



# **EXPRESSION OF INTEREST (EOI)**

**Title of Consulting Service: WECS/EOI/01/077/78**

**Method of Consulting Service: National**

**Project Name : Energy Consumption and Supply Situation in Federal System of  
Nepal (Bagmati Province)**

**EOI : WECS/01/077/78**

**Office Name: Water and Energy Commission Secretariat**

**Office Address: Singha Durbar Kathmandu**

**Funding agency : Government Budget**



## Abbreviations

|      |   |   |
|------|---|---|
| CV   | - | Curriculum Vitae                        |
| 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                         |
| WECS | - | Water and Energy Commission Secretariat |



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



# Request for Expression of Interest

## Government of Nepal (GoN)

Name of Employer: Water and Energy Commission Secretariat

Date: 18-08-2020 05:00

Name of Project: Energy Consumption and Supply Situation in Federal System of Nepal (Bagmati Province)

1. Government of Nepal (GoN) has allocated fund toward the cost of Energy Consumption and Supply Situation in Federal System of Nepal (Bagmati Province) 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 Water and Energy Commission Secretariat now invites Expression of Interest (EOI) from eligible consulting firms (“consultant”) to provide the following consulting services: The main objective of this project is to find the existing situation of energy consumption and supply situation of the energy resources of Bagmati Province as well as forecast energy demand up to 2040 A.D. at different growth rates (socio economic, demography and technology) based on consultation with National Planning Commission (NPC).
3. Interested eligible consultants may obtain further information and EOI document free of cost at the address Water and Energy Commission Secretariat,(WECS)  
Singha durbar, Kathmandu  
Tel: 4211423, Fax: 4211425  
during office hours on or before 02-09-2020 12:00 or visit e-GP system [www.bolpatra.gov.np/egp](http://www.bolpatra.gov.np/egp) or visit the client’s website [www.wecs.gov.np](http://www.wecs.gov.np)
4. Consultants may associate with other consultants to enhance their qualifications.
5. Expressions of interest shall be delivered online through e-GP system [www.bolpatra.gov.np/egp](http://www.bolpatra.gov.np/egp) Water and Energy Commission Secretariat (WECS)  
Singha durbar, Kathmandu  
Tel: 4211423, Fax: 4211425 on or before 02-09-2020 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 50.0 %, 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 National Consulting Firm.
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 12 Months. Expected date of commencement of the assignment is 25-12-2020.
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 Energy Consumption and Supply Situation in Federal System of Nepal (Bagmati Province). 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)

### 1. Introduction

Information on available energy resources and its consumption provide sound basis for appropriate policy formulation and planning of the energy sector towards sustainable development. It requires regular update and compilation of the resource status through primary research survey and study programs. The information helps in resources planning and management in integrated way. Energy resources have multiple usage. Fuel wood resources can be used for other wood demanding areas. Similarly agricultural residues and animal dung has vital contribution in agricultural production. Use of water resources also has multiple benefits like Hydropower generation, Irrigation, Drinking water supply etc. Society can also achieve maximum benefits once the resources are utilized at optimum level for the concerned purpose. This requires actual field based information so that benefits can be maximized from multiple perspectives.

Water and Energy Commission Secretariat (WECS) has been involved in collection and analysis of the field based energy resources and consumption information since its establishment. WECS completed the study on Sectorial Energy Supply/Demand Profiles at the regional level and Residential Energy Supply/Demand Profiles at the district level during 1990-1995. Such regional and district level sectoral energy supply demand profiles were updated and compiled in 1995/96 at national level. Industrial Sector Energy Consumption Survey was completed in 1997/98 covering both traditional and modern sector. Furthermore, WECS conducted the Commercial Sector Energy Consumption Survey in 1998/99 and Transport Sector Energy Consumption in the year 1999/2000. Agricultural Sector Energy consumption survey was also completed in 2000/2001. Based on these primary surveys of energy demand supply situation, WECS published Energy Sector synopsis report in regular basis. Energy Consumption and Supply Situation of Nepal, 2011/12 is the latest survey carried out by WECS. WECS routinely conducts such primary surveys and prepares reports related to the development of the energy sector in Nepal, for example, estimation of resource potential, energy consumption and conversion technologies appropriate for Nepal's future economic growth, modernization, socio-economic development, policy researches and demonstration studies. Such information obtained from surveys and studies provide a scientific basis which would be a value added tool for conducting various energy policy analysis and energy modeling exercises.

Nepal has entered into federal system with 753 local bodies and 7 province. Till date all the energy data are collected and compiled centrally. So WECS is planning to collect the data of energy consumption, supply and project energy demand of each province. For this purpose WECS has already started energy consumption, supply and demand survey of Province No. 1 and Province No.2 from Fiscal Year 2075/76. This is just the initial step towards micromanagement of the energy data base. Though, WECS is publishing energy synopsis and energy data sheet frequently, previous data does not give any information about province. According to constitution 2015, every province has right to plan the project and in order to achieve their goal and in order to do so, province needs data related to energy. Energy consumption, energy supply and energy demand of Bagmati Province shall be quantified after completing this project. WECS acting as an umbrella organization is going to collect and compile all the energy database of each province and district so that it would help province for the planning and management of energy resource. WECS intends to invite National Consultants to conduct a survey on energy consumption and supply situation as well as project the future energy demand of Bagmati Province of Nepal.



## 2. Objective of the study

The main objective of this project is to find the existing situation of energy consumption and supply situation of the energy resources of Bagmati Province as well as forecast energy demand up to 2040 A.D. at different growth rates (socio economic, demography and technology) based on consultation with National Planning Commission (NPC). The outcomes of this study shall be further presented in three physiographic regions (Himalaya, Mountains and Terai).

