## **EXPRESSION OF INTEREST** (EOI)

Title of Consulting Service: Monitoring of Energy Generation and Community Benefits of Mini/Micro-Hydro Under Clean Development Mechanism

**Method of Consulting Service: National** 

Project Name: Monitoring of Energy Generation and Community Benefits of Mini/Micro-Hydro Under Clean Development Mechanism

EOI: AEPC/CCU/EoI/2080/81-01

**Office Name: Alternative Energy Promotion Center** 

Office Address: Mid-Baneshwor Kathmandu Kathmandu

**Funding agency: Government Budget** 

#### **Abbreviations**

AEPC - Alternative Energy Promotion Centre

CV - Curriculum Vitae

DAEs - Direct Access Entities
DO - Development Partner

EA - Executive Agency

EOI - Expression of Interest

GCF - Green Climate Fund

GON - Government of Nepal

MoF - Ministry of Finance

NDA - National Designated Authority

PAN - Permanent Account Number

PPA - Public Procurement Act

PPR - Public Procurement Regulation

RPSP - Readiness Preparatory and Support Programme

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: Alternative Energy Promotion Center

Date: 22-11-2023 16:00

Name of Project: Monitoring of Energy Generation and Community Benefits of Mini/Micro-Hydro Under Clean Development Mechanism

- 1. Government of Nepal (GoN) has allocated fund toward the cost of Monitoring of Energy Generation and Community Benefits of Mini/Micro-Hydro Under Clean Development Mechanism and intend to apply portion of this fund to eligible payments under the Contract for which this Expression of Interest is invited for National consulting service
- 2. The Alternative Energy Promotion Center now invites Expression of Interest (EOI) from eligible consulting firms ("consultant") to provide the following consulting services: Monitoring of Energy Generation and Community Benefits of Mini/Micro-Hydro Under Clean Development Mechanism
- 3. Interested eligible consultants may obtain further information and EOI document free of cost at the address Alternative Energy Promotion Center, Alternative Energy Promotion Center

Mid-Baneshwor

Kathmandu

Kathmandu, Kathmandu

Bagmati Province

Nepal during office hours on or before 07-12-2023 12:00 or visit e-GP system www.bolpatra.gov.np/egp or visit the client's website www.aepc.gov.np

- 4. Consultants may associate with other consultants to enhance their qualifications.
- 5. Expressions of interest shall be delivered online through e-GP system www.bolpatra.gov.np/egp (Mannually not applicable) on or before 07-12-2023 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 40.0 %, Experience 45.0 %, and Capacity 15.0 % 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 70

<b>B.</b> Instructions for	Submission of	of Expression of	Interest

#### **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 and 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.
- 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 5 Months. Expected date of commencement of the assignment is 08-02-2024.
- 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 by electronically only 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 Ser	rvices or Brief TOR

# TERM OF REFERENCE FOR MONITORING OF ENERGY GENERATION AND COMMUNITY BENEFITS OF MINI/MICRO-HYDRO UNDER CLEAN DEVELOPMENT MECHANISM

#### 1. Introduction

Alternative Energy Promotion Centre (AEPC) is a Government institution established on 3 November 1996, under then Ministry of Science and Technology with the objective of developing and promoting renewable/alternative energy technologies in Nepal. Currently, it is under the Ministry of Energy, Water Resources and Irrigation.

#### 2. Background

Due to the topographic suitability, Nepal possesses immense potentiality of hydropower. Theoretical estimation of the hydropower potential of Nepal is as 83,000 MW. These potentials, however, have not been well developed. The streams and rivulets of different districts have the economic potentiality of generating more than 100 MW of Micro-hydro Project, but the majority of hydro-power potential has remained undeveloped. The efforts to modernize traditional water mills started in nineteen sixties. Because of low power output and low efficiency, their utility was limited to grinding only. The main focus was then the development of indigenous capability to manufacture modern turbines. The success of this effort provided the motion for development of Micro Hydro Power in Nepal.

The rapid development of MHP was started after the establishment of AEPC in 1996. MHPs were promoted by three programs under AEPC: Rural Energy Development Program (REDP), Energy Sector Assistance Program (ESAP) and National Rural and Renewable Energy Promgram (NRREP). REDP, supported by United Nations Development Program (UNDP) and the World Bank, promoted the community based MHPs through community mobilization process establishing District Energy and Environment Unit/Section (DEEU/DEES) under the umbrella of then District Development Committee (DDC). Similarly, ESAP from the support of Danish Government and Norwegian Government, promoted the hydro power project in demand based approach through Regional Renewable Energy Service Center (RRESC). Lateron, AEPC has implemented a single modality program called NRREP from the support of GoN and other multiple development partners.

