



**Government of Nepal**  
**Ministry of Energy, Water Resources and Irrigation**  
**DEPARTMENT OF ELECTRICITY DEVELOPMENT**  
**Sanogaucharan, Kathmandu**

# **EXPRESSION OF INTEREST (EOI)**

**for**

**DEVELOPMENT OF LUNGRI KHOLA HPP (6 MW), ROPLA DISTRICT  
ON A BUILD-OWN-OPERATE-TRANSFER (BOOT) MODEL**

**From Companies or Joint Venture (JV) Partners registered in Nepal**

**EOI No.: DOED/BOOT/2082/83/EOI-11**

**Re-EOI Issue Date: December 16, 2025**

## ABBREVIATIONS

|        |                                                      |
|--------|------------------------------------------------------|
| BOOT   | Build Own Operate and Transfer                       |
| DOED   | Department of Electricity Development                |
| EIA    | Environmental Impact Assessment                      |
| EOI    | Expression of Interest                               |
| EPA    | Environment Protection Act                           |
| EPR    | Environment Protection Rules                         |
| GoN    | Government of Nepal                                  |
| IEE    | Initial Environmental Examination                    |
| MOEWRI | Ministry of Energy Water Resources and Irrigation    |
| PPA    | Power Purchase Agreement                             |
| PPP    | Public-Private Partnership                           |
| PPPIA  | Public Private Partnership and Investment Act        |
| PPPIR  | Public Private Partnership and Investment Regulation |
| RFP    | Request for Proposal                                 |

## TABLE OF CONTENTS

|          |                                                                    |           |
|----------|--------------------------------------------------------------------|-----------|
| <b>1</b> | <b>BRIEF DESCRIPTION .....</b>                                     | <b>1</b>  |
| 1.1      | BACKGROUND .....                                                   | 1         |
| 1.2      | PROJECT SALIENT FEATURE .....                                      | 1         |
| 1.3      | PROJECT COST AND MINIMUM UPFRONT FEE .....                         | 1         |
| 1.4      | PROJECT DEVELOPMENT PLAN .....                                     | 2         |
| 1.4.1    | Availability of Study Reports .....                                | 2         |
| 1.4.2    | Responsibilities of Selected Proponent .....                       | 2         |
| 1.4.3    | Survey License Application .....                                   | 2         |
| 1.4.4    | Review and Optimization of Project .....                           | 2         |
| 1.4.5    | Study Completion Requirements .....                                | 2         |
| 1.4.6    | Extension of Survey License Period .....                           | 2         |
| 1.4.7    | Consequence of Non-Compliance .....                                | 2         |
| 1.4.8    | Issuance of Generation License .....                               | 3         |
| 1.4.9    | Transmission Line and Interconnection Facilities .....             | 3         |
| 1.4.10   | Power Purchase Agreement (PPA) .....                               | 3         |
| 1.4.11   | Financial Closure .....                                            | 3         |
| 1.4.12   | Additional Responsibilities .....                                  | 3         |
| 1.4.13   | Project Interconnection and Transmission Line .....                | 3         |
| 1.4.14   | Feasibility Study and EIA Approvals .....                          | 3         |
| 1.5      | PROPOSERS OBLIGATIONS AND GON FACILITATION .....                   | 4         |
| <b>2</b> | <b>INSTRUCTIONS FOR SUBMISSION OF EXPRESSION OF INTEREST .....</b> | <b>5</b>  |
| <b>3</b> | <b>EXPRESSION OF INTEREST (EOI) .....</b>                          | <b>6</b>  |
| 3.1      | ACKNOWLEDGEMENT OF UNDERSTANDING OF TERMS .....                    | 6         |
| 3.2      | AVAILABILITY OF THE EOI DOCUMENTS .....                            | 6         |
| 3.3      | EOI TERMS AND CONDITION .....                                      | 6         |
| 3.4      | EOI SCHEDULE .....                                                 | 6         |
| 3.5      | EOI NOTICE .....                                                   | 6         |
| 3.6      | EOI PROCESSING FEES .....                                          | 7         |
| 3.7      | PROPOSERS' MEETING .....                                           | 7         |
| 3.8      | CLARIFICATION AND AMENDMENT TO EOI DOCUMENT .....                  | 7         |
| 3.9      | COST OF PREPARATION OF EOI AND LIABILITY .....                     | 7         |
| 3.10     | CONFIDENTIALITY OF THE DOCUMENT .....                              | 7         |
| 3.11     | JOINT LIABILITY FOR JOINT VENTURE COMPANIES .....                  | 8         |
| 3.12     | SUBMISSION OF EXPRESSION OF INTEREST (EOI) .....                   | 8         |
| 3.12.1   | Sealing and Marking .....                                          | 8         |
| 3.12.2   | Deadline for Submission .....                                      | 8         |
| 3.12.3   | Withdrawal of EOI Document .....                                   | 8         |
| 3.13     | PUBLIC OPENING OF SUBMITTED EOI DOCUMENT .....                     | 8         |
| <b>4</b> | <b>EVALUATION OF EXPRESSION OF INTEREST .....</b>                  | <b>9</b>  |
| 4.1      | ELIGIBILITY & COMPLETENESS TEST OF THE EOI DOCUMENT .....          | 9         |
| 4.2      | DETAILED EVALUATION OF EOI DOCUMENT .....                          | 10        |
| 4.2.1    | Technical Capability (30 points) .....                             | 10        |
| 4.2.2    | Financial Capability (40 Points) .....                             | 11        |
| 4.2.3    | Hydropower Project Development Experience (30 points) .....        | 11        |
| 4.2.4    | General Evaluation Guideline .....                                 | 12        |
| 4.3      | SHORTLISTING OF THE PROPOSER .....                                 | 12        |
| <b>5</b> | <b>EOI DOCUMENT REQUIREMENT AND FORMATS .....</b>                  | <b>13</b> |
| <b>6</b> | <b>EOI FORMS .....</b>                                             | <b>14</b> |