Followings are the specific objectives of the survey work in each province:

- To determine the present status of energy consumption of all districts and supply situation in provincial level of economic sectors namely residential/domestic, industrial, transport, commercial/business, agricultural, construction and mining industries and other sectors of Bagmati Province including data analysis and presentation based on different physiographic regions.
- To prepare energy flow diagram (Sankey chart).
- To estimate the energy supply and demand of all type of energy up to 2040 AD at 5 years interval in all economic sectors (Residential, Industrial, Commercial, Transport, Agriculture, Construction and Mining sectors) of Bagmati Province at different physiographic regions and with different growth scenarios.
- Potential of all type of energy resources of Bagmati Province shall be identified on the basis of available secondary data/information.
- Prepare the most appropriate and relevant models for energy demand forecast.
- To identify the costs of all energy resources in each economic sector in each sample unit.
- To analyze and report per capita and per economic sector energy consumption for different economic sectors and physiographic regions based on different growth rates.



### 3. General Scope of Work

The scope of the work, but not limited to, is the following:

- Before conducting the survey on energy consumption, supply situation and demand projection, the existing plans, policies, rules, regulations and guidelines related to energy shall be reviewed.
- Primary data shall be collected at physical and local unit ( eg. bhari ) at first and then converted into standard gigajoules (GJ) and Ton of Oil Equivalent (ToE) unit later during analysis.
- Methodology of energy demand analysis for each economic sectors shall be developed by the consultant and shall be complemented only after approved by WECS.
- **Total and Specific energy consumption of all districts of Bagmati Province in all economic sectors by each fuel type, end uses and energy technologies/devices used shall be provided.**
- Energy supply and demand of Bagmati Province at different physiographic regions and with different growth scenarios in all economic sectors shall be determined.
- Potential of all type of energy resources of Bagmati Province shall be determined on the basis of available secondary data/information.
- The study shall be carried out for all districts of Bagmati Province including three physiographic regions (Hill, Mountain and Terai) for the sample survey.
- The output of the survey shall also contain energy supply situation and demand projection of all energy forms of the province at different physiographic regions and with different growth scenarios up to year 2040 AD.
- Major statistical information of the energy consumption in each Economic Sector at district and provincial level shall be assessed during the survey. Specially the average energy consumption, standard deviation/variation, coefficient of variation, standard error of the mean shall be found out for each type/form of energy consumption in all sectors as well as total energy consumption of the sectors.
- After collection and compilation of all the data, energy demand of Bagmati Province at different physiographic regions (Hill, Mountain and Terai) for all economic sectors and with different growth scenarios up to 2040 AD shall be forecasted by using **freely available software/model.**
- All the energy resources available and used in the country shall be considered while surveying the energy consumption, demand and supply status. All the energy resources used in all economic sectors for all purposes and end uses by all devices shall be identified during the survey.
- **For determination of sample size, all existing data of each economic sectors shall be collected from the concerned authorities.**
- Detailed survey questionnaire for each economic sectors shall be prepared separately by the consultant and surveying will be carried out only after the questionnaire has been approved by WECS.
- Before conducting Energy Consumption, Supply and Demand survey, training program for the enumerators, field supervisors and WECS staffs shall be organized.



- A letter certifying the work carried out from the concerned surveyed commercial, industrial, agricultural and construction and mining company/institution/firm etc. is necessary to verify the work. The official authenticated letter shall be submitted to WECS after completion of the field work in Field/Interim report.

#### 4. Specific scope of the work

##### 4.1. Residential/Domestic sector

- Household shall be the basic unit of energy consumption both in the rural and urban residential sector.
- **The estimation of the sample size shall be determined with 95% level of confidence, 5% margin error and at 5% non-response rate.**
- **District shall be the ultimate location for estimation of sample size.**
- **Depending upon the roof type of house, distribution of Sample size shall be proportionated.**
- Household survey shall include energy consumption data of the year 2077 BS.
- Basic socio economic information shall also be collected during the household survey. Especially the household size, distance from the nearest market, distance from the forests, distance from the highway/accessible road, access to grid electricity, access to other energy form such as biogas, solar, micro hydro, bio briquette etc. shall be collected. This provides the relationship between energy consumption and socio economic situation. Data related to income of household shall also be collected and analyzed.
- Specific energy consumption per capita and household shall be determined.
- Energy production within the household level shall also be assessed. Particularly the fuel wood, agricultural residues and animal dung produced within the household level shall be estimated. Commercial production of the energy resources such as bio-briquettes, fuel wood etc. shall also be accounted during the survey. **Energy supply demand balance at household level shall therefore be known from the survey work.**
- Consultants are strongly advised to compare the output of this survey work with "Update and Compilation of Regional Energy Consumption Profile 1995/96", and "Energy Consumption and Supply Situation of Nepal, 2011/12" reports of WECS for reference.

##### 4.2. Industrial Sector

Industrial Energy consumption Survey shall cover both the traditional/cottage and modern industries. The modern industries can further be divided into large, small and medium enterprises. The population of the industry for sampling shall be based on National Census of Manufacturing Establishments by Central bureau of statistics and Department of Industry. The following shall be collected and analyzed, but not limited to:

- A single factory with a particular product shall be the sample unit of the industrial energy consumption and survey with greater focus on energy intensive industry.
- District shall be the ultimate location for estimation of sample size.

- **For population size up to 750, thirty three percent threshold shall be used for the determination of sample size and for population size more than 750, then the estimation of the sample size shall be determined with 95% level of confidence, 5% margin error and at 5% non-response rate.**
- The sample shall represent all categories of industries.
- Energy consumption by industrial output, cost, labor etc. are important variables to be identified.
- Specific energy consumption of products (per ton/kl of product) shall be determined.
- Consultants are strongly advised to compare the output of this survey work with "Industrial Energy Consumption Survey 1996/97 ", and "Energy Consumption and Supply Situation of Nepal, 2011/12" reports of WECS for reference.