AEPC is committed to updating knowledge on Climate Change mitigation and adaptation options; further development of a diversified portfolio of Renewable Energy Technologies (RETs) projects using different instruments and establishing high quality performance assurance and monitoring systems. In July 2010, a Carbon and Climate Unit (CCU) was established in AEPC with responsibility to carry out the activities related to climate change and to tap carbon trade opportunities while promoting RETs in Nepal.

Kyoto Protocol, an international agreement linked to the United Nations Framework Convention on Climate Change (UNFCCC), which commits its Parties by setting internationally binding emission reduction targets came into existence in 1997. The Clean Development Mechanism (CDM), defined in Article 12 of the Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol to implement an emission-reduction project in developing countries. Realizing the importance of biogas technology in avoiding the use of non-renewable biomass and its role in reducing the emission of GHG in the atmosphere, and realizing the opportunities of such technologies in the international carbon market

regime, AEPC initiated its first CDM project in Biogas succeeding in registration on 27th December 2005. AEPC has been successful in registering 8 projects/programs under CDM. Out of these, Biogas Support Program - Nepal Activity-1, Biogas Support Program - Nepal Activity-2, Biogas Support Program - Nepal Activity-3, Biogas Support Program - Nepal Activity-4 and Nepal Micro-hydro Promotion are registered as CDM projects while Nepal Biogas Support Program-PoA, Promotion of the Improved Cooking Stove (ICS) – Nepal and PoA for Promotion of the Improved Water Mills (IWM) in Nepal are registered as CDM PoA.

Nepal Village Micro Hydro Project (NVMHP) is a Clean Development Mechanism (CDM) Project deals with the development and installation of MHPs of different capacities with a cumulative capacity of 14.970 MW and is being promoted by AEPC. The project activities are targeting poor communities in several regions of Nepal. This also supports the Government's objective of improving energy services in rural areas by developing viable and market-oriented MHPs by offering support to both demand and supply sides. The project expects to reduce greenhouse gas (GHG) emissions through the replacement of diesel fuel used for lighting and milling. The project was registered with the United Nations Framework Convention on Climate Change (UNFCCC) on October 18, 2010.

Kyoto Protocol, an international agreement linked to the United Nations Framework Convention on Climate Change (UNFCCC), which commits its Parties by setting internationally binding emission reduction targets came into existence in 1997. The Clean Development Mechanism (CDM), defined in Article 12 of the Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol to implement an emission-reduction project in developing countries. CDM principles focus on the sustainability of the systems being deployed as CDM projects and their contribution in the sustainable development. Apart from the physical implementation, continuous functioning of the installed plants is crucial measure of success of the technology and the program as a whole. It is also imperative to know how far the users of micro-hydro have derived benefit from MHPs deployed and the programme as a whole and to what extent they are satisfied with the technology. It is equally important to assess socio-economic impact brought about by this technology. To assure that these things are delivered to the households, it is essential to monitor both the technology and its impact on user satisfaction.

In this backdrop, AEPC intends to procure service from a shortlisted consulting firm or Joint Venture (JV) of consulting firms to conduct a monitoring of energy generation and community benefits of micro-hydro under CDM. The proposal from the interested eligible consulting firm is requested to carry out the activity.

#### 3. Objectives

The objective of the assignment is to assess the construction status, operational status, energy generation and community benefits of 450 MHPs under CDM More specifically the following objectives need to be addressed by the study.

- Identify the operational/construction status of 450 MHPs under CDM
- Assess the community benefits offered by those MHPs.
- Overall beneficiary satisfaction with the product and process.

#### 4. Scope of Work

There are 450 MHPs included in the MHP CDM project. The district-wise and province wise distribution of those MHPs are as given below:

Districts	No	Districts	No	Districts	No
Province-1		Bagmati Province		Gandaki Provi	nce
Bhojpur	8	Dhading	15	Baglung	51
Dhankuta	2	Dolakha	13	Gorkha	20
Ilam	5	Kavre	13	Kaski	6
Khotang	13	Makawanpur	1	Lamjung	9
Okhaldhunga	18	Nuwakot	1	Manang	4
Panchthar	19	Ramechhap	4	Myagdi	7
Sankhuwashava	8	Sindhuli	3	Nawalparasi	2
Solukhumbhu	16	Sindhupalchowk	4	Parvat	2
Taplejung	19			Syangja	1
Tehrathum	4			Tanahun	1
Udayapur	3				
Total	115	Total	54	Total	103
Province-5		Karnali Province		Sudurpaschim Province	
Gulmi	4	Dailekh	6	Achham	18
Palpa	6	Dolpa	1	Baitadi	10
Pyuthan	3	Humla	11	Bajhang	22
Rolpa	10	Jajarkot	12	Bajura	16
Rukum	3	Jumla	15	Dadeldhura	2
		Kalikot	10	Darchula	10
		Mugu	5	Doti	11
		Salyan	1		
		Surkhet	2		
Total	26	Total	63	Total	89

