and Commissioned) hydropower project outside home country, within last 10 years with capacity not less than 50 MW as Electrical engineer
11	Transmission Line Engineer	The Transmission Line Engineer must have at least 10 years of professional experience with fluent communication skill in English language. Evaluations of the Expert will be on the basis of the following three sub-criteria: 1. Academic Qualifications.
		1.1 Master degree in Electrical Engineering or equivalent in related field.
		1.2 Bachelor degree in Electrical Engineering.
		Professional Experience in Similar Job. 2.1 Professional experience in CoAnstruction Supervision of successfully completed (Constructed and Commissioned)

Sl. No.	Criteria	Minimum Requirement
		Hydropower Projects with in last 10 years with capacity not less than 80 MW as the Transmission Line engineer
		3. Regional Experience (Outside Home Country/within Hindu Kush Himalayan Region). 3.1 Relevant experience in Construction Supervision of at least one successfully completed (Constructed and Commissioned) hydropower project outside home country, within last 10 years with capacity not less than 50 MW as Transmission Line engineer
12		The Scada & Communication Engineer must have at least 10 years of professional experience with fluent communication skill in English language. Evaluations of the Expert will be on the basis of the following three sub-criteria: 1. Academic Qualifications. 1.1 Master degree in Electronics & Communication
		Engineering or equivalent in related field. 1.2 Bachelor degree in Electronics & Communication Engineering.
	Scada & Communication Engineer	 Professional Experience in Similar Job. Professional experience in Construction Supervision of successfully completed (Constructed and Commissioned) Hydropower Projects with in last 10 years with capacity not less than 80 MW as the Scada and Communication Engineer
		3. Regional Experience (Outside Home Country/within Hindu Kush Himalayan Region). 3.1 Relevant experience in Construction Supervision of at least one successfully completed (Constructed and Commissioned) hydropower project outside home country, within last 10 years with capacity not less than 50 MW as Scada and Communication engineer

Score: 30.0

B. Experience

Sl. No.	Criteria	Minimum Requirement
1	B.1 General work Experience of Consulting Firm	Evaluation under this criterion is based on the experience of the Consulting Firm in Construction Supervision, Detailed Engineering Design, and Design and Construction of Civil Engineering Projects/Infrastructure Project in last seven (7) years preceding from the last date of submission of EOI. The combined experience of the JV partner shall be evaluated. The evaluation will be based on the following aspects 1.1 Detailed Engineering Design of any Civil Engineering Projects/ Infrastructure Projects of the size of construction cost of 112 Million USD. 1.2 Construction Supervision of any Civil Engineering Projects/ Infrastructure Projects of the size of construction cost of 112 Million USD.
2	B.2 Specific Experience of Consulting Firm within last 7 years	Evaluation under this criterion is based on the experience of the Consulting Firm in Construction Supervision, Detailed Engineering Design, and Design and construction of Hydro-

SI No	Critorio	Minimum Requirement
Sl. No.	Criteria	Mechanical and Electo-Mechanical works of Hydropower Projects in last seven (7) years preceding from the last date of submission of EOI. The combined experience of the JV partner shall be evaluated. The evaluation will be based on the following aspects: 2.1 Detailed engineering Design of Hydropower Projects having installed capacity not less than 80 MW. 2.2 Construction Supervision of Hydropower Projects having installed capacity not less than 80 MW. 2.3 Construction Supervision of Hydropower Projects in EPC contracts having installed capacity not less than 25 MW. 2.4 Construction Supervision of Hydropower Projects having installed capacity not less than 80 MW funded by Multinational Financial institutes (Eg: ADB, EIB, AIIB, World Bank). 2.5 Construction Supervision of Hydropower Projects having headrace tunnel of length 4km and above in a single stretch in a single project. 2.6 Construction Supervision of Hydropower Projects having headrace tunnel of diameter 5m and above. 2.7 Construction Supervision of Hydropower Projects having cavern of width more than 12 m. 2.8 Experience in design and construction supervision of Hydropower Projects having cavern of width more than 12 m. 2.8 Experience in design and construction supervision of Hydropower Projects having cavern of width more than 12 m. 2.8 Experience in design and construction supervision of Hydropower Projects having installed capacity not less than 80 MW. 2.9 Experience in design and construction supervision of Transmission Line of voltage level 220 kV or above.
3	B.3 Similar Geographical experience of the Consulting Firm	Evaluation under this criterion is based on the experience of Consulting Firm in Detailed Engineering Design of Hydropower Projects in last seven (7) years preceding from the last date of submission of EOI in countries (Nepal, India, Pakistan, Afghanistan, Bangladesh, Bhutan, China, Myanmar) falling under Hindu kush Himalayan Region as defined by ICIMOD (Integrated Centre for Integrated Mountain Development). The cumulative experience of JV partner shall be evaluated. The geographical competence of the Consulting Firm has been divided as below; 3.1 Experience in construction supervision of Hydropower Projects with Installed Capacity not less than 50 MW in countries falling under Hindu Kush Himalayan Region. 3.2 Experience in construction supervision of Hydropower Projects in EPC contracts with Installed Capacity not less than 25 MW in countries falling under Hindu kush Himalayan Region.

Score: 60.0

C. Capacity

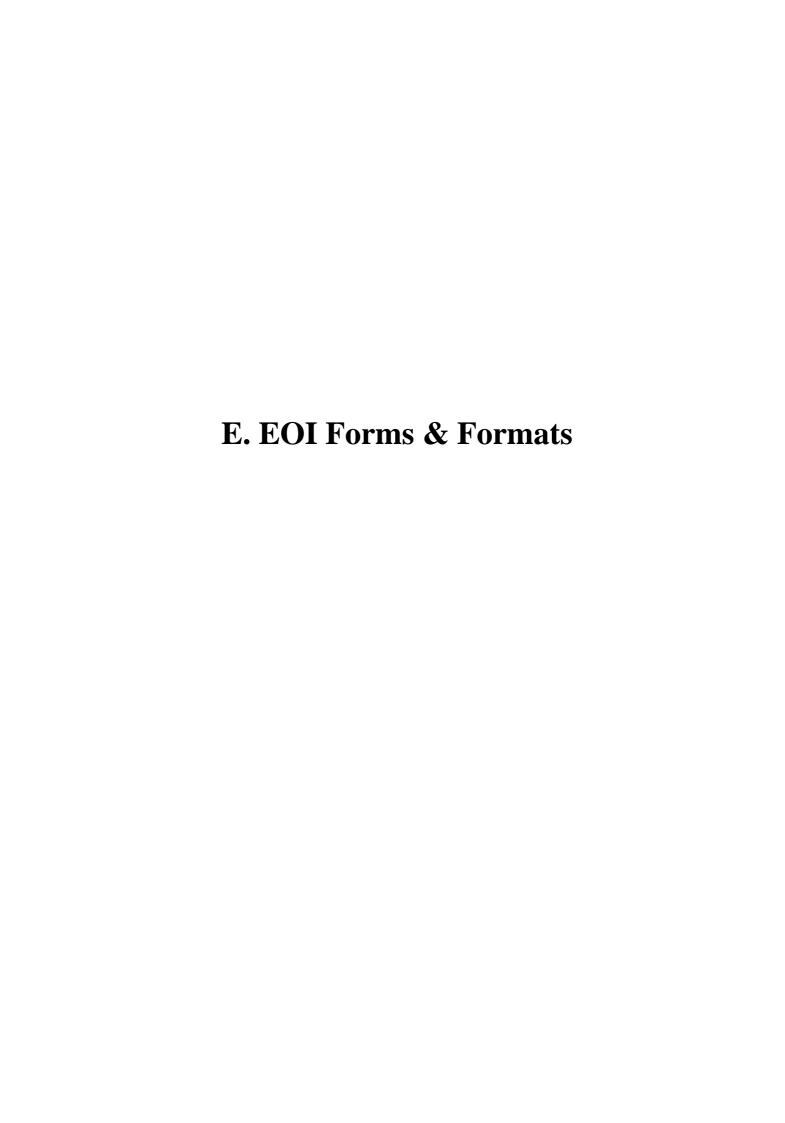
	•	
Sl. No.	Criteria	Minimum Requirement
		Average Annual Turnover of Best of 3 Fiscal Year of last 7 fiscal years equals to 8.5 million USD
1	CRITERIA C: Financial Capacity of the Consulting Firm	Evaluation under this criterion is based on the financial capacity of the Consulting Firm (Average Annual Turnover (AAT) of Best of 3 Fiscal Year of Last 7 Fiscal Years in consulting business) preceding the submission of EOI.
		Note: For the purpose of determining the equivalent amount of the required amount of the required average annual turnover

Sl. No.	Criteria	Minimum Requirement
		shall be provided in freely convertible currency. The exchange rate (Selling exchange rate) published by Nepal Rastra Bank prevailing on the last date of submission of EOI document shall be applied.

Score: 10.0

Minimum score to pass the EOI is: 60

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.