### 4.3. Transport Sector

Transport sector has different types of mode to be surveyed from energy consumption perspective. Transport sector shall be broadly divided into Road Transport (Passenger and Freight), Air transport and Ropeway, Navigation and Railways sub sector. Road, Air and Ropeway transport which shall further be divided into public, private, corporate and government transport and others. The main uses of the transport sector are passenger services, goods carrier services. In this sector buses, cars, jeeps, vans are used for passenger services and truck, lorry, pickup could be the load carrier services. Similar categories can be made in the air transport sector.

Each type of energy consumption in each mode of transport sector for Bagmati Province shall be assessed in the survey. Major variables in transport sector from the energy consumption perspective shall be identified. For example, energy consumption per passenger kilometer can be one of the important variables for Passenger Transport and ton kilometer for Freight Transport that can be used for future forecasting of the energy consumption.

- A vehicle shall be the sample unit in this sector. The sample unit can be motorcycle, jeep, car, bus, truck, airplane, helicopter/train, boat etc.
- The study shall find out the major driving factors affecting the energy consumption in this sector.
- Zone shall be the ultimate location for sample determination.
- **The estimation of the sample size shall be determined with 95% level of confidence, 5% margin error and at 5% non-response rate.**
- **Specific energy consumption (per Passenger km or ton km) shall be determined.**
- Number of vehicles (operational and non-operational) registered in different Zones in Bagmati Province of Nepal shall be taken into consideration while determining the sample size in this sector. All types of vehicles shall be accounted and be represented during survey work. Energy consumption, the vehicle registration number, owner's information, its type, capacity etc. shall be mentioned in the field survey. The information related to vehicle registration can be obtained from Department of Transport Management.
- **Estimate the future energy demand in each type of transport mode including Navigation and Railways at different growth scenarios shall be determined for Bagmati province as well as physiographic regions.**
- Average kilometers of each vehicle type in a day/week/month/year shall be assessed during the primary survey from the sample unit.



- Total fuel consumption by each transport mode can be estimated based on the distance covered in a day/week/month/year and the distance covered per unit of fuel.
- Supply of fuel used in the transport sector shall also be assessed during the field survey. Numbers of petrol pumps supplying the petroleum products in the transport mode are important in this regard. Transport sector fuel consumption can be obtained from the divisional offices of Nepal Oil Corporation.
- “Detailed Energy Consumption Survey in Transport Sector of Nepal (2000)” report of WECS can be reviewed in this regards.
- The further details on energy consumption survey on of the transport sector are expected from the consultant side.

#### 4.4. Commercial sector

This sector is one of the major energy consuming sectors. This sector includes varieties of institutions ranging from academic sector to the commercial complexes. Some important sub sectors are hotels, restaurants, wholesalers/dealers/retailers of the industrial products, hostels/barracks, academic institutes, corporate bodies, hospitals, nursing homes, banks and high rise buildings etc.

- The basic sample unit for this sector shall be commercial entity.
- District shall be the ultimate location for estimation of sample size. A complete list of the commercial entities by district and province shall be identified from the government registration office.
- **The estimation of the sample size shall be determined with 95% level of confidence, 5% margin error and at 5% non-response rate.**
- **The determined sample size shall be proportionally distributed according to population of different types of commercial entities as classified by National Standard Industrial Classification (NSIC).**
- Energy consumption per capita, energy consumption per sample unit, energy consumption per factor of expansion in each category of the corporate sector shall be identified. For example, energy consumption per bed or per guest can be major variables for hotels/ restaurants. Energy consumption per number of student can be the expansion factor in hostels.

#### 4.5. Agricultural sector

Electricity and petroleum products are two major energy resources used in this sector. Electricity is mainly used in water pumping for irrigation purposes whereas petroleum products are used for both the water pumping as well as tillage purpose by tractors, harvesters etc. Major energy technologies in this sector are electric pump, electric generator, diesel pump, diesel generators and tractors. Drought animal power in this sector shall also be included in this survey. It requires separate survey for accurate estimate. Trend of using Renewable energy in the agriculture sector is increasing. Solar water pumping is recognized as emerging technology in the rural area.

- A farm shall be the sample unit for the energy consumption survey. The farm size (big, medium and small) shall be taken into consideration while identifying the sample size. However, sampling intensity shall be the different one than the residential sector.

- District shall be the ultimate location for determination of sample size.
- **For population size up to 750, thirty three percent threshold shall be used for the determination of sample size and for population size more than 750, then the estimation of the sample size shall be determined with 95% level of confidence, 5% margin error and at 5% non-response rate.**
- Specific energy consumption (per ha/bigha/ropani) shall be determined.
- The data shall be collected on the basis of type of energy consumption (petroleum, Solar, grid electricity etc.), its specific use (irrigation, plantation, harvesting etc.) and technology used (Drought animal power, tractor, power tiller, harvester, paddy/garlic thresher etc.)

#### 4.6. Construction and Mining sector

Construction Projects like Water supply, Irrigation, Hydropower, Crusher industry, High rise Building construction, Road/Bridge construction projects and mining industries (Limestone, Coal etc.) are energy intensive sites. Heavy equipment's like Loader, Dozer, Excavator, Tunnel Boring Machine, Crusher machine etc. are frequently used in such construction projects.