The scope of work shall include following, but shall not necessarily be limited to the following:

- Assess the operational/construction status of MHPs and grid connection.
- Collection of Energy meter data logbook from individual MHPs from 1<sup>st</sup> January 2023.
- If logbook is not prepared, prepare daily operational status consulting with MHP operator/Working Committee
- Assess the community benefits offered by those MHPs specifically
  - o whether the project helped in expansion of rural energy services to the poorest of the poor households and their future sustainability; and
  - whether project managed to assist the poor, women, vulnerable, and marginalized communities for enhancing their role in decision making; benefit sharing; access to resources; and capacity building.

All the 450 MHPs have to be visited by the consultant to acquire the required data and information. For the community benefit monitoring at least 2 HH for each MHPs have to be visited. At-least 25% of those HH belongs to the targeted/disadvantages group. The potential indicators for the community benefit monitoring (but not limited to) are as follows:

- Increase in number of households connected to electricity
- Total consumption of electricity in kWh
- Reduction in consumption of kerosene oil after the installation of MH
- Number of part time and full time job opportunities created during the construction and operation of the MH plant
- Number of new enterprises established after the installation of MH (type wise number)
- Average time spent on productive usage post installation of MH (in hour)
- Increase in time spend (in hour) on studies after the installation of MH
- Frequency of social meetings in the village after the installation of MH
- Increase in number of participants in such meetings

The Consultant shall describe detailed methodology for carrying out the work. The consultant shall submit the draft questionnaire to the AEPC for review before initiating the monitoring and shall take into account the feedback provided by the AEPC on the draft questionnaire.

#### 5. Deliverables:

The consultant shall deliver the following outputs:

- a) <u>Inception Report</u>: An inception report highlighting the detailed plan of the task, allocation of human resource and schedule of field deployment. (within 15 days after signing the contract)
- b) <u>Draft report</u>: Draft Report including all the parameters (one physical copy and one electronic copy) (within 4 Months after signing of the contract)
- c) <u>Final report</u>: Final Report (one physical copy and one electronic copy) (within 5 Months after signing of the contract)
- d) <u>Filled-in Questionnaire and Data Entry:</u> All the filled in questionnaires and electronic copy of the data entry (Excel spreadsheet), Scan copy of all filled-in questionnaire, hard copy of associated supporting documents, hard copy of the filled in log book, soft copies of photo of all MHPs. (within 5 Months after signing of the contract)

#### 6. Inputs from AEPC/CCU

- AEPC budget and relevant documents/materials and information
- Input from relevant AEPC Officers.

#### 7. Contact period/Time and Budget

- Contact period/Time: There will be a contact agreement between AEPC and Consulting Company/Consultant. The consultant is expected to complete the tasks within 5 (Five) months from the date of contract agreement.
- **Budget and Payment Schedule:** Payment shall be made from AEPC budget as per agreement. Proposed payment schedule shall be as per following:

• First Installment : Maximum 20% (Twenty Percentage) of agreement amount after

submission and approval of Inception Report.

o **Second Installment**: Maximum 70% (Sixty Percentage) of agreement amount after

submission and Approval of Draft Report

o **Final Remaining** : 10% (Ten Percentage) Remaining payment after submission and

Approval of Final Report by AEPC

Note:

• Installment will be made against TAX invoice only

#### 8. Qualification of the Consulting Companies and Requirement of Human Resources

The consulting services shall be carried out by National consultants. The firm shall have extensive experience in MHP survey, design, construction, monitoring etc. The team shall be comprised of following members:

- Team Leader (1 Nos): At least Masters Degree in Sociology; Economics; Engineering, Energy or Water Resources or any other related social science subject seven (7) years of demonstrated experience in designing and implementing social assessment/community benefit monitoring programs in micro hydro projects; good understanding on the impacts of Renewable Energy Technologies (RETs) on socioeconomic and cultural status and combining social issues and gender is required.
- Mini/Micro-hydro Expert (1 Nos): At least Master's in Engineering (Civil, Electrical or Mechanical) with five (5) years of national/international experience in a combination of micro hydro projects and/or integrated water resources management. Familiarity with MHP survey, design, monitoring, training, installation, and environmental, social assessments.
- Statistician/Data Analyst (1 Nos): At least Master's Degree in the field of Statistics with at least five (5) years of professional experience in sampling design, handling large database, analysis of data and demonstrative experience of computerized database development and management.
- Enumerators/Surveyor (at least 10): At least Bachelors in engineering, rural development or similar field and demonstrated experience in data collection of renewable energy project, idea of energy production from MHPs etc.