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

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 having reviewed and fully understood all the short undersigned hereby apply to be short-listed by [Insert {Insert brief description of Work/Services}.	t-listing information provided, the
2.	Attached to this letter are photocopies of original docume	nts defining:
	a) the Applicant's legal status;	
	b) the principal place of business;	
3.	[Insert name of Client] and its authorized representation the statements, documents, and information submitted. This Letter of Application will also serve as authorized representative of any institution referred to provide such information deemed necessary and restatements and information provided in this application experience, and competence of the Applicant.	in connection with this application. horization to any individual or in the supporting information, to quested by yourselves to verify
4.	[Insert name of Client) and its authorized representance any of the signatories to this letter for any further information.	
5.	All further communication concerning this Application sh person,	ould be addressed to the following
	[Person]	
	[Company]	
	[Address]	
	[Phone, Fax, Email]	
6.	We declare that, we have no conflict of interest in the p	proposed procurement proceedings

and we have not been punished for an offense relating to the concerned profession or

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

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	
Signed	-

Name :

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

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.)

3. Experience

3(A). General Work Experience

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

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

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

(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) ² :
Country:	Duration of assignment (months):
Location within country:	
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\$ of Euro):
Start date (month/year):	No. of professional person-months provided by
Completion date (month/year):	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 provid	led in the assignment:
Note: Provide highlight on similar required by the EOI assignment.	services provided by the consultant as
Firm's Name	

² Consultant should state value in the currency as mentioned in the contract

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)

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

4. Capacity

4(A). Financial Capacity

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

Annual Turnover			
Year	Amount Currency		
- Average Annual Turnover			

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

4(B). Infrastructure/equipment related to the proposed assignment³

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

 $^{^{3}}$ Delete this table if infrastructure/equipment for the proposed assignment is not required.

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)

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

(Please insert more rows as necessary)

Note: Please Refer Complete set of EOI Document prepared by Tamakoshi Jal vidhyut Company Limited attached herewith and fill all the attached forms in the EOI document

TAMAKOSHI JALVIDHYUT COMPANY LIMITED TAMAKOSHI V HYDROELECTRIC PROJECT



Consulting Services For

CONSTRUCTION MANAGEMENT AND SUPERVISION OF TAMAKOSHI V HYDROELECTRIC PROJECT

EXPRESSION OF INTEREST (EOI)

Tamakoshi V Hydroelectric Project

EOI No.: TKJVC/078-79/EOI-1

Kathmandu, Nepal August, 2021

Expression of Interest (EOI)

Consulting Services For Construction Management and Supervision

Method of Consulting Service (International)

Project Name: Tamakoshi V Hydroelectric Project

EOI : *TKJVC/078-79/EOI-1*

Office Name : Tamakoshi Jal Vidhyut Company Limited

Office Address: Thapagaun, New Baneshwor, Kathmandu Nepal

Issued on: 16th September, 2021

Financing Agency: Loan

Abbreviations

CV - Curriculum Vitae

DO - Development Partner

EA - Executive Agency

EOI - Expression of Interest

GON - Government of Nepal

PAN - Permanent Account Number

PPA - Public Procurement Act

PPR - Public Procurement Regulation

TOR - Terms of Reference

VAT - Value Added Tax

Request for Expression of Interest

Tamakoshi Jal Vidhyut Company Limited **Date:16**th **September, 2021**Tamakoshi V Hydroelectric Project

- 1. Tamakoshi Jal vidhyut Company Limited (TKJVC) is going to complete the financial closure including the debt portion required for the Project with Employees Provident Fund (EPF) and equity investment will be made from Nepal Electricity Authority (NEA) and intends to apply a portion of this loan to eligible payments under this Contract for which this Expression of Interest is invited for International Consulting Service.
- 2. The *Tamakoshi Jal Vidhyut Company Limited* (TKJVC) now invites Expression of Interest (EOI) from eligible Consulting Firms ("consultant") to provide the following consulting services:

Construction Management and Supervision of Tamakoshi V Hydroelectric Project and the scope of consulting services ("the Services") include but not limited to:

- Review, modify as required and finalize the Detailed Engineering Design Report and Bid/Contract Documents including Employer's/Client's requirements, specification, drawings, etc. for civil, Hydro-mechanical and Electromechanical works prepared by TKJVC.
- To prepare/modify & finalize Geological/Geotechnical Baseline Report and Geological/Geotechnical Baseline Data from the geological/geotechnical report prepared by Tractebel Engineering GmbH and other available data.
- Assist and recommend to the Client in evaluation of technical and financial proposals for selection of Contractors for the execution of TKVHEP and also in Contract negotiation;
- Review with modification as required, approval and issuing of construction design/documents/drawings submitted by EPC contractor with consent from the client.
- Review, check, modify and finalize the necessary design/documents/drawings in due course of the construction as required upon the request of the client.
- Supervise the construction work and assure quality control of the project including contract administration.
- Review, check and monitor the project construction schedule of different work
 packages and overall joint coordinated interface schedule (OJCIS) using state of
 the art technology and maintain the original schedule.
- Ensure the timely completion of the project construction works within the specified time and contracted value.
- Administer Construction Supervision and Contract administration of the Contract packages as provisioned in Contract.
- Analyze and recommend variation, extension of times if required, liquidated damages to the client in contract administration.



- All the project components being underground, the consultant shall review / finalize the risk sharing mechanism proposed in the Detailed Engineering Design with respect to quantity and different class of rock and modify if necessary before the contract signing and implement it during the construction period.
- Verification of the invoices submitted by the contractor and recommend to the client for payment.
- Review and recommend the Testing and Commissioning plan and program of the facilities of the project (Civil, Hydro-Mechanical, Electro-Mechanical and Transmission line) for approval and assist Client for its execution.
- Assist client/ owner in all aspect of project management and contract administration for Completion of the Project within the stipulated time and budget.
- Ensure the health and environmental safety measures taken by the contractors in line with the contract document.
- Interested eligible consultants may obtain further information and EOI document free of
 cost at the address mentioned below during office hours on or before 20th October,
 2021 during office hours or may visit PPMO e-GP system www.bolpatra.gov.np/egp. or
 visit the client's website; www.nea.org.np.
 - Consultants may associate with other consultants to enhance their qualifications.
- 4. All submittals from the Consulting Firms shall be in English Language.
- 5. All the submitted reference projects should be completed and commissioned by the date of submission of EOI. Not commissioned projects shall not be considered for evaluation.
- 6. The Expressions of Interest, EOI shall be delivered online through e-GP system www.bolpatra.gov.np/egp on or before 12:00 hours (local time) on 20th October, 2021.
- 7. Expression of Interest (EOI) must also be delivered along with one copy in hardcopy; a copy in USB drive as softcopy to the address mentioned below (in person or by courier) within 15 days from the last date of EOI submission.

Chief Executive Officer

Tamakoshi Jalvidhyut Company Limited House No. 106, Okharbot Marg, Thapagaun Kathmandu, Nepal

E-mail: tamakoshi5@nea.org.np

- 8. EOI will be assessed based on **Criteria A. Qualification [30%], Criteria B. Experience [60%], and Criteria C. Capacity [10%]** 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.
- 9. Minimum score to pass the EOI is 600 in overall and 60 % points in Criteria B.
- 10. TKJVC reserves the right to reject any or all of the EOIs at any stage without assigning any reason whatsoever and without incurring any liability to the affected applicant(s). TKJVC will not be responsible for any cost of expenses incurred by the firms in connection with the preparation or delivery of the EOI.



B. 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. The maximum number of partners in JV shall be limited to three.
- 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 Firm / company/** organization].
- 4. The assignment has been scheduled for a period of **Sixty Three Months** Expected date of commencement of the assignment is **20**th **December**, **2022**.
- 5. A Consultant will be selected in accordance with the **QCBS** method.
- 6. 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: Financial Capacity Details (Form 4)
 - EOI Form: Key Experts List (form 5).
 - 7. 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.
 - 8. Consulting Firms shall submit only one (1) EOI proposal as a single entity or partner in JV and/or associated partner. However associate partner may associate with more than one Consulting Firm during EOI submission but shall not associate with more than one (1) shortlisted Consulting Firm in RFP submission. If submitted/participated as associated partner with more than one (1) shortlisted Consulting Firm in RFP then such proposal will be rejected/disqualified. Local Expert may be supplied from NEA/NEA Subsidiary Company/Companies which will work as an associated partner of the Consultant.
 - 9. The firms submitting EOI as JV partners, if short-listed, must submit their proposal in the same JV name while submitting technical and financial proposal based on RFP. The references and qualification document submitted from their parent or subsidiary companies shall not be considered for their evaluation.
 - 10. Consulting Firms' work experiences shall be evidenced by duly certified (by Authorized Agency) and notarized copies of client's references with contact address and email addresses on the letterhead of client's organization and shall be written in English. If the references are in other languages than the English, it shall be accompanied by an accurate translation into the English language duly authenticated by notary agencies or



- the nationally/internationally recognized translating body/ agency. Any experiences without client's/ employer's references shall not be considered for evaluation.
- 11. The Expression of Interest (EOI) document must be duly completed and submitted through e-GP system by using the forms and instructions provided by the system.
- 12. The completed EOI document must be submitted on or before the date and address mentioned in the "*Request for Expression of Interest*". Any EOI Document received after the closing time for submission of proposals shall not be considered for evaluation.
- 13. Expression of Interest (EOI) must also be delivered along with one copy in hardcopy; a copy in USB drive as softcopy to the address mentioned in the "Request for Expression of Interest" (in person or by courier) within 15 days from the last date of EOI submission.