- Construction/Mining/Quarry site shall be the sample unit for the energy consumption survey.
- District shall be the ultimate location for estimation of sample size.
- **For population size up to 750, thirty three percent threshold shall be used for the determination of sample size and for population size more than 750, then the estimation of the sample size shall be determined with 95% level of confidence, 5% margin error and at 5% non-response rate.**
- Inventory of construction sector projects, mining industries and equipment used shall be prepared.
- Specific energy consumption of construction and mining sector shall be determined.
- Energy consumption, supply and demand forecast of all on going National Pride Projects of these Province shall be carried out. The energy consumption, supply and demand forecast of such projects shall be categorized under Province level.

#### 5. Energy Resource and Supply Assessment

- All the indigenous and modern energy resources shall be assessed based on secondary information at district/Provincial level.
- Energy Resources database or information shall be updated up to the recent years using standard factors acceptable as per statistical procedures.
- Energy supply assessment shall be made based on secondary information available in the country. Authentic and approved secondary information shall be used for this purpose.
- Supply situation of the imported fossil fuels (coal, petroleum products, natural gas) shall also be estimated for Bagmati Province.
- Production of electricity in different parts of the country can be collected from Nepal Electricity Authority (NEA), Independent Power Producers Association of Nepal (IPPAN) and Alternative Energy Promotion Centre (AEPC) and others, up to the



recent years and also its future generation plan. Electricity supply situation shall also cover the transmission and distribution network in the country.

## 6. Energy Demand Projection

Forecast of energy demand can help the decision/policy makers to know the quantity and trend of the future energy consumption for better planning and scheduling the appropriate operation of energy supply and distribution systems. The following shall be considered while projecting the energy demand.

- The future energy demand projection shall be based on a set of consistent assumptions on medium to long term socio-economic, technological and demographical developments of Bagmati province. The different socio economic growth rates shall be based on consultation with National Planning Commission (NPC).
- The **appropriate and freely available software/model** shall be used for the demand energy forecasting.
- All economic sectors and all energy resources shall be considered in the energy demand projection.
- The Past and Current Energy demand and consumption shall be reviewed. For reference "Electricity Demand Forecast Report (2014-2040)" report published by WECS and "Energy Demand Projection 2030" report published by Investment Board of Nepal shall be reviewed.

## 7. Energy Resources Potential

Potential of all types of energy resources (hydropower, micro hydropower, solar, wind, biogas, biomass, petroleum products etc.) of Bagmati Province shall be identified on the basis of available secondary data/information. Potential of renewable energy resources shall also be assessed based on the available secondary information. Potential of some of the renewable such as wind, micro hydro, solar, biogas, waste to energy and solar wind hybrid can be found from the AEPC. Similarly, other reliable and authentic institution can be used for collecting the information.

## 8. Duration and Phase of Work

The whole survey works shall be completed in **12 months** after signing the contract. The phase of the work shall be as follows:

- Inception Phase
- Interim Phase
- Draft Phase
- Final Phase

The scope of work for each Phase shall include, but not be limited to, the following:



## 8.1. Inception Phase

In this phase, the consultant shall review Literatures related to previous and existing Energy consumption pattern, Supply and Demand situation as well as collect all the information's related to economic sectors especially from energy perspective. The duration of this Phase shall be of **2 (Two) months** after signing the contract.

- Plan/Policies/Guidelines related to Energy shall be reviewed.
- The Consultants are strongly advised to refer the previous WECS survey reports regarding the energy consumption.
- Basic characteristics and information related to the economic sectors shall be collected from the different authentic institutions and authorities. For example, population census report, national living standard survey report, household expenditure survey report, labor survey report, economic survey reports, agricultural census survey, industrial Inventory etc. are the important reference materials for Inception/Desk Reporting.
- The detailed questionnaire shall be developed during the inception work. Inception report shall include detail methodology of sample determination, data collection, data entering and analysis as well as field mobilization schedule of field supervisors, enumerators and other team members.
- Pilot survey shall be carried out for testing of the questionnaire during this Phase. The questionnaire shall be approved by WECS before field mobilization.
- Population of Households, Industrial units, Commercial entities, Agricultural and farm units, Constructions and mining's etc. shall be identified at District and Provincial level whereas population of transportation sector shall be identified at zonal level for determination of the sample size based on the aforesaid statistical methods.
- The Inception Report shall include the detailed methodology, work plan schedule and information, total sample size of each sector and detail about the model to be used for Energy Demand Projection.
- This Inception Report shall further provide the outline of output of the survey and detailed table of contents for writing the final results.
- **Five hard copies** of the report including a soft copy shall be submitted to WECS within two months. All pages of the hard copy shall be authenticated by the consultant with official signature and official stamps.
- The Consultant shall organize interactive Workshop to discuss on Inception Report. WECS will comment on the report as per objective, scope and spirit of the TOR. WECS may also invite the experts and concerned professionals in this Workshop. All the comments and suggestions provided by WECS shall be incorporated in the revised Inception Report for approval.

## 8.2. Interim Phase

After approval of the Inception Report, the consultant shall prepare for field mobilization of the supervisors, enumerators and other team members for field survey. Before mobilization of the staffs for the field survey, an extensive training programme for field staffs shall be



organized. **WECS professionals shall also be engaged in this training programme.** The duration of this Phase shall be of **6 (Six) months** after the submission and approval of Inception Report.