|                                                                             |    |
|-----------------------------------------------------------------------------|----|
| FORM 1: LETTER OF APPLICATION .....                                         | 15 |
| FORM 2: PROPONENT'S INFORMATION FORM .....                                  | 16 |
| FORM 3: PROJECT IMPLEMENTATION BUSINESS PLAN.....                           | 17 |
| FORM 4: PROJECT TEAM COMPOSITION (INCLUDE DETAILS OF KEY EXPERTS ONLY)..... | 18 |
| FORM 5: PROPONENT'S WORK EXPERIENCE .....                                   | 19 |
| 5(a). List of Completed Hydropower Projects as a Developer.....             | 19 |
| 5(B). Hydropower Project Development Experience.....                        | 20 |
| 5(C). Salient Feature of the Project.....                                   | 21 |
| FORM 6: NET WORTH.....                                                      | 22 |
| Form 6(A) Cumulative Net Worth Certificate.....                             | 22 |
| Form 6(B) Net Worth Certificate .....                                       | 23 |

## 1 BRIEF DESCRIPTION

### 1.1 BACKGROUND

The Department of Electricity Development (DOED) under the Ministry of Energy, Water Resources, and Irrigation (MOEWRI), is tasked with the development and promotion of the electricity sector in Nepal. Its primary goal is to enhance the sector's financial efficiency at the national level by attracting private sector investments.

The Department of Electricity Development (DOED) works with and assists MOEWRI to implement government policies related to power and electricity sector. Key functions of the DOED include ensuring transparency in the regulatory framework and facilitating private sector involvement by offering "One Window" service and issuing licenses for power projects.

The DOED has played a pivotal role in creating a conducive environment for private sector participation in electricity sector, as outlined in the Hydropower Development Policy 2058 and Electricity Act, 2049. It is also engaged in identification, feasibility studies and detail design of hydropower projects of various capacities. The department has successfully completed the feasibility/detailed engineering design and environmental studies of several hydropower projects.