Terms of Reference (TOR)

For

Consulting Services of Tamakoshi V Hydroelectric Project

1. BACKGROUND AND OBJECTIVES

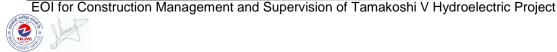
- a) Tamakoshi V Hydroelectric Project (the "Project") intends to apply a portion of its funds to engage Consulting Firm(s) (the consultants) to undertake the tasks given under the main objectives of the consulting services.
- b) Tamakoshi V Hydroelectric Project intends to construct the project in two Contract Packages; viz. Package I: Civil and Hydro-Mechanical works and Package II: Electro-Mechanical Equipment and Transmission Lines Works in Engineering, Procurement and Construction Model (EPC Contract). The Project is of 99.8 MW installed capacity and located approximately 170 km north east of Kathmandu, the capital of Nepal and approximately 40 km away from the district head-quarter of Dolakha District- Charikot Bazaar. The district head-quarter is connected with the capital by Arniko Highway upto Lamasangu which is approximately 90 km and by Lamasangu Jiri road which is approximately 40 km up to Charikot. The project site is connected with the Dolakha Lamabagar road recently constructed by Upper Tamakoshi HEP.
- c) The objectives of the consulting services shall be to ensure that the Project is constructed and completed with a high standard of workmanship and materials within the scheduled time and the budget, in accordance with the specifications and desirable quality as mentioned in the Contracts, in compliance with the environmental and social standards of Nepal Government, Multinational lending agencies and in accordance with the Client 1 's requirements. The Consultant shall carry out the Engineering Services of the Project throughout the entire contract period under and in close cooperation with the Client's Project Office. The Consultant shall act as the Client's Representative for EPC Contract to carry out all the duties fulfilling contractual responsibilities as mentioned in the contract agreement for consultancy services.

2. SCOPE OF CONSULTING SERVICES

2.1 Brief Description of Services

The selected Consultant shall provide the consulting services for approximately 63 calendar months (this includes 6 months of pre-award, 48 months of construction period, 9 months of post construction period i.e. during Defect Liability Period (12 months)). The main services to be provided by the Consultant but not limited to:

 Review, modify as required and finalize the Detailed Engineering Design Report and Bid/Contract Documents including Employer's/Client's requirements, specification,



- drawings, etc. for civil, hydromechanical and electromechanical works prepared by TKJVC.
- To prepare/modify & finalize Geological/Geotechnical Baseline Report and Geological/Geotechnical Baseline Data from the geological/geotechnical report prepared by Tractebel Engineering GmbH and other available data.
- Assist and recommend to the Client in Bid evaluation (Evaluation of Technical and Financial proposals) for selection of Contractors for the execution of TKVHEP and also in Contract negotiation.
- Review with modification as required, approval and issuing of construction design/documents/drawings submitted by EPC contractor with consent from the client.
- Review, check, modify and finalize the necessary design/documents/drawings in due course of the construction as required upon the request of the client.
- Supervise the construction work and assure quality control of the project including contract administration.
- Review, check and monitor the project construction schedule of different work packages and overall joint coordinated interface schedule (OJCIS) using state of the art technology and maintain the original schedule.
- Ensure the timely completion of the project construction works within the specified time and contracted value.
- Administer Construction Supervision and Contract administration of the Contract packages as provisioned in Contract.
- Analyze and recommend variation, extension of times if required, liquidated damages to the client in contract administration.
- All the project components being underground, the consultant shall review / finalize the
 risk sharing mechanism proposed in the Detailed Engineering Design with respect to
 quantity and different class of rock and modify if necessary before the contract signing and
 implement it during the construction period.
- Verification of the invoices submitted by the contractor and recommend to the client for payment.
- Review and recommend the Testing and Commissioning plan and program of the facilities
 of the project (Civil, Hydro-Mechanical, Electro-Mechanical and Transmission line) for
 approval and assist Client for its execution.
- Assist client/ owner in all aspect of project management and contract administration for Completion of the Project within the stipulated time and budget.
- Ensure the health and environmental safety measures taken by the contractors in line with the contract document.
 - The brief description of Consulting Services is as follows:

2.1.1 Consulting Services related to Contract Package – I: Civil and Hydro-Mechanical Works (EPC Contract):

- a. The Consultant shall review, modify as required and finalize the Detailed Engineering Design Report and Bid/contract Documents prepared by Client; assist and recommend to the Client in the bid evaluation (evaluation of Technical and Financial Proposal) for the contractor selection and in contract negotiation prior to signing the contract.
- b. The consultant shall review, check and monitor the project construction schedule proposed by EPC contractor and finalize it with the consent of client.
- c. The Consultant shall assist the Client for the implementation of the project by providing a comprehensive project management service. The Consultant shall review, verify check, modify as required and finalize the design/documents/drawings submitted by the EPC Contractor, and approve/issue the design/documents/drawings with the consent from the client. Furthermore, the Consultant shall produce, revise



- and modify the necessary design/documents/drawings in due course of construction upon request of client.
- d. The Consultant shall perform the assigned task to ensure smooth completion of the Project Construction work in accordance with the Contract agreement between the Client and Contractor and in conformity with internationally accepted standards and procedures as well as the state-of-the-art-technology prevailing in the Hydro Power Generation Construction industry.
- e. The selected Consultant shall provide the Consulting services for review of Detailed Engineering Design Report, Biding Documents, Design verification check, review and approve, Construction Supervision and contract administration and provide necessary guidance and advice to the Client before and during the implementation of the project construction works as well as in operation phase. The Consultant shall act on behalf of the Client as owners engineer during the execution of EPC Contract packages, carry out such duties and responsibilities as defined in the Agreement for Consulting Services. The Consultant shall recommend interim and final payments to be made to the Contractors.
- f. The selected Consultant shall review and recommend the Testing and Commissioning plan and program of the facilities for approval and assist Client for the Testing and Commissioning. Also assist the Client in Type Test/ Factory Acceptance Test of the Equipment and other necessary test required for the project.
- g. Shall provide all the services depicted in clause 2.1 "Brief Description of Services"
- h. Finalize As built drawing prepared by EPC contractor including the operation and maintenance manuals along with all the necessary documents.
- i. Assist in operation and maintenance of the facilities/equipment during the operation phase.

This Contract package of Civil and Hydro-mechanical Work in general consists of the following but not limited to:

a) <u>Civil Works</u>

- Smooth transection activities along the interfacing of different project components (Civil/Hydro-Mechanical/ Electro-Mechanical) including Head pond and constructed Tunnel Interconnection) without hampering the project schedule.
- ii. Preliminary Works (access road and bridge, camp, power supply, water supply, telecommunication etc.)
- iii. Head pond
- iv. Head pond Spillway
- v. Headrace tunnel (Modified horse shoe typed) and its support system
- vi. Surge Tank
- vii. Vertical Shaft
- viii. Underground Powerhouse



- ix. Tailrace Conduit
- x. Others as required for the performance of the works.

b) **Hydro-mechanical Works**

Design, Manufacture, Supply, Erection, Testing and Commissioning of all the hydromechanical equipment involved in the Client including:

- Gates
- Trashracks
- Stoplogs
- Valves
- Penstock
- Gantry Crane
- Others as required to complete the specified scope of the works.

2.1.2 Consulting Services related to Contract Package - II: Electro-Mechanical Equipment and Transmission Lines Works (EPC Contract):

- a. The Consultant shall review, modify as required and finalize the Detailed Engineering Design Report and Bid/Contract Documents prepared by the Client; assist and recommend to the Client in the bid evaluation (evaluation of Technical and Financial Proposal) for the contractor selection and in contract negotiation prior to signing the contract.
- b. The Consultant shall review, check and monitor the manufacturing and erection schedule proposed by EPC contractor and finalize it with the consent of client.
- c. The Consultant shall act as owner's Engineer to supervise the manufacturing and erection of equipment during the construction works. The Consultant shall review, check and finalize and approve the design/documents/drawings submitted by the Contractor/ Manufacturer with the consent from the client. Furthermore, the consultant shall produce, revise and modify the necessary design/documents/drawings in due course of the construction/erection of equipment upon request of the client.
- d. The Consultant shall perform the assigned task to ensure smooth completion of the Project Construction work in accordance with the Contract agreements between the Client and the Contractor and in conformity with internationally accepted standards and procedures as well as the state-of-the-art-technology prevailing in the Hydro Power Generation and Transmission Construction industry.
- e. The Consultant in the role of Engineer shall carry out such duties and assume such responsibilities as defined in the Agreement for Consulting Services. The Consultant shall recommend interim and final payments to be made to the Contractor and issue instructions as needed.
- f. The selected Consultant shall provide the Consulting services for review of Detailed Engineering Design Report, Biding Documents, Design verification check and review,



- Construction Supervision and Contract Administration and necessary guidance and advice to the Client before and during the implementation of the project construction works as well as in the operation phase.
- g. The selected Consultant shall review and recommend the Testing and Commissioning plan and program of the equipment or facilities or project (Electro-Mechanical and Transmission line) for approval and assist client for the Testing and Commissioning. Also assist the Client in Type Test/ Factory Acceptance Test of the Equipment and other necessary test required for the project.
- h. Shall provide all the services depicted in clause 2.1 "Brief Description of Services"
- i. Finalize the As built drawing prepared by EPC contractor including the operation and maintenance manuals along with all the necessary documents.
- j. Assist the operation and maintenance of the facilities/ equipment during the operation phase.
- k. The selected Consultant will be responsible for Testing, Commissioning and Approval of the equipment or facilities or project (Electro-Mechanical and Transmission line) in presence of the client.
- I. Ensure the Quality and Reliability of the supplied/ erected equipment.