- Prior approval of WECS is required for mobilization of the survey team for field data collection. WECS staff may also monitor the field work activities.
- A prior approval is required for the use of field questionnaires and field personnel not specified in technical proposal. The Consultant shall have the responsibility to defend the quality, authenticity and appropriateness of data.
- The consultant shall complete all the field survey work in this phase. The Interim reports shall include compilation of data of different end uses in District and Provincial level including physiographic region at different growth rates.
- The field survey questionnaires, primary and processed data shall be the property of WECS and shall be submitted to WECS in original form separately in ANNEX. These data shall not be used anywhere else without a written consent from WECS.
- A proof of the field work and primary data collection from the sample unit in each sector shall be submitted to WECS for its verification. **For household and agricultural sector energy consumption survey, a certification from the Municipal Office/ Ward Office shall be submitted to WECS.** In case of Industrial, Commercial, Construction and Mining sectors, a **certification** form related entity shall be obtained and submitted to WECS.
- All the information collected during the field work for primary data of the energy consumption shall be analyzed using a **standard computer model/programme.** Important statistical information specially the standard deviation, average, standard error, error margin of the sample survey shall also be covered in this phase. Accuracy of the sample survey shall also be judged from this information.

In this Phase, the consultant shall complete the survey of **the Province**. The consultant shall submit **5 hard copies** with a soft copy of the Interim Report including all the data collected, processed and analyzed data/model.

- a) The Consultant shall organize workshop for presentation and discussion on Interim Report among related stakeholders for comments and suggestions. WECS may also invite the experts and concerned professionals in these Workshops.
- b) WECS will provide comments and suggestion on Interim Report. All the comments and suggestions provided by WECS shall be incorporated in the revised Interim Report for its final submission.
- c) The Consultant shall submit the progress report of the work in every two months.

***The Interim Report shall include the entire completed questionnaire sheet in its original form. Soft copy shall include model/data input, data analysis and data output information of field work. The Interim Report shall cover the list of sample units with its detail information (name, location, geography, types etc.). After completion of the field survey work, the consultant shall submit Interim Report to WECS.***



### 8.3. Draft Phase

The duration of this Phase shall be of **3 (Three) months** after the submission and approval of Interim Report. In this phase, the consultant shall prepare and submit **5 (Five)** hard copies and a soft copy of Draft Report.

- Draft Report shall include data analysis and results/outputs in compiled form.
- The report shall cover text, table, picture based on the findings of the survey work. It shall also compare the results with previous finding of the WECS survey work.
- The complete developed model of future energy demand projection of all economic sectors by each energy resources type at different growth scenarios (socio economic, technology and demography) of Bagmati Province shall be submitted.
- The Consultant shall conduct seven days training in operation of energy demand projection model
- The Consultant shall organize an interaction workshop to discuss on Draft Report among related stakeholders in Bagmati Province. WECS may also invite the experts and concerned professionals in this Workshop.
- WECS will provide comments and suggestion on Draft Report. All the comments and suggestions provided by WECS shall be incorporated. WECS will check and verify whether all the comments and suggestions have been incorporated or not in the Revised Draft Report and if any additional comments and suggestions need to be incorporated for its approval.

*All the Costs and Expenditures of the Workshops and training shall be borne by the consultants.*

### 8.4. Final Phase

The duration of this phase shall be **1 (One) month** after the submission and approval of Draft Report.

- The Consultant shall prepare the Final Report incorporating all the comments and suggestions, if any.
- **10 (Ten)** hard copies and a soft copy of Final Report shall be submitted. The consultant shall submit all data, analyzed database files and complete energy demand projection model including all the results/findings.



## 9. Expected Human Resources

The following professionals with stated qualifications are proposed for the assignment.

| S. N. | Particulars                | Minimum Qualification                           | Required No. | Experience                                       |
|-------|----------------------------|---|--------------|--|
| 1     | Team Leader                | Master's degree in Engineering field            | 1            | Refer to position description below respectively |
| 2     | Energy Modeling Expert     | Master's degree in Engineering field            | 1            |  |
| 3     | Statistician/ Data Analyst | Master's degree in Statistics                   | 1            |  |
| 4     | Renewable Energy Expert    | Master's degree in Renewable Energy Engineering | 1            |  |
| 5     | Forestry Expert            | Master's degree in Forestry Science             | 1            |  |
| 6     | Economist                  | Master's degree in Economics                    | 1            |  |
| 7     | Electrical Engineer        | Bachelor's degree in Electrical Engineering     | 1            |  |
| 8     | Mechanical Engineer        | Bachelor's degree in Mechanical Engineering     | 1            |  |
| 9     | Field Supervisor           | Minimum 10 +2                                   | 3            |  |
| 10    | Computer Operator          | Minimum 10 +2                                   | 1            | Knowledge in Computer (MS office)                |
| 11    | Enumerators                | Minimum SLC/SEE                                 | 9            | -  |

*Note: CV of key experts from S.N. 1 to 8 shall be evaluated. The work experience of the key experts shall be counted after completion of the Bachelor's Degree.*

The responsibility of the experts are, but not limited to, the following:

### 9.1. Team Leader

The Team Leader shall have substantial experience in the area of energy sector. S/he shall have minimum Master's degree in engineering field with at least 15 years of professional experience in the energy sector. S/he shall have specific work experience in Energy survey/Energy statistics/Energy management /Energy Planning. S/he shall be responsible to:

- Take full responsibility for the consulting team and as per the Term of Reference (TOR), provide overall direction to the consulting team and coordinate between individual experts and with related WECS officials.



- In co-ordination and cooperation with WECS, carryout extensive consultations with the key stakeholders for obtaining suggestions and concurrence with the contents of the plan.
- Prepare and implement detailed schedules for the fieldwork and office works;
- Organize meetings, training and workshops;
- Prepare and ensure timely delivery and quality control of the field survey questionnaire, different outputs and reports required as per TOR.

### **9.2. Energy Modeling Expert**

The Energy Modeling Expert shall have substantial experience in the area of energy sector. S/he shall have minimum Master's degree in engineering field with at least 12 years of professional experience in the related and relevant field. S/he shall have specific work experience in energy demand forecast modeling works. S/he shall be responsible to:

- Work closely with other members of the core technical team and assist the Team Leader.
- Take full responsibility for preparation of framework, data analysis and carry out modelling for the energy demand projection.
- Assist the Team Leader in timely delivery of all outputs related to modelling and preparation of reports and preparation of reports and questionnaires.
- Assist the study team in preparing field survey questionnaires required for the model to predict the demands of various energy resources at future at economic growth rate.