Under the "Directive of Licensing of Electricity Projects 2075, (including amendments)", hydropower projects studied by DOED are listed under the Government of Nepal (GON) Project Bank (Clause "19 Ka" of the directive). Projects whose Generation Licenses are canceled are also listed under the GON Project Bank (Clause "19 Ga" of the directive). Both categories of reserved projects require development through competitive bidding processes (Clause 22 of the directive). The selection process will be conducted in accordance with the provisions of Public Private Partnership and Investment Act (PPPIA), 2075 and Public Private Partnership and Investment Regulation (PPPIR), 2077. As per MOEWRI's approval, the selection of proponents will be based on the value of the upfront fee proposed by the short-listed proponents, which will participate later in the RFP stage.

Under the two-stage competitive selection process as envisaged in PPPIA, 2075 and PPPIR, 2077, DOED now invites Expression of Interest (EOI) from eligible companies, registered in Nepal, or their Joint Venture, referred to as "Proponent" to develop the following hydropower project ("Project"). The EOI submitted by the Proponents will be evaluated as per the evaluation criteria mentioned in Section 4 and the shortlist of eligible Proponent(s) will be prepared. The Request For Proposal (RFP) will be issued to the shortlisted Proponent(s) for selection of the successful Proponent. The selected Proponent will be issued a Project license under the Electricity Act, 2049 and Electricity Regulations, 2050 to develop the project on Build, Own, Operate and Transfer (BOOT) model.

| SN | EOI Number               | Project Name                            | Type of Project |
|----|--------------------------|-----------------------------------------|-----------------|
| 1  | DOED/BOOT/2082/83/EOI-11 | Lungri Khola HPP (6 MW), Ropla District | ROR             |

### 1.2 PROJECT SALIENT FEATURE

The salient feature of Lungri Khola HPP (6 MW), Ropla District as per pervious study is given in Annex 1.

### 1.3 PROJECT COST AND MINIMUM UPFRONT FEE

The total estimated cost of the project and minimum required upfront fee are shown in table below.

| SN | Project Name                            | Total Estimated Project Cost                                                                                                            | Minimum Upfront Fee                                                                              |
|----|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 1  | Lungri Khola HPP (6 MW), Ropla District | NRs. 1,258,764,362.00 (NRs. One Billion Two Hundred Fifty-Eight Million Seven Hundred Sixty-Four Thousand Three Hundred Sixty-Two only) | NRs. 18,306,918.00 (NRs. Eighteen Million Three Hundred Six Thousand Nine Hundred Eighteen only) |

## **1.4 PROJECT DEVELOPMENT PLAN**

### **1.4.1 Availability of Study Reports**

For the purpose of the EOI, DOED will provide feasibility study reports and the Initial Environmental Examination (IEE) study reports to the interested Proponents. Interested Proponents shall be responsible for the cost of obtaining copies of these reports.

### **1.4.2 Responsibilities of Selected Proponent**

The selected Proponent shall be responsible for all aspects of the Project, including design, engineering, financing, procurement, construction, testing, commissioning, development, insurance, operation, and maintenance, for the duration defined in the generation license. The Proponent shall transfer the project to GON, free of cost and clear of all encumbrances and liabilities, in good running condition after expiry of the generation license. The detailed process and activities to be followed by the selected Proponent are described in subsequent paragraphs. The Proponent must also comply with all legal requirements as per the prevailing laws and regulations.

### **1.4.3 Survey License Application**

The Proponent selected through the process of the two-stage competitive selection process must apply for a survey license for the Project, submitting all required documents in line with the Electricity Act, 2049, Electricity Regulations, 2050 and the Directive of Licensing of Electricity Projects, 2075 (including amendments). The survey license fee for a two-year period must be deposited into the GON Revenue Account. DOED will provide the selected Proponent with the survey license for two years, along with the feasibility study reports, IEE/EIA reports and investigation reports including drill logs where available.

### **1.4.4 Review and Optimization of Project**

Upon receiving the survey license, the selected Proponent will be responsible for reviewing the feasibility and IEE/EIA studies and may re-optimize the project within the given boundaries, including additional areas outside original boundaries (if available), during the survey license period.