2.2 Location of Services

In order to maintain close liaison between project management, design review and construction supervision, Tamakoshi V HEP requires that the Consultant's project management, construction supervision and design staff are all stationed at the Project site located in Dolakha district. However consultant's staff may also require to stay in Kathmandu office if necessary.

3. DETAILED DESCRIPTION OF CONSULTING SERVICES -

3.1 Review and finalize the Bid/Contract Documents and assist the Client in procurement of Contractors

Consultant's scope of services in this regard shall be including but not limited to the following:

- Review and recommend all the Bid/Contract Documents including Client's requirements, Specifications etc. prepared by the Client for the procurement of EPC Contractors.
- ii. Review and assist the Client for the finalization of Client's requirements, specifications etc. for contract packages.
- iii. Assist to finalize the evaluation (evaluation of Technical and Financial Proposal) of the contractors and recommend for the selection of Contractors.
- iv. Assist Client in contract negotiation for the signing of contract.

3.2 Review and Approval of Engineering and Detailed Design



Consultant's scope of services shall be but not limited to as under:

- Review, modify as required and finalize available Detailed Engineering Design Report.
- ii. Prepare Project Management & Contract Administration procedures for Communications & Meetings to the satisfaction of the Client.
- iii. Approval of all design, drawings and technical documents submitted by the Contractors with consent of the client. The Consultant shall analyze the adequacy of such designs, and shall advice/recommend in writing to the Client if any changes which the consultant feels necessary as per Contract Requirements before final approval. Copies of all reviewed/recommended drawings shall be retained by the Consultant & Client for information and records.
- iv. Review, check and modify the necessary design/documents/drawing in due course of the construction upon request of the client.
- v. Approval of construction design/documents/drawings submitted by EPC contractor with consent from the client.
- vi. Review and approval of quality assurance plan and procedures developed and submitted by the Contractors with consent from the client.
- vii. Assist the Client in writing contractual letters as required in due course of contract execution.
- viii. Carry out all necessary activity to support the project for the timely completion of construction within the contracted value.

3.3 Supervision of Construction Activities

The Consultant shall be responsible for monitoring and supervising all the construction activities to ensure that the work is carried out in accordance with the Contract and the quality of workmanship & the materials conform to the Client's requirements and specifications. The Consultant shall ensure that the work is carried out in accordance to the International EHS (Environment, Health and Safety) Standard Practice.

The tasks to be carried out by the Consultant shall include, but not limited to the following:

i. Programme Schedule

- a) The Consultant shall review, assess, analyze, update and approve the detailed work program comprising all the activities related to the contract execution submitted by the Contractors in periodic basis.
- b) The Consultant shall monitor the actual progress of work based on the base line program submitted by the Contractor(s). Monthly updates of the Contractor's program shall be monitored against the pre-approved program and all variations shall be noted. The future impact of major variations and necessary corrective



- measures shall be determined, analyzed, updated and submitted to Client with necessary recommendation.
- c) In the event the Contractor's programme fails to comply with the Contract works schedule or the actual progress is inconsistent with the Contractor's stated intentions, the Consultant shall inform the actual situation on time and advice the Client for necessary action accordingly with the Contractual provisions. The Consultant shall also review and assess the revised program submitted by the Contractor and take necessary actions as needed to correct/ speedup and catch with the original schedule.
- d) The Consultant shall carry out Budget and Cost Forecast (BCF) reports at an intervals of not more than 6 months or when major changes occur. The estimated cash flow and time required for the completion of the Contracts shall also be prepared based on the revised Contract costs.
- e) The Consultant shall also prepare a coordinated schedule of Civil, Hydro-Mechanical, Transmission line and Electro-Mechanical works in consultation with the Contractors based on their individual detail schedule (Considering the interface activities) ensuring the timely completion of the complete project work.

ii. General Activities of Supervision Works

To ensure that all the construction works are carried out in accordance with the Contracts, the Consultant shall undertake, among other tasks, the following activities but not limited to:

- Maintain a Master diary, including Contractor's daily records of labor and equipment employed, work in progress, weather conditions, instruction issued etc.
- Assess the Contractor's equipment and verify that it has adequate capacity to perform the works in accordance with the contract.
- Review monthly & weekly progress reports.
- Check the Contractor's surveys, control points and setting out as work proceeds based on the basic reference points provided by the Client and ensure accuracy of surveys and bench marks connecting various sites.
- Provide appropriate level of inspection/checking and witness testing where
 required, of work, materials & equipment including Hydro-Mechanical & ElectroMechanical equipment, communication and automobiles equipment prior to
 dispatch and after received at site as per contracts. The inspection services shall
 cover but not limited to:
 - Construction workmanship and acceptability of installation of all permanent work.
 - Materials and plants purchased- sources and quality etc.
 - Monitoring of all instrumentation installed.



- All construction activities, including preparatory work, materials production and final finish.
- Organizing the regular site coordination meetings to review construction progress and actual status.
- Consultant is responsible for issuance of instructions and day to day correspondences with the EPC Contractors in writing and with a copied to the client.
- Keep records of all the work authorized to be undertaken by the Contractors as dayworks.
- Check and certify the monthly statements of payment submitted by the Contractors in accordance with the Contract for approval by the Client.
- Check and certify the final statement for payment submitted by the Contractors in accordance with the Contracts.
- Prepare and issue Taking-over Certificates and Performance Certificates in accordance with the Contract requirements with consent from the client.
- Check, review and approve the detailed "Operation & Maintenance Manuals and As Built Drawings" prepared and submitted by the Contractors for use of the Client in the operation of the works.
- Ensure that all submittals/deliverables of the Contractors, upon completion of the works, in the forms and numbers set out in the Contract, are well received by the Client.
- Prepare a "Completion Report" for the works under the Contract, including a summary of final costs and submit them to the Client for future reference.

iii. Extension, Variations, Claims and Disputes

The Consultant shall assist and recommend the Client including but not limited to the following aspects:

- Maintain records of all field instructions.
- Promptly notify the Client of any unusual events leading to Claims and Disputes.
- Assist Client to take action to resolve problems or conflicts.
- Assist the Client in preparing the required documents to be submitted to the Dispute Adjudication Board (DAB) and/or Arbitration.
- Carryout and maintain effective contract management and claim control.
- Notify the Client of any requirement for a variation and estimate the cost of the variation order.
- Analyze and Recommend client for the contractor's claim of extension of contract completion period.
- Prepare the Variation Orders and recommend to the Client for approval.



- Provide available information and support in assisting Client in the assessment and resolution of claims of the Contractor and provide necessary determinations thereof as per the Contract.
- Obtain approval of the Client before certifying any claim amount of the Contractors.
- Other assistance and recommendation as required in contract administration.

iv. Monitor Contracts Costs

The Consultant shall monitor contract Costs and shall update the cost of contract works every 6 months incorporating actual and projected expenses including costs of variation orders if any, potential costs of claims and provisional sums. The estimated cash flow for the completion of the project Contracts shall also be projected based on the revised Contract Costs.

The Consultant shall ensure that the Client is well advised in advance of any additional funds required for completion of the project.

v. Testing and Commissioning:

The consultant shall review and recommend the Testing and Commissioning Plan and program of the facilities submitted by the contractors for approval from the client and assist Client for Testing and Commissioning. The Consultant shall fully involve in Testing and Commissioning of the facilities (Civil Work, Hydro-Mechanical equipment, Electro-Mechanical Equipment and Transmission line and other necessary tests required for the project) and ensure quality of the works and services. The consultant shall assist the client in Type Test/ Factory Acceptance Test (FAT) of the equipment and all the necessary tests at site after the delivery of equipment.

3.4 Project Management

i. Contract Procedures

The Consultant shall formulate and establish procedures for the proper management, administration and quality assurance/ control of the contract as well as the Consultant's own services, and shall have effective monitoring and control of these procedures. The Consultant shall provide Manual of Project Implementation Procedures for approval within 90 days from the date of signing of the Consulting Services Contract.

ii. Reports

The Consultant shall prepare and submit the following reports which shall be in a format agreed with the Client and or the Financing body in number of copies as



mentioned below:

- a) 2 copies of Daily and shift reports by inspectors, etc., within four working days, recording weather conditions, crews and equipment working, areas being worked on, production, resource allocation, compliance with approved procedures, any special or unusual occurrence, etc.
- b) 2 copies of Weekly reports by Resident Engineer, within one week of the end of the report period, recording progress during the month on a quantity and cost basis with appropriate graphical presentations comparing progress with program and giving reasons for any discrepancies if any.
- c) 6 copies of Monthly report comprising the work progress.
- d) 20 copies of Project Completion Reports including electronic copies(in word and pdf format) for all major structures or elements of the contract works, incorporating design calculations, as-built records and drawings (Auto-cad format) submitted by the Contractors, within 60 days of issue of any Taking-Over Certificate. Completion Reports shall also include but not limited to the following:
 - Details of construction methodology, concrete quality, hydrological, sedimentation, geological and geotechnical conditions etc,
 - Underground support system, support type with respect to Rock type.
 - Details of hydro mechanical works.
 - Details of Electro-Mechanical works etc.
 - details of the transmission line works
 - Details of the Cost.
 - Progress of the month in comparison with the agreed schedule.
 - Detail programme of next month.
 - Comparison of overall progress in respect to the agreed schedule
 - Catchup plan if any
- e) 5 copies of Testing and Commissioning Reports.
- f) Provide any special reports as requested by the Client.