### **9.3. Statistician/ Data Analyst**

The Statistician/Data Analyst shall at least have Master's degree in Statistics with at least 12 years of Professional experience in related and relevant field. S/he shall have specific work experience in data analysis, statistics and preparation of questionnaire of similar sector. S/he shall be responsible to:

- Work closely with other members of the core technical team and assist the Team Leader.
- Coordinate with field supervisors to receive the field survey data for further processing.
- Carry out all the statistical analysis after receiving the data from field survey.
- Provide inputs to the Energy Modelling Expert during energy modelling.
- Assist the Team Leader in timely delivery of all outputs and preparation of reports and field survey questionnaires.

### **9.4. Renewable Energy Expert**

The Renewable Energy Expert shall have substantial experience in the area of renewable energy sector. S/he shall at least have a Master's degree in Renewable Energy Engineering with at least 12 years of professional experience in the energy sector. S/he shall have specific work experience in Renewable energy sectors. S/he shall be responsible to:

- Work closely with other members of the core technical team and assist the Team Leader.
- Carry out field work and diagnose the data related to all Renewable sectors during energy survey.



- Provide inputs to the Energy Modelling Expert during projection of the energy demand.
- Monitor, review and analyze the inputs provided by different experts in the team;
- Assist the Team Leader in timely delivery of all outputs and preparation of reports and field survey questionnaires.

### **9.5. Forestry Expert**

The Forestry Expert shall at least have Master's degree in Forestry science with at least 10 years of Professional experience in related and relevant field. S/he shall have specific work experience in survey related to traditional energy (fuel wood, agriculture residue, biomass etc.) and preparation of questionnaire of forest/agriculture sector. S/he shall be responsible to:

- Work closely with other members of the core technical team and assist the Team Leader.
- Carry out the survey and diagnose the data related to traditional energy and agricultural sector.
- Provide inputs to the Energy Modelling Expert during energy modelling.
- Assist the Team Leader in timely delivery of all outputs and preparation of reports and field survey questionnaires.

### **9.6. Economist**

Economist shall at least have Master's degree in Economics with at least 10 years of professional experience in related and relevant field. S/he shall have specific work experience in economic analysis. S/he shall be responsible to:

- Work closely with other members of the core technical team and assist the Team Leader.
- Ensure that economic/financial assessments carried out are undertaken with correct methodologies.
- Assist the Team Leader in timely delivery of all outputs and preparation of reports.
- Analysis of energy data in terms of different economic growth rates.
- Provide inputs to the Energy Modelling Expert during energy modelling.
- Assist the Team Leader in timely delivery of all outputs and preparation of reports and field survey questionnaires.
- Predict the energy consumption of various energy resources at different economic growth rates.

### **9.7. Electrical Engineer**

The Electrical Engineer shall have substantial experience in the area of energy sector. S/he shall at least have a Bachelor's degree in Electrical Engineering with at least 7 years of professional experience in the energy sector. S/he shall have specific work experience in Energy planning /Energy management / Energy sector survey/ Energy sector. S/he shall be responsible to:

- Work closely with other members of the core technical team and assist the Team Leader.



- Carry out field work and diagnose the data related to all sectors during energy survey.
- Provide inputs to the Energy Modelling Expert during projection of the energy demand.
- Monitor, review and analyze the inputs provided by different experts in the team;
- Assist the Team Leader in timely delivery of all outputs and preparation of reports and field survey questionnaires.

### 9.8. Mechanical Engineer

The Mechanical Engineer shall have substantial experience in the area of energy sector. S/he shall at least have a Bachelor's degree in Mechanical Engineering with at least 7 years of professional experience in the energy sector. S/he shall have specific work experience in Energy planning /Energy management / Energy sector survey/ Energy sector. S/he shall be responsible to:

- Work closely with other members of the core technical team and assist the Team Leader.
- Carry out field work and diagnose the data related to all sectors during energy survey.
- Provide inputs to the Energy Modelling Expert during projection of the energy demand.
- Monitor, review and analyze the inputs provided by different experts in the team;
- Assist the Team Leader in timely delivery of all outputs and preparation of reports and field survey questionnaires.

### 10. Work Schedule

The Consultant shall complete the entire study project within a period of 12 (Twelve) months from the date of signing the agreement with WECS. It is responsibility of the consultant to plan in detail the work schedule and expert person-months schedule to complete the assigned work within the assigned time frame.

### 11. Terms of Payment

Payment shall be made according to the following schedule:

| Installments                | Payment (%) of the total Contract Amount | Condition for Payment  |
|-----------------------------|--|--|
| 1 <sup>st</sup> Installment | 30%                                      | After submission and approval of Inception Report  |
| 2 <sup>nd</sup> Installment | 20%                                      | After submission and acceptance of Interim Report  |
| 3 <sup>rd</sup> Installment | 20%                                      | After submission and acceptance of Draft Report and operational energy model with inputs and outputs |
| 4 <sup>th</sup> Installment | 30%                                      | After submission and approval of Final Report, model and analyzed database files.                    |

Consultant shall request the WECS for the payment of the offered job with valid bills.



## **12. Language of the Report:**

All the reports shall be prepared and submitted in English.

## **13. Competencies**

The organization/consulting firm shall have the following competencies:

- Excellent communication skill, good working relationship with the government and other organization and ability to collect and analyze data and information.
- Excellent ability to quickly grasp and synthesize inputs from a range of disciplines related to this subject area.