### **1.4.5 Study Completion Requirements**

The selected proponent shall complete all necessary studies, including the revisions or extensions of IEE/EIA study within survey license period. All required documents, including updated feasibility study reports, valid and approved IEE/EIA studies for the optimized capacity, shall be submitted to the DOED. The Proponent shall then apply for a generation license, along with necessary fees, within the validity of the survey license.

### **1.4.6 Extension of Survey License Period**

If the selected Proponent is unable to complete the required studies and documentation within the survey license period, they must notify and apply for extension to DOED in writing with applicable fees, within the validity period of survey license, explaining the reasons for the delay. DOED may grant the extension of survey license period based on the merit of the reasons provided, in accordance with the Electricity Act, 2049 and Electricity Regulations, 2050.

### **1.4.7 Consequence of Non-Compliance**

Failure to submit the application for a generation license and necessary documents within the validity period of the survey license will result in the cancellation of survey license.

#### **1.4.8 Issuance of Generation License**

DOED will issue the generation license for a period of thirty-five years. During this period, the selected Proponent will be responsible for the complete lifecycle of the Project, including design, engineering, finance, procurement, construction, testing, commissioning, development, insurance, own, operate and maintain the project. At the end of the thirty-five years, the selected Proponent must transfer the project and associated transmission facilities to GON, free of cost and clear of all encumbrances and liabilities, in good running condition.

#### **1.4.9 Transmission Line and Interconnection Facilities**

The selected Proponent is responsible for the construction and completion of the transmission line and the associated interconnection facilities at their own cost, up to the sub-station or evacuation point as outlined in the connection agreement and Power Purchase Agreement (PPA) to be undertaken by the Proponent with NEA.

#### **1.4.10 Power Purchase Agreement (PPA)**

It is the responsibility of the selected Proponent to secure a connection agreement and PPA with Nepal Electricity Authority (NEA) during the survey license period or as specified in the generation license. DOED through MOEWRI will facilitate the PPA with NEA.

#### **1.4.11 Financial Closure**

The selected Proponent must achieve the Financial Closure within the time specified in the generation license, including any extension, and extension thereof, pursuant to the Directive of Licensing of Electricity Projects, 2075 (including amendments).

#### **1.4.12 Additional Responsibilities**

The selected proponent will bear all the costs for project-related activities, including land acquisition, resettlement and rehabilitation of the displaced people, construction power, construction of access road, forest clearance, obtaining necessary permits and approvals and any other requirements in accordance with prevailing laws and regulations.

#### **1.4.13 Project Interconnection and Transmission Line**

The tentative point of interconnection and substation for the project, along with the corresponding transmission line length based on feasibility study are as follows:

| SN | Project Name                            | Length (km) | Substation/Evacuation Point                      |
|----|-----------------------------------------|-------------|--------------------------------------------------|
| 1  | Lungri Khola HPP (6 MW), Ropla District | 14 km       | connection point at Switchyard of Madi Khola HPP |

The selected proponent in coordination with NEA may work out a different interconnection point based on the recent developments on the transmission line plan of NEA.

#### **1.4.14 Feasibility Study and EIA Approvals**

The Feasibility Study and EIA approval date for the project is provided below:

| SN | Project Name                            | Study Completed | Env. Study Approval Date |
|----|-----------------------------------------|-----------------|--------------------------|
| 1  | Lungri Khola HPP (6 MW), Ropla District | FS (2019)       | IEE (2076/05/23)         |



**IEE: Initial Environmental Assessment, EIA: Environmental Impact Assessment, FS: Feasibility Study**

The proponent may have to seek the time extension or pursue new studies at their own cost in relation to EIA studies as per EPA, 2076 and EPR, 2077.

## **1.5 PROPONENTS OBLIGATIONS AND GON FACILITATION**

All taxes and fiscal incentives will be provided as per the prevailing laws of GoN. It is the responsibility of the selected Proponent to secure a connection agreement and PPA with Nepal Electricity Authority (NEA) during the survey license period or as specified in the generation license. DOED through MOEWRI will facilitate the PPA with NEA.