iii. Monitor Environmental Requirements

The Consultant shall be responsible for monitoring all the activities of the Project, under the contractor's control, are compliant:

- · In general with:
 - the prevailing laws in Nepal
 - o the Project's national/international lenders E&S (Environmental



- and Social) policies and standards
- the Project's national/international lenders EHS (Environmental, Health and Safety) policies and standards

in particular with:

- the Project's Environmental and Social documents, including but not limited to the Environmental Impact Assessment Report, Environmental and Social Management / Action Plans, Resettlement Action Plan.
- the Contract Documents
- the requests for corrective actions emitted by the competent Nepalese authorities or the national/international lenders;

iv. Project Relations

The Consultant shall promote good project relations and in doing so shall monitor project labour relations, living conditions, health and safety programs to identify potential problems and assist the Client to resolve them promptly. Problems that cannot be resolved promptly by the Consultant shall be reported forthwith to the Client for action.

v. Monitor Environment, Health and Safety

The Consultant shall monitor, inspect and ensure that the Contractors comply with the requirements of the working conditions for laborers as directed in the construction Contract and as specified in the Nepali labor code as well as following the international practices. The Consultant shall assist the Client to take initiative to address and correct any deleterious effects arising from the implementation of the Contract.

vi. Commissioning of the Works

The Consultant shall be responsible for supervision of the commissioning of all works/structures of the Project. The Consultant shall be responsible for, but not limited to the following:

- Liaise with the Client when establishing the overall requirements for project commissioning, coordinate Testing and Commissioning programs.
- Establish specific commissioning requirements in relation to the overall requirements for the project as per the contract document and international practice.



- Submit, with prior approval with the Client, the commissioning requirements to the Contractor to enable him to prepare his detailed commissioning procedures.
- Liaise with the Client to achieve the desired level of involvement by the Client's operating staff and other personnel assigned.
- Review and approval of commissioning procedures prepared by the Contractor(s) to provide assurance that design requirements are complied with, that all necessary observations will be made, that the proposed methods are adequate to maintain control of the operation and that the Contractor is fully cognizant of any criteria which may require the commissioning to be discontinued,
- Carry out/ check evaluations of observed data during the course of commissioning and advise the Contractor accordingly,
- Review and approve commissioning reports to be prepared by the Contractor as required by the construction Contracts.

vii. Review and Approval of Operation and Maintenance Manuals

The Consultant shall check, review and finalize the detailed Operation and Maintenance (O & M) manuals for structures and plants submitted by the Contractors. The Consultant shall ensure that uniform, complete, high quality O & M manuals are prepared by the Contractors for the whole Project.

The Consultant shall ensure that the O&M manual shall include, among others:

- references to all relevant design and other reports, in order to provide a complete bibliography on the structures and plant,
- specifications, data and statements on design for operation and maintenance staff to understand the basis of their functions,
- drawings, diagrams, charts, etc. to facilitate understanding of the O&M requirements,
- complete list of components particularly plant and instrument parts and spares,
- standard forms for O&M functions and step-by-step instruction.

viii. Technology Transfer

The Consultant shall involve the Client's Engineers in various activities including Design works and Construction Supervision. The Consultant shall provide capacity building to five (5) number of Client's executives for a period of 10 days in its home office. Capacity building shall focus on observation tour acceptable to the Client.

The Consultant shall also conduct capacity building training in its home office for 10



days duration to thirteen (13) number of Client's Engineers and two (2) numbers of client's non-technical staff. The training material shall be fixed on mutual discussion.

All training costs including travel, boarding and lodging expenses in connection with the training and visit to the consultant's home office will be covered from the provisional sum allocated for the observation tour and trainings. The training materials and software shall also be supplied.

ix. Other Assistance to the Client

As directed by the Client from time to time, the Consultant shall assist the Client in carrying out specific tasks directly or indirectly related to the project, such as, but not limited to, the following:

 Assist in conducting meetings and site visit for dignitaries, representatives of financial institutions, etc.

In the event that the Consultant is required to deal with any dispute pursuant the Contract Clause for Contracts, the services required and the remuneration for such services shall be additional to the scope of the agreement, provided that the dispute does not arise from any failure of the Consultant to perform properly his duties under this agreement.

x. Inputs and Facilities provided by the Client

All the available documents that includes Detail Design Reports, Drawings etc shall be provided to the consultant. Also, Client will provide Office space and Accommodation space including basic furniture to the Consultant.

4. CONSULTANT'S STAFF

4.1 General

To provide the consulting services for the duration of the Project, the Consultant shall ensure a team of engineers and other specialists, experienced in the detail designing and supervision of construction of the Project.

Emphasis is placed on the need for relevant design and construction supervision engineers to have knowledge and previous experience of similar works to work at the Project site. In particular, the Engineers concerned with the design review and construction supervision of the Civil works, Hydro-Mechanical and Electro-Mechanical works shall have previous experience in similar type of construction. It is particularly important that the Team Leader and Resident Engineer shall have substantial previous experience in dealing with contractual matters and



contract claims under Conditions of Contract for EPC/Turnkey Projects ,FIDIC (1999, First Edition).

Responsibility for management of all services as per the Contract shall be with the Consultant's Team Leader. The Team Leader shall provide overall technical direction and coordination of the Services. The Consultant's Team Leader shall efficiently manage the staffs/experts manmonth and ensure the project completion at the initial contract price. The Consultant's Team Leader shall also manage and coordinate the assignment of pool of experts that may be required from time to time, with prior approval of the Client.

4.2 Required Person-Months of Consulting Services

The estimated requirement of Consulting Services are:

Key Expatriate Staff (International) with 143 Man Month

1	Team leader / Project Manager/ Contract Specialist
2	Contracts Engineer
3	Cost and Quality Engineer
4	RE-Tunnel / Rock Engineer/geotechnical
5	Structure Engineer
6	Hydraulic design Engineer
7	Engineering Geologist
8	Electro-Mechanical Engineer
9	Hydro-Mechanical Engineer
10	Electrical Engineer
11	Transmission line Engineer
12	Scada & Communication Engineer
13	Pool of Expert

Note: National Staff/Expert may be supplied from NEA/NEA Subsidiary Company/Companies which will work as an associated partner of the Consultant.

5. COUNTERPART STAFF

Tamakoshi V HEP, in consultation with the Consultant, may provide its own professional staff to work closely with the Consultant as counterpart staffs in the capacity of trainee engineer. The Consultant shall work in close coordination with them in executing their responsibilities. The consultant shall manage to complete the contracted work even in case, NEA fails to provide their counterpart staffs, using the local/National experts.



A. Additional Project Information

Project information:

Tamakoshi-V Hydropower Project is a cascade development of the Upper Tamakoshi HEP with tandem operation. The project area is located on the right bank of Tamakoshi River. It takes the discharge from the tailrace of the Upper Tamakoshi Project through an underground inter connection arrangement and conveys to headrace tunnel of this Project. An underground powerhouse is proposed at Suri Dovan. The design discharge of the project is 66 m3/ sec and has installed capacity of 99.8 MW.

The general arrangement of the project comprises of underground interconnection arrangement of headrace tunnel with the tailrace tunnel of Upper Tamakoshi HEP. The interconnection system consists of connecting tunnel, a head pond required to maintain suction head at the pressurized head race tunnel entrance, spillway and spillway tunnel. The water from tailrace of Upper Tamakoshi HEP is diverted to this interconnection system and conveyed to the 8.09 Km long (7.098 km concrete lined and 1 Km Shotcrete lined) headrace tunnel, a 152.72m (length including bends) long vertical shaft, 404.36 m long tailrace tunnel and underground powerhouse containing four Francis turbines, from where it is released into the Tamakoshi river at about 0.2 km downstream from the confluence of Tamakoshi River and Khari Khola at Suri Dovan.

The interconnection system has already been constructed to avoid the delay in project construction and smooth operation of Upper Tamakoshi HEP without any interruption.

Location and Access:

Tamakoshi-V is located in the Central Development Region of Dolakha District of Janakpur Zone. The project area is situated within Longitude 86°14'30" to 86°10'30" East and Latitude 27°49'50" to 27°45'00" North. The whole project area lies in Khare, Orang and Lamabagar Village Development Committees. As per new provincial provision of Nepal, the project area lies on Gaurisankar and Bigu village councils. This project is conceptualized to develop as a tandom operation project with Upper Tamakoshi HEP. The intake site / underground interconnection system with Upper Tamakoshi tailrace outlet is located in Lamabagar VDC at an elevation of 1155.02 masl whereas the underground powerhouse lies at the right bank of Tamakoshi River just downstream of the Suri River confluence with Tamakoshi River.

The Tamakoshi-V Hydropower Project is located approximately 170 km north east of Kathmandu, the capital of Nepal and approximately 40 km away from the district head-quarter of Dolakha District-Charikot Bazaar. The district head-quarter is connected with the capital by Arniko Highway upto Lamasangu which is approximately 90 km and by Lamasangu – Jiri road which is approximately 40 km up to Charikot. A gravel road of about 33 km is available from Charikot to Singate Bazaar is recently



upgraded for the construction of Upper Tamakoshi Project. The newly constructed road connecting Singate Bazaar and Lamabagar for the construction of Upper Tamakoshi HEP passes from the both powerhouse and the headwork sites of this project. This road is recently constructed.