## **14. Qualifications:**

The consulting firm shall provide lists of qualified human resources with proven track records. The study team shall comprise of specialist and/or knowledge –based human resources having required qualifications and experiences in relevant fields/thematic areas to carry out the works as included in the scope of this study. S/he shall have good written and oral communication skills in English.

## **15. Property Rights**

WECS shall have the sole authority on all data (primary and analyzed), texts, pictures, letters, analysis, questionnaires (filled and unfilled) and other information collected during the survey. The consultant shall refrain from using any of the information in any other studies without receiving prior approval from WECS. Failing to get prior approval from WECS in such cases may result in black listing of the consultant in WECS future works.

## **16. Work Inspection**

- Before proceeding with the field work, the consultant shall submit a field work schedule so that WECS may send its own staff to observe the field work and monitor the progress.
- Before the award of the contract, the designated WECS staff may visit the office of the consultant to verify the status and soundness of the consulting firm to carry out the job. The designated WECS staff shall also be entitled to visit the office of the consultant during implementation, from time to time to inspect the work in progress.

## **17. Other Instructions**

- *WECS's energy professionals shall regularly monitor and evaluate the survey work from the beginning. Field works shall also be monitored and evaluated directly at the site as well as office. WECS may request other government and related agencies to monitor and evaluate the consultant's work both in the office and in the field.*
- *The cost of presentations, meetings, workshops, interactions as indicated in the TOR and suggested by WECS shall be covered by the consultant.*
- *WECS reserves the right to accept or reject any or all of the proposals without assigning any reason whatsoever.*



## **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       | Notarized copy of Company/Firm Registration certificate (of each member of Joint Venture (JV) in case of JV)  |            |
| 2       | The Lead Firm shall have minimum 7 (Seven) Years of Experience  |            |
| 3       | Notarized copy of VAT and PAN Registration certificate (of each member of JV in case of JV)   |            |
| 4       | Notarized copy of Tax Clearance Certificate/ Tax Return Submission/ Letter of Time Extension for Tax Return Submission of FY 2076/77 (of each member of JV in case of JV)   |            |
| 5       | Self declaration letter of the firm ( In case of JV, the Consultants shall submit self-declaration either separately or jointly by signing each member of JV)   |            |
| 6       | Joint Venture agreement between of JV partners duly signed by authorized signatories and stamped with company seal of each member of JV and clearly mentioning the name of lead firm, name of JV partners, role and responsibility of each members, name of authorized signatories ( in case of a JV) |            |
| 7       | Power of attorney of authorized signatories of JV agreement from their respective firm with signature and stamp for each member of JV( in case of a JV)   |            |
| 8       | Power of attorney to lead firm by JV partners ( in case of JV)  |            |
| 9       | The total number of consulting firms including the lead firm shall not exceed a maximum of three in a JV.   |            |
| 10      | An applicant must not submit more than one (1) EOI application either as a single entity or as a partner in JV Firm   |            |
| 11      | EOI Form 1: Letter of Application   |            |
| 12      | EOI Form 2: Applicant's Information   |            |
| 13      | EOI Form 3: Work Experience Details   |            |
| 14      | EOI Form 4: Capacity Details  |            |
| 15      | EOI Form 5: List and Qualification of Key Experts   |            |

## ii) EOI Evaluation Criteria

### A. Qualification

| Sl. No. | Criteria                   | Minimum Requirement   |
|---------|----------------------------|---|
| 1       | Team Leader                | Master's degree in Engineering field with at least 15 years of professional experience in the energy sector. S/he shall have specific work experience in Energy survey/Energy statistics/Energy management /Energy Planning.            |
| 2       | Energy Modeling Expert     | Master's degree in Engineering field with at least 12 years of professional experience in the related and relevant field. S/he shall have specific work experience in energy demand forecast modeling works.                            |
| 3       | Statistician/ Data Analyst | Master's degree in Statistics with at least 12 years of Professional experience in related and relevant field. S/he shall have specific work experience in data analysis, statistics and preparation of questionnaire of similar sector |
| 4       | Renewable Energy Expert    | Master's degree in Renewable Energy Engineering with at least 12 years of professional experience in the energy sector. S/he shall have specific work experience in Renewable energy sector survey.                                     |

| Sl. No. | Criteria            | Minimum Requirement  |
|---------|---------------------|--|
| 5       | Forestry Expert     | Master's degree in Forestry science with at least 10 years of Professional experience in related and relevant field. S/he shall have specific work experience in survey related to traditional energy (fuel wood, agriculture residue, biomass etc.) and preparation of questionnaire of forest/agriculture sector |
| 6       | Economist           | Master's degree in Economics with at least 10 years of professional experience in related and relevant field. S/he shall have specific work experience in economic analysis.   |
| 7       | Electrical Engineer | Bachelor's degree in Electrical Engineering with at least 7 years of professional experience in the energy sector. S/he shall have specific work experience in Energy planning /Energy management / Energy sector survey/ Energy sector  |
| 8       | Mechanical Engineer | Bachelor's degree in Mechanical Engineering with at least 7 years of professional experience in the energy sector. S/he shall have specific work experience in Energy planning /Energy management / Energy sector survey/ Energy sector.   |

**Score: 40.0**

### B. Experience

| Sl. No. | Criteria   | Minimum Requirement   |
|---------|--|---|
| 1       | General Experience of Consulting Firm (Only lead firm in case of JV) | Minimum 7 years of Experience in the Energy Sector.   |
| 2       | Specific experience of Consulting Firm (in last 7 Years)             | Experience in Energy survey/Energy statistics/Energy management /Energy Planning. The completed projects/tasks having contract amount/value less than 2.0 Million shall not be considered for evaluation. |

**Score: 50.0**

### C. Capacity

| Sl. No. | Criteria                            | Minimum Requirement   |
|---------|-------------------------------------|---|
| 1       | Financial Capability of the Firm/JV | Average Annual Turn Over of the best three Fiscal Years in recent last seven consecutive Fiscal Years (in NRs.)<br>Minimum 16 Million |

**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**



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

Form 1. Letter of Application

Form 2. Applicant's information

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

Form 4. Capacity

Form 5. Qualification of Key Experts



## Standard EOI Document

### 1. Letter of Application

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

Date: .....