Additionally, DOED, in accordance with the prevailing laws and regulations, will facilitate the selected Proponent in acquiring land for project and obtaining necessary clearances regarding EIA.



## 2 INSTRUCTIONS FOR SUBMISSION OF EXPRESSION OF INTEREST

- 1) This Expression of Interest (EOI) is issued in accordance with the PPPIA, 2075 and PPPIR, 2077 by the Department of Electricity Development (DOED), to short-list potential Proponents for *Development of Lungri Khola HPP (6 MW), Ropla District on a Built-Own-Operate-Transfer (BOOT) Model*. DOED's decision regarding the short-listing of proponents through this EOI, based on approved criteria, shall be final. DOED reserves the right to reject any or all the proposals without assigning any reason whatsoever. Following the shortlisting, DOED will issue a Request for Proposal (RFP) to the shortlisted Proponents.
- 2) The EOI document consists of the "*Expression of Interest for Development of Lungri Khola HPP (6 MW), Ropla District on a Built-Own-Operate-Transfer (BOOT) Model*" which includes Project information, salient features of the Project, required forms and formats, evaluation criteria and facilitation that will be provided to the selected proponent.
- 3) This Expression of Interest (EOI) is open to all eligible companies registered in Nepal. Companies may associate with other companies to enhance their qualifications. However, such association must be in the form of Joint Venture (JV), and the number of companies in a JV should not exceed three including the lead company. Additionally, the same company is not allowed to enter into more than one JV for the same project. A newly registered company may apply in a JV with eligible companies.
- 4) Eligible Proponent(s) can submit the EOI document for one project only. If a proponent submits EOI for multiple projects, such proponent shall be declared ineligible for all submitted EOIs.
- 5) Expression of Interest should contain the following:
  - a. A covering letter addressed to the Director General of DOED on the official letterhead of the company, duly signed by authorized signatory.
  - b. Proponents shall provide the following information in the respective formats given in the EOI document:
    - FORM 1: Letter of Application
    - FORM 2: Proponent's Information Form
    - FORM 3: Project Implementation Business Plan
    - FORM 4: Project Team Composition (Include Details of Key Experts Only)
    - FORM 5: Proponent's Work Experience
    - FORM 6: Net Worth
- 6) Proponents may submit additional information with their application, but shortlisting shall be based solely on the evaluation of information requested and included in the formats provided in the EOI document.
- 7) The Expression of Interest (EOI) document must be duly completed and submitted to DOED by using the forms and instructions provided in the EOI document.
- 8) The completed EOI document must be submitted on or before the date and to the address mentioned in the "Request for Expression of Interest". In case the last date of obtaining and submission of the EOI documents is a holiday, the next working day will be deemed the due date, but the time will remain the same as stipulated. Any EOI received to DOED after the deadline shall be rejected.
- 9) DOED may, in exceptional circumstances and at its discretion, extend the deadline for the submission of EOI by issuing an addendum to be made available on DOED's website. In such a case, all rights and obligations of DOED and the proponents previously subject to the original deadline will thereafter be subject to the new extended deadline.

### 3 EXPRESSION OF INTEREST (EOI)

#### 3.1 ACKNOWLEDGEMENT OF UNDERSTANDING OF TERMS

By submitting an EOI, each proponent shall be deemed to acknowledge that it has carefully read all sections of this EOI, including all forms, schedules and annexure hereto, and has fully informed itself of all existing conditions and limitations.

#### 3.2 AVAILABILITY OF THE EOI DOCUMENTS

EOI can be downloaded from the DOED/MOEWRI website ([www.doed.gov.np](http://www.doed.gov.np) or [www.moewri.gov.np](http://www.moewri.gov.np)) or obtained from the Procurement Unit of DOED upon formal request. Proponents are expected to examine all instructions, forms, terms, requirements, and other details in the EOI documents.