Tamakoshi Jal Vidhyut Company has already started the construction of Permanent Camp Facility required for the Tamakoshi V Hydroelectric Project that is expected to get completed by May, 2022.



Salient Features of the Project

Location

Type of project Cascade development of Upper Tamakoshi HEP

Zone Janakpur District Dolakha

Village Development Committee Khare, Orang and Lamabagar VDCs

Province (New provision) Bagmati

Village council (New provision)

Gaurishankar and Bigu village councils

Headworks site

Between Purano Jagat and Gongor village

Powerhouse site Jamune and Suri Dovan. Approx. 7.0 Km upstream

fromthe present road head at Singate Bazar

Name of the River Tamakoshi River

Hydrology

Design Discharge 66 m³/sec
Annual average flow 69.51m³/sec

Access Road

Existing Road Access Road is available on both Powerhouse and

Headwork interconnection area

Interconnection with UTHEP

Type Tailrace tunnel of UTHEP is interconnected with the

headrace tunnel of Tamakoshi-V

The interconnection system is being constructed
Interconnection Tunnel 103.20m length; invert level of starting point = EL

1155.02 masl

Head Pond Width = 12.77m to 6.80m, Length = 74.01m,

Maximum water depth = 14.00 m

Headpond Spillway

Type Free overflow concrete weir

Length of the crest 55.50 m

Crest Level El. 1158.20 amsl Outlet of Spillway Tunnel El.1150.21 amsl

Headrace Tunnel

Type Circular type, Length 8.09 Km

Finished Diameter Concrete Lining=5.60 m and Steel lining=4.20 m

Surge Tank

Type Circular Type

Effective Size 15.0 m internal diameter Orifice Diameter =2.50m

Vertical Shaft



length including bends 152.72 m
Internal Diameter 4.2 m

Thickness of Shaft Steel Lining 17 mm to 36 mm

Powerhouse

Type Underground Cavern

Dimension L=69.00m, W=18.0m, H=33.14m.

Generator Floor Level El. 978.51masl
Turbine Setting Level El. 975.15 masl

Type of Turbine Francis (3*Vertical Axis & 1*horizontal axis)

No. of unit 4 units (3 units of 31.6 MW & 1 unit of 5.0 MW)

Switchyard

Type Cavern Type

Dimensions L=47.60m, W=13.0m, H=17.95m

Tailrace Tunnel

Type Circular type
Length 404.36 m
Finished Diameter Circular 5.60m

Transmission Line

Voltage of Transmission Line 220 KV double circuit

Length of Transmission line 2*1.7 Km upto nearest point of Tamakoshi-Khimti

TRL

Power and Energy Generation

Rated Gross Head 174.00 m
Rated Net Head 159.10 m
Installed Capacity 99.8 MW

Annual Energy 543.494 GWh (Rolwaling Considered)
Dry Season Energy 159.454 GWh (Rolwaling Considered)
Wet Season Energy 370.502 GWh (Rolwaling Considered)

Annual Energy 495.148 GWh (Rolwaling Not Considered)
Dry Season Energy 64.362 GWh (Rolwaling Not Considered)
Wet Season Energy 371.658 GWh (Rolwaling Not Considered)

Cost Estimates (Approximate)

Total Project Cost in US \$ 137.16 million



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.

EVALUATION PROCEDURE FOR SCREENING OF CONSULTING FIRMS

The long list will be prepared of those Consulting Firms which have submitted EOI within the scheduled time in response to the notice of EOI for consulting services published by TKJVC. The general notes in the evaluation procedures are as follows:

- i. Qualification and experience of the Consulting Firm associated as sub-consultancy or in association will not be considered for evaluation for short listing:
- ii. The experience of the Consulting Firms(single entity or as JV partners)carried out in association or sub-consultancy will not be evaluated;
- iii. The references and the qualification documents submitted from their parent or subsidiary companies as applicable shall not be considered for their evaluation;
- iv. Consulting Firms shall submit only one (1) EOI proposal as a single entity or partner in JV and/or associated partner. However associate partner may associate with more than one Consulting Firm during EOI submission but shall not associate with more than one (1) shortlisted Consulting Firm in RFP submission. If submitted/participated with more than one (1) shortlisted Consulting Firm in RFP then such proposal will be rejected/disqualified.
- v. Consulting Firms' work experiences shall be evidenced by duly certified (by authorized agency) and notarized copies of client's references with contact details and email addresses on the letter head of the client's organization and shall be written in English. If the references are in other languages, it shall be accompanies by notary agency or nationally/internationally recognized translating agency translated in English language.

The short-listing of Consulting Firm will be carried out based on the following three steps of evaluation criteria.

STEP I: PRELIMINARY SCREENING OF CONSULTING FIRMS/ ELIGIBILITY & COMPLETENESS TEST

In this step, a preliminary screening of the received EOI proposals will be carried out. The Consulting Firms will be evaluated on 'Pass' or 'Fail' basis. Each Consulting Firm must 'pass' each and every threshold criterion mentioned below. Any Consulting Firm not complying with any of the specified threshold criteria shall be disqualified and shall not be considered for further evaluation.

A. General Threshold Criteria

EOI proposal shall be duly received within the last date and time of submission as mentioned in the notice of EOI. Following documents shall be submitted along with the EOI proposal,

- i. Notarized/Certified (by authorized agency) Certificates of incorporation or Registration.
- ii. VAT/PAN Registration (for National Consulting Firm only)
- iii. Tax clearance/ Tax returns submission/ Letter of time extension for Tax Return Submission for fiscal 077/78 Year. (For national Consulting Firm only)
- iv. Company Profile
- v. The Consulting Firms/Institution / Company or Natural Person must not have been black listed by Public Procurement Monitoring Office (PPMO) or NEA or Asian Infrastructure Investment Bank (AIIB)/ World Bank/ Asian Development Bank (ADB) etc. at the time of submission of EOI proposal,
- vi. In case of a natural Person or Firm/Institution/Company which is already declared blacklisted and ineligible by the GoN and International Financing Agencies, any other new or existing Firm/Institution/Company owned partially or fully by such Natural person or Owner or Board of director of blacklisted Firm/Institution/Company; shall not be eligible consultant.
- vii. Consulting Firms (Single entity or JV partners) must have been legally registered for at least Ten (10) years from the last date of submission of EOI,
- viii. Minimum average annual turnover of the best three years over the last seven fiscal years shall



be US\$ 8.5 Million or equivalent. In case of JV, cumulative strength of JV partners will be evaluated for annual turnover. If annual turnover is in other currency than US\$, equivalent to US\$ shall be considered by calculation Nepal Rastra Bank's Buying Rate on last date of submission of EOI document.

- ix. Notarized/Certified (by authorized agency) financial statement or document (Annual report) to support annual turnover of last seven fiscal years.
- x. Following Form Attached:

EOI Form 1: Letter of Application

EOI Form 2: Applicant's Information Form

EOI Form 3: Experience (3(A) and 3(B))

EOI Form 4: Financial Capacity

EOI Form 5: Qualification of Key Experts

B. Technical Threshold Criteria

Evaluation under these criteria will be based on Hydropower Projects which are **successfully constructed and commissioned** during last seven (7) years preceding from the last date of submission of EOI. Ongoing projects will not be considered for evaluation. All of the criteria listed below should be fulfilled by single or separate projects.

- (i) Consulting Firms must have experience in construction supervision of *EPC* contract in at least one (1) Hydropower Projects having installed capacity not less than 25 MW.
- (ii) Consulting Firms must have experience in detailed design of at least one (1) Hydropower Projects having installed capacity not less than 80 MW
- (iii) Consulting Firms must have experience in Construction Supervision of at least one (1) Hydropower Projects having installed capacity not less than 80 MW
- (iv) Consulting Firms must have experience in Construction Supervision of at least one (1) Hydropower Project having tunnel length not less than 4km in a single stretch in a single project,
- (v) Consulting Firms must have experience in Construction Supervision of at least one (1) Hydropower project having underground cavern of width not less than 12m,
- (vi) Consulting Firms must have experience in design and construction supervision of Hydro-Mechanical and Electro-Mechanical equipment in at least one(1) Hydropower project having installed capacity not less than 80 MW,

C. Threshold Criteria for Joint Venture Firms

- (i) Maximum number of JV partners shall be three (3). The lead partner of the Joint Venture firm must have majority and not less than 40% share and each of the other partner must have at least 25% of share,
- (ii) Each partner of JV shall meet General Threshold Criteria (i), (ii), (iii) and (iv),
- (iii) Each partner of JV shall meet at least one of the Technical Threshold Criteria above. If any of the partners of the JV does not meet any one of the above Technical Threshold criteria, the entire JV will not be considered for evaluation.
- (iv) Combined experience of the JV must meet all the Technical Threshold Criteria,
- (v) Joint Venture firms shall submit the Joint Venture Agreement or MOU of JV Agreement or intended JV Agreement along with their EOI proposal,
- (vi) Consulting firms shall submit only one (1) EOI proposal as a single entity or partner in JV and/or associated partner. However associate partner may associate with more than one consulting firm during EOI submission but shall not associate with more than one (1) shortlisted consulting firm in RFP submission. If submitted/participated with more than one (1) shortlisted consulting firm in RFP then such proposal will be rejected/disqualified,
- (vii) In case that the JV partners are from different countries, the nationality of the lead partner shall determine the nationality of the JV firm. This principle will be applied in determining the firm from the developing country as well.