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 FY 2079/80	
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.	

#### ii) EOI Evaluation Criteria

#### A. Qualification

Sl. No. Criteria		Minimum Requirement	
1	Qualification of Key Experts	As per ToR	
2	Experience of Key Experts	As per ToR	

**Score: 40.0** 

#### **B.** Experience

Sl. No.	Criteria	Minimum Requirement
1	General Experience of consulting firm	General Experience of the consulting firm in last 3 years
2	Specific experience of consulting firm within last 7 years.	Specific experience of consulting firm within last 7 years
3	Similar Geographical experience of consulting firm	Similar Geographical experience of consulting firm

**Score: 45.0** 

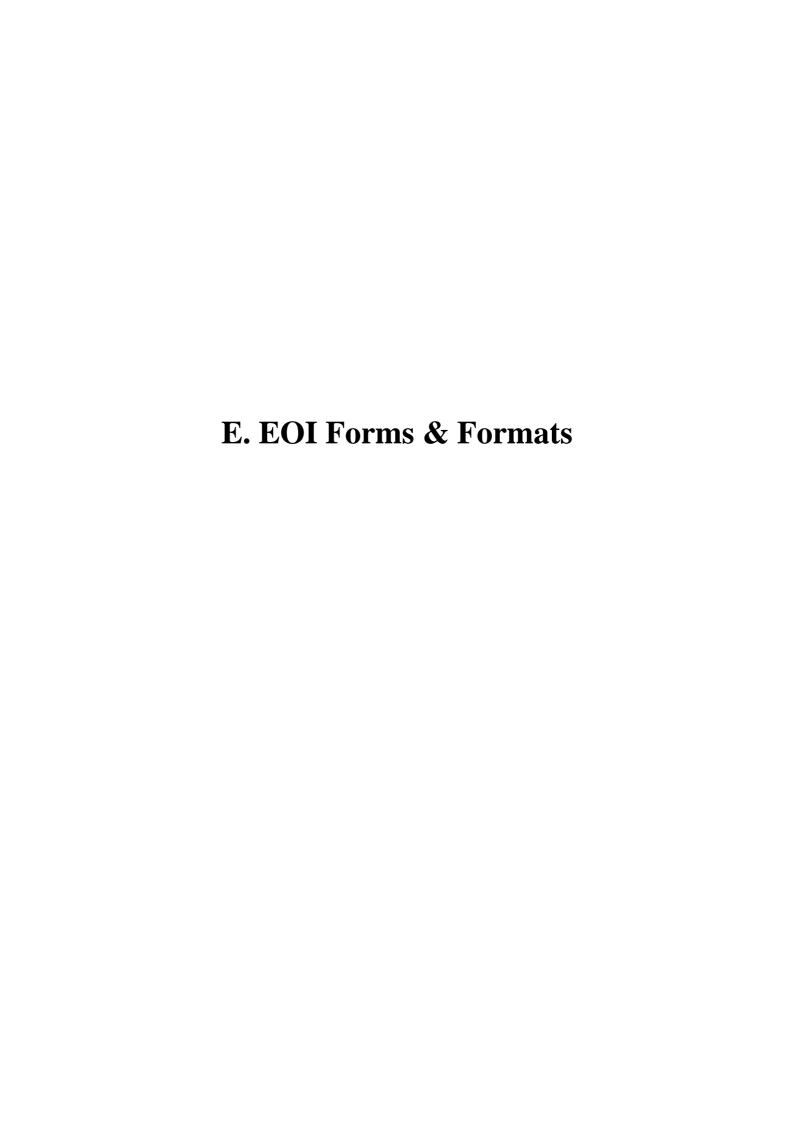
#### C. Capacity

Sl. No.	Criteria	Minimum Requirement
1		Financial capacity (Average annual turnover required is NRs. 3.5 million best three years in last five years)

**Score: 15.0** 

#### Minimum score to pass the EOI is: 70

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

<sup>&</sup>lt;sup>1</sup> 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) <sup>2</sup> :
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\$ o 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	ed in the assignment:
Note: Provide highlight on similar required by the EOI assignment.	services provided by the consultant as
Firm's Name	

<sup>&</sup>lt;sup>2</sup> 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 assignment<sup>3</sup>

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

 $<sup>^{3}</sup>$  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)