To,

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

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

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

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

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

Sir/Madam,

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

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



## **Standard EOI Document**

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

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

**Signed** :

**Name** :

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



## Standard EOI Document

### 2. Applicant's Information Form

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

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

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

**Standard EOI Document**



**3. Experience**

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

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

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



## Standard EOI Document

### 3(B). Specific Experience

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

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

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

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

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



## Standard EOI Document

### 3(C). Geographic Experience

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

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

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



## Standard EOI Document

### 4. Capacity

#### 4(A). Financial Capacity

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

| Annual Turnover |                 |
|-----------------|-----------------|
| Year            | Amount Currency |
|                 |                 |
|                 |                 |
|                 |                 |
|                 |                 |
|                 |                 |
|                 |                 |
|                 |                 |
|                 |                 |

- Average Annual Turnover

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



## Standard EOI Document

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

| 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.



## Standard EOI Document

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

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

| 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)

## Evaluation Criteria (Evaluation of Consultant's EOI Application)

|           | EOI Evaluation Criteria           | Minimum Requirement  | Score     |
|-----------|-----------------------------------|--|-----------|
| <b>A.</b> | <b>Evaluation of personnel</b>    |  |           |
|           | <b>Experience of Personnel</b>    |  | <b>40</b> |
|           | <b>Team Leader</b>                | Master's degree in Engineering field with at least 15 years of professional experience in the energy sector. S/he shall have specific work experience in Energy survey/Energy statistics/Energy management /Energy Planning.   | 8         |
|           | <b>Energy Modeling Expert</b>     | Master's degree in Engineering field with at least 12 years of professional experience in the related and relevant field. S/he shall have specific work experience in energy demand forecast modeling works.   | 6         |
|           | <b>Statistician/ Data Analyst</b> | Master's degree in Statistics with at least 12 years of Professional experience in related and relevant field. S/he shall have specific work experience in data analysis, statistics and preparation of questionnaire of similar sector  | 6         |
|           | <b>Renewable Energy Expert</b>    | Master's degree in Renewable Energy Engineering with at least 12 years of professional experience in the energy sector. S/he shall have specific work experience in Renewable energy sector survey.  | 6         |
|           | <b>Forestry Expert</b>            | Master's degree in Forestry science with at least 10 years of Professional experience in related and relevant field. S/he shall have specific work experience in survey related to traditional energy (fuel wood, agriculture residue, biomass etc.) and preparation of questionnaire of forest/agriculture sector | 4         |
|           | <b>Economist</b>                  | Master's degree in Economics with at least 10 years of professional experience in related and relevant field. S/he shall have specific work experience in economic analysis.   | 4         |

|            |   |  |           |
|------------|---|--|-----------|
|            | <b>Electrical Engineer</b>  | Bachelor's degree in Electrical Engineering with at least 7 years of professional experience in the energy sector. S/he shall have specific work experience in Energy planning /Energy management / Energy sector survey/ Energy sector  | 3         |
|            | <b>Mechanical Engineer</b>  | Bachelor's degree in Mechanical Engineering with at least 7 years of professional experience in the energy sector. S/he shall have specific work experience in Energy planning /Energy management / Energy sector survey/ Energy sector. | 3         |
| <b>B.</b>  | <b>Experience of Consulting Firm (in last 7 Years)</b>  |  | <b>50</b> |
| <b>B1.</b> | <b>General Experience (Only lead firm in case of JV)</b>  | Minimum 7 years of Experience in the Energy Sector.  | 20        |
| <b>B2.</b> | <b>Specific experience (in last 7 Years)</b>  | Experience in Energy survey/Energy statistics/Energy management /Energy Planning. The completed projects/tasks having contract amount/value less than 2.0 Million shall not be considered for evaluation.                                | 30        |
| <b>C.</b>  | <b>Financial Capability of the Firm/JV</b>  |  | <b>10</b> |
|            | Average Annual Turn Over of the best three Fiscal Years in recent last seven consecutive Fiscal Years (in NRs.) | Minimum 16 Million   | 10        |



## Note:

- *Only the Firms or JV(s) fulfilling the Eligibility and Completeness Test criteria mentioned above shall be eligible for further evaluation. The EOI application of those Firms or JV(s) which do not fulfill the above criteria shall not be evaluated further. 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.*
- *Curriculum Vitae (CV) of the key professionals shall be submitted with expert's original signature in blue indelible ink along with the notarized copy of the Nepal Engineering Council (NEC)'s certificate of the professionals required to be registered as per NEC Act, 2055 and Regulation, 2057, and Academic qualification Certificates shall also be submitted for each expert. The notarized copy of work completion certificate of Firm shall be submitted. The certificate of Specific experience of the Firm shall be submitted.*
- *The contact number and the email address of each key experts shall be provided in the CV.*
- *A firm shall not propose the same professional in more than one designation in this job. If so proposed, the respective person will not be considered in the evaluation for any designation.*
- *Experience in ongoing/incomplete project shall not be considered for evaluation.*
- *If more than one consulting firms propose the same professional, enquiry will be made by the client to verify the authenticity of the professional, if necessary.*