Note: In Case, a 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 firm's or JV EoI shall be excluded from the evaluation, if public entity receives instruction from Government of Nepal.



D. Management competency of Consulting Firm

Management competency of Consulting Firm will be assessed based on following sub-criteria:

- i. Standard policies, procedures and practices to assure quality, interaction with clients and outputs including ISO registration
- ii. Complaint handling mechanism concerning performance of experts or quality of the reports and internal controls to address ad resolve complaints
- iii. Strategy to improve quality of firm/association's performance for the assignment
- iv. Firm/association's standard policies, procedures and practices to avoid changes/replacements of personnel and continuity of professional services
- v. Firm/association social protection practices to safeguard the well-being of proposed experts
- vi. Firm/association practices towards the implementation of International Environmental and Social (E&S) policies and standards
- vii. Firm/association practices towards the implementation of International Environmental, Health and Safety (EHS) standards.



ii. STEP II: EVALUATION CRITERIA

The Consulting Firms fulfilling all requirements in the STEP I are selected for further evaluation in STEP II. A scoring system is adopted to rank these firms on merit basis, based on the criteria specified below. The cumulative experience, manpower and financial strength of JV partners shall be considered in the evaluation. Only **successfully constructed and commissioned** Hydropower Projects in last seven (7) years preceding from the last date of submission of EOI will be considered for evaluation. Ongoing and planned projects will not be considered for evaluation. The maximum overall score that any Consulting Firms can obtain is set at 1,000 points, which are distributed as follows:

Criteria A: Qualification & Experience of Key Experts : 300 Points
Criteria B: Experience of the Consulting Firm : 600 Points
Criteria C: Capacity of the Consulting Firm : 100 Points

CRITERIA A: Qualification & Experience of the Key Experts (300 Points)

The points are distributed among following three sub-criteria as follows:

- Academic Qualifications.
- Professional Experience in Similar Job.
- Regional Experience (Outside Home Country/within Hindu Kush Himalayan Region).

The Consulting Firm shall clearly identify the key staff (International Experts) members proposed for the specified positions. The client will not evaluate the proposed key staff members whose positions are not clearly identified in the proposal. Among the key staffs, the Team Leader must have at least 15 years of professional experience with fluent communication skill in English language. All other experts must have at least 10 years of professional experience.

The Consulting Firm shall clearly state the person-months involvement of each of the key staff member in previous assignments.

The list of Key staff is listed below

S.No. Description (Key Expatriate Staff- International)

- 1 Team leader / Project Manager/ Contract Specialist
- 2 Contracts Engineer
- 3 Cost and Quality Engineer
- 4 RE-Tunnel / Rock Engineer/geotechnical
- 5 Structure Engineer
- 6 Hydraulic design Engineer
- 7 Engineering Geologist
- 8 Electro-Mechanical Engineer
- 9 Hydro-Mechanical Engineer
- 10 Electrical Engineer
- 11 Transmission line Engineer
- 12 Scada & Communication Engineer

CRITERIA B: Experience of the Consulting Firm (600 Points)

B.1 General work Experience of Consulting Firm (90 Points)

Evaluation under this criterion is based on the experience of the Consulting Firm in Construction Supervision, Detailed Engineering Design, and Design and Construction of Civil Engineering Projects/Infrastructure Project in last seven (7) years preceding from the last date of submission of EOI. The combined experience of the JV partner shall be evaluated. The evaluation will be based on the following aspects



- 1.1 Detailed Engineering Design of any Civil Engineering Projects/ Infrastructure Projects of the size of construction cost of 112 Million USD.
- 1.2 Construction Supervision of any Civil Engineering Projects/ Infrastructure Projects of the size of construction cost of 112 Million USD.

B.2 Specific Experience of Consulting Firm within last 7 years (450 Points)

Evaluation under this criterion is based on the experience of the Consulting Firm in Construction Supervision, Detailed Engineering Design, and Design and construction of Hydro-Mechanical and Electo-Mechanical works of Hydropower Projects in last seven (7) years preceding from the last date of submission of EOI. The combined experience of the JV partner shall be evaluated. The evaluation will be based on the following aspects:

- 2.1 Detailed engineering Design of Hydropower Projects having installed capacity not less than 80 MW.
- 2.2 Construction Supervision of Hydropower Projects having installed capacity not less than 80 MW.
- 2.3 Construction Supervision of Hydropower Projects in EPC contracts having installed capacity not less than 25 MW.
- 2.4 Construction Supervision of Hydropower Projects having installed capacity not less than 80 MW funded by Multi-national Financial institutes (Eg: ADB, EIB, AIIB, World Bank).
- 2.5 Construction Supervision of Hydropower Projects having headrace tunnel of length 4km and above in a single stretch in a single project.
- 2.6 Construction Supervision of Hydropower Projects having headrace tunnel of diameter 5m and above.
- 2.7 Construction Supervision of Hydropower Projects having cavern of width more than 12 m.
- 2.8 Experience in design and construction supervision of Hydro-Mechanical and Electro-Mechanical works of Hydropower Projects having installed capacity not less than 80 MW.
- 2.9 Experience in design and construction supervision of Transmission Line of voltage level 220 kV or above.

B.3 Similar Geographical experience of the Consulting Firm (60 Points)

Evaluation under this criterion is based on the experience of Consulting Firm in Detailed Engineering Design of Hydropower Projects in last seven (7) years preceding from the last date of submission of EOI in countries (Nepal, India, Pakistan, Afghanistan, Bangladesh, Bhutan, China, Myanmar) falling under Hindu kush Himalayan Region as defined by ICIMOD (Integrated Centre for Integrated Mountain Development). The cumulative experience of JV partner shall be evaluated. The geographical competence of the Consulting Firm has been divided as below;

- 3.1 Experience in construction supervision of Hydropower Projects with Installed Capacity not less than 50 MW in countries falling under Hindu Kush Himalayan Region.
- 3.2 Experience in construction supervision of Hydropower Projects in EPC contracts with Installed Capacity not less than 25 MW in countries falling under Hindu kush Himalayan Region.

CRITERIA C: Financial Capacity of the Consulting Firm (100 Points)

Evaluation under this criterion is based on the financial capacity of the Consulting Firm (Average Annual Turnover (AAT) of Best of 3 Fiscal Year of Last 7 Fiscal Years in consulting business) preceding the submission of EOI.

Note: For the purpose of determining the equivalent amount of the required amount of the required average annual turnover shall be provided in freely convertible currency. The exchange rate (Selling exchange rate) published by Nepal Rastra Bank prevailing on the last date of submission of EOI



document shall be applied.

iii. STEP III: SHORT-LISTING OF FIRMS

The Consulting Firm scoring less than 600 points out of total 1000 points and 60 % points in Criteria B: Experience of the Consulting Firm will not be qualified for short listing. For short-listing of the qualified Consulting Firms, the following procedures will be followed as;

- 1. Rank the firms in order of merit according to the points secured by them.
- 2. Select top ranked six Consulting Firms not exceeding two firms from any one country, to which RFP will be addressed.
- 3. In case of Joint Venture origin of lead firms shall be considered for the listing.

If the points obtained by two or more firms are same, the firm with more number of project's experience on the sub-criteria 2.2 "Construction Supervision of Hydropower Projects having installed capacity not less than 80 MW" of Criteria B: Experience of the Consulting Firm will be prioritize



C. 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



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,	_
Being duly authorized to represent and act on behalf having reviewed and fully understood all the shundersigned hereby apply to be short-listed by [Inset [Inset]] [Inset] [In	nort-listing information provided, the
Attached to this letter are photocopies of original documents	ments defining:
a) the Applicant's legal status;	
b) the principal place of business;	
[Insert name of Client] and its authorized represents the statements, documents, and information submitted. This Letter of Application will also serve as a authorized representative of any institution referred provide such information deemed necessary and statements and information provided in this application experience, and competence of the Applicant.	ed in connection with this application. authorization to any individual or do in the supporting information, to requested by yourselves to verify
[Insert name of Client) and its authorized representation and of the signatories to this letter for any further information.	
All further communication concerning this Application person,	should be addressed to the following
[Person]	
[Company]	
[Address]	

² Applications by joint ventures should provide on a separate sheet, relevant information for each party to the Application.



[Phone, Fax, Email]

1.

2.

3.

4.

5.

- 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 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	
Signed	

Name :

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



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.)



Associa	tions (Joint Venture or Assoc	ciated Partner)		
Consulta	ant Country of Incorporation	Joint Venture (JV) or Associated Partner		
Present the rationale for and benefits of working in association (JV or Associated Partner) with others rather than undertaking the assignment independently (as appropriate). Describe the proposed management and coordination approach of the association and the role of each firm.				
I confirm	n that:			
	Ocumentation regarding commentation regarding commership has been attached.	our corporate structure including beneficial I.		
	Oocumentation regarding our	Board of Directors has been attached.		

A written agreement to associate for the purpose of this Expression of Interest has been signed between the consortium partners and has been attached.

3. Experience

3(A). General Work Experience

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

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

- 1. All the submitted reference projects should be completed and commissioned on the date of submission of EOI. Not commissioned projects shall not be considered for evaluation.
- 2. All the submitted project shall be accompanied by the client reference. Projects without client reference shall not be considered for evaluation.
- 3. Consultant may add more rows as necessary.



Form to be filled for Criteria B: Experiences of the Consulting Firm

1.1. Detailed Engineering Design of any Civil Engineering Projects/ Infrastructure Projects of the size of construction cost of 112 Million USD				
□т	hree or more projects	☐Two projects	☐ One proje	ect None
Proj	ect Details for above Experie	nce:		
S. No	Name of the project		Construction cost of Project	Completed or Commissioned Year
1				
2				
3				
4				
1.2. Construction Supervision of any Civil Engineering Projects/ Infrastructure Projects of the size of construction cost of 112 Million USD				
			ing Projects/ Infrast	ructure Projects of the
size			ing Projects/ Infrast	
size	e of construction cost of 112	Million USD ☐Two projects	-	
size	e of construction cost of 112 hree or more projects	Million USD ☐Two projects	-	
size □T Proj	e of construction cost of 112 hree or more projects ject Details for above Experie	Million USD ☐Two projects	☐ One proje	cct None
Proj	e of construction cost of 112 hree or more projects ject Details for above Experie	Million USD ☐Two projects	☐ One proje	cct None
Size Proj S. No	e of construction cost of 112 hree or more projects ject Details for above Experie	Million USD ☐Two projects	☐ One proje	cct None

- 1. All the submitted reference projects should be completed and commissioned on the date of submission of EOI. Not commissioned projects shall not be considered for evaluation.
- 2. All the submitted project shall be accompanied by the client reference. Projects without client reference shall not be considered for evaluation.
- 3. Consultant may add more rows as necessary.



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) ³ :
Country:	Duration of assignment (months):
Location within country:	
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:
Note: Provide highlight on similar required by the EOI assignment.	ed in the assignment: services provided by the consultant as
-irm's Name:	

 $^{^{\}rm 3}$ Consultant should state value in the currency as mentioned in the contract



Form to be filled for Criteria B: Experiences of the Consulting Firm

2.1		alled Engineering Design 80 MW.	of Hydropower Pr	ojects naving insta	illed capacity not less	
	□ті	nree or more projects	☐Two projects	☐ One proje	ect None	
	Proj	ect Details for above Expe	rience:			
S.	No	Name of the project		Installed Capacity(MW)	Completed or Commissioned Year	
1						
2						
3						
4						
2.2	Con 80 M	struction Supervision of I IW.	Hydropower Projec	ts having installed	capacity not less than	
	ПТ	nree or more projects	☐Two projects	☐ One proje	ect None	
	Proj	ect Details for above Expe	rience:	Г	Г	
S.	No	Name of the project		Installed Capacity(MW)	Completed or Commissioned Year	
1						
2						
3						
4						
2.3	2.3 Construction Supervision of Hydropower Projects in EPC contracts having installed capacity not less than 25 MW. Three or more projects Two projects One project None					
	Proj	ect Details for above Expe	rience:			
S.	No	Name of the project		Installed Capacity(MW)	Completed or Commissioned Year	
1						
2						
3						



2.4	Construction Supervision of Hydropower Projects having installed capacity not less than 80 MW funded by Multi-national Financial Institutes (Eg: ADB, EIB, AIIB, World Bank)					
	□ті	nree or more projects	☐Two projects	☐ One projec	ct None	
	Proj	ect Details for above Experie	nce:	1		
S.	No	Name of the project		Installed Capacity(MW)	Completed or Commissioned Year	
1						
2						
3						
4						
2.5		struction Supervision of Hyabove in a single stretch in a		cts having headrace	tunnel of length 4km	
Dro		hree or more projects	☐Two projects	☐ One projec	ct None	
FIC	njeci	Details for above Experience				
S.	No	Name of the project		Tunnel Length (m)	Completed or Commissioned Year	
1						
2						
3						
4						
2.6	2.6 Construction Supervision of Hydropower Projects having headrace tunnel of finished diameter 5m and above.					
	ПТ	hree or more projects	☐Two projects	☐ One projec	ct None	
Pro	ject	Details for above Experience			1	
S.	No	Name of the project		Tunnel Diameter (m)	Completed or Commissioned Year	
1						
2						
3						
4						



2.7 Cor	nstruction Supervision of Hyd	ropower Project:	s having cavern of w	vidth more than 12 m.
□т	hree or more projects	☐Two projects	☐ One proje	ect None
Project	Details for above Experience		,	
S. No	Name of the project		Width (m)	Completed or Commissioned Year
1				
2				
3				
4				
Med □T	perience in design and conschanical works of Hydropower Three or more projects	r Projects having ☐Two projects	g installed capacity r	not less than 80 MW.
Project	Details for above Experience			
S. No	Name of the project		Installed Capacity(MW)	Completed or Commissioned Year
1				
2				
3				
4				
	perience in design and const or above.	ruction supervis	ion of transmission	line voltage level 220
П	hree or more projects	☐Two projects	☐ One proje	ect None
Project	Details for above Experience		<u>r</u>	
S. No	Name of the project		Installed Capacity(MW)	Completed or Commissioned Year
1				
2				
3				



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)

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

- All the submitted reference projects should be completed and commissioned on the date of submission of EOI. Not commissioned projects shall not be considered for evaluation.
- 2. All the submitted project shall be accompanied by the client reference. Projects without client reference shall not be considered for evaluation.
- 3. Consultant may add more rows as necessary.



Form to be filled for Criteria 3: Geographical Competence of Consulting Firm

		ction supervision of Hydun untries falling under Hin			
□Th	ree or More	☐Two Projects	☐One Projec	t [None
Project [Details for above E	xperience			
S. No	Name of the proje	ct	Installed Capacity (MW)	Country	Completed / Commissioned Year
1					
2					
3					
4					
Regi		Iess than 25MW in co ☐Two Projects	□One Projec		None
· · · · ·	iree or wore	☐ I wo Flojecis		,ı _	Tivotie
Project [Details for above E	xperience	ľ	1	
S. No	Name of the proje	ct	Installed Capacity (MW)	Country	Completed / Commissioned Year
1					
2					
3					

- 1. All the submitted reference projects should be completed and commissioned on the date of submission of EOI. Not commissioned projects shall not be considered for evaluation.
- 2. All the submitted project shall be accompanied by the client reference. Projects without client reference shall not be considered for evaluation.
- 3. Consultant may add more rows as necessary.



4. Financial Capacity

4(A). Financial Capacity

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

Annual Turnover			
Year	Amount Currency		
- Average Annual Turnover of Best of 3 Fiscal Year Of Last 7 Fiscal Years			

- 1 Supporting documents for Average Turnover should be submitted for the above.
- 2 Supporting documents foe Average Turnover should be duly signed and stamped by the certified Auditor.
- 3 For the purpose of determining the equivalent amount of the required amount of the required average annual turnover shall be provided in freely convertible currency. The exchange rate (Selling exchange rate) published by Nepal Rastra Bank prevailing on the last date of submission of EOI document shall be applied.



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)

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

(Please insert more rows as necessary)

Note: For Specific Experience of Key Experts, fill up the form as given in next page.



Form to be filled for Criteria A: Qualification & Experience of the Key Expert

Personal Information Sheet (sample Format)

Team Leader/Project Manager/Contract Specialist

Name of Professional:

1.	Acaden	sic Ou	alifica	tions:
1 -	Acaden	าเต เมนะ	ашиса	itions:

S.N	Academic	Graduation Years	Faculty	Program
	Degree			
1	Bachelor			
2	Masters			

2.	Work Ex	perience d	of Kev	Expert	propose	d
----	---------	------------	--------	--------	---------	---

a)	Years of professional Experienc	es:		
b)	Professional experience in Con	struction Supervision of	successfully completed	(Constructed and
	Commissioned) Hydropower Pr	ojects within last 10 yea	rs with capacity not les	s than 80 MW as
	Team Leader/Project Manager			
	Three or more projects	☐Two projects	☐ One project	☐ None

Project Details for above Experience

S. No	Name of the project	Installed Capacity(MW)	Country	Position Held	No. of person month in the project	Project Commissioned Year (AD)
1						
2						
3						
4						

c)	Professional experience in Construction Supervision of successfully completed (Constructed and
	Commissioned) Hydropower Projects within last 10 years with capacity not less than 80 MW as a
	Contract Specialist

☐ Three or more projects	☐Two projects	☐ One project	☐ None



Project Details for above Experience

S. No	Name of the project	Installed Capacity(MW)	Country	Position Held	No. of person month in the project	Project Commissioned Year (AD)
1						
2						
3						
4						

4							
d) Regional experience in Construction Supervision of at least one successfully completed (Constructed and Commissioned) hydropower project within last 10 years with capacity not less than 50 MW as Team Leader.							
	ee or more projec		⊡Two projed	cts 🗆 C	One project	None	
S. No	Name of the project	Installed Capacity(MW)	Country	Position Held	No. of person month in the project	Project Commissioned Year (AD)	
1							
2							
3							
4							
	I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.						
[Signature of staff member and authorized representative of the consultant] Date: Day/Month/Year							
Full	Full name of staff member:						
Full	Full name of authorized representative:						
Orig	Original Signature of Expert:						

- 1. All the submitted reference project should be complete and commissioned on the date of submission of EOI. Not commissioned projects shall not be considered for evaluation.
- 2. All the submitted project shall be accompanied by the client reference shall not be considered for evaluation