#### 3.3 EOI TERMS AND CONDITION

- 1) DOED reserves the right to withdraw the EOI and change or vary any part thereof at any stage. DOED's decision regarding the short-listing of proponents through this EOI based on approved criteria, shall be final. DOED reserves the right to reject any or all proposals without assigning any reason.
- 2) Short-listed proponents would be issued formal Request for Proposal (RFP) for the *Development of Lungri Khola HPP (6 MW), Ropla District on a Built-Own-Operate-Transfer (BOOT) Model* at a later date.
- 3) The timing and sequence of events resulting from this EOI will ultimately be determined by DOED.
- 4) Neither the proponent nor any of the proponent's representatives shall have any claims whatsoever against DOED or any of its respective officials, agents, or employees arising out of, or relating to, this EOI or these procedures.
- 5) Proponents found to canvass, influence or attempt to influence the qualification or selection process in any manner, including but not limited to offering bribes or other illegal gratification, shall be disqualified from the process at any stage.

#### 3.4 EOI SCHEDULE

The following table outlines important milestones and timelines for the completion of EOI activities:

| SN | Milestone                                             | Date and time                              |
|----|-------------------------------------------------------|--------------------------------------------|
| 1  | Publication of Expression of Interest (EOI) Notice    | Tuesday, December 16, 2025                 |
| 2  | Prospective Proponents Pre- EOI meeting               | Monday, December 29, 2025 11:00 am at DOED |
| 3  | Last date for submission of Written Queries           | Friday, January 2, 2026                    |
| 4  | Response to the Queries                               | Tuesday, January 6, 2026                   |
| 5  | Last date for Submission of EOI                       | Friday, January 16, 2026, 12:00 Noon       |
| 6  | Opening of EOI                                        | Same date as stated in 5, 1:00 PM at DOED  |
| 7  | Declaration of Short-listed Firms and Issuance of RFP | After Evaluation of EOI                    |

#### 3.5 EOI NOTICE

The EOI notice is published on Gorakhapatra National Daily on Tuesday, December 16, 2025 to invite EOI from all eligible Nepalese hydropower companies or their joint ventures (JV).

### 3.6 EOI PROCESSING FEES

The Proponent must submit, together with the EOI document, a non-refundable processing fee for Rs. 1,50,000 (Rupees One Lakh Fifty Thousand only) in the form of a bank voucher deposited in GON Revenue Account No. 1000100200010000 in name of Office Code 308013501 (Department of Electricity Development) Revenue Title No. 14229 (Prashasanik Sulka) in Rastriya Banijya Bank, Teku Branch. EOI received without or with inadequate EOI Processing fees shall be rejected.

### 3.7 PROPONENTS' MEETING

DOED will host a proponent's meeting at DOED 2<sup>nd</sup> Floor, Subarna Hall. The meeting is tentatively scheduled as per the schedule given in Section 3.4. Representatives from interested organizations may attend the proponents' meeting at their own cost. The purpose of the meeting is to provide prospective proponents with clarifications regarding the EOI. It will also offer an opportunity for each Proponent to seek clarifications regarding any aspect of the EOI and the Project.

Proponents may request clarification of any part of the EOI during the period specified in Section 3.4. Any request for clarification must be sent in writing, or through standard electronic means, to the Client's address.

Name of the Client: Department of Electricity Development

Address: Sano Gaucharan, Kathmandu

Phone No: (977-1-) 4534119, Fax: (977-1-) 5244257

Email address: [info@doed.gov.np](mailto:info@doed.gov.np), [khanalsub@gmail.com](mailto:khanalsub@gmail.com), [badrikuikel@gmail.com](mailto:badrikuikel@gmail.com),

Website: <https://www.doed.gov.np>

### 3.8 CLARIFICATION AND AMENDMENT TO EOI DOCUMENT

DOED will respond in writing, or through standard electronic means, sending written copies of the response (including an explanation of the query but without identifying its source) to all interested proponents. Should DOED find it necessary to amend the EOI following a clarification, it shall do so as described below.

- a) At any time before the EOI submission deadline, DOED may amend the EOI by issuing an amendment in writing or by standard electronic means. The amendment shall be published on the DOED website and will be binding.
- b) If the amendment is substantial, DOED may extend the EOI submission deadline to provide interested Proponents with reasonable time to account for such amendments.
- c) Proponents may submit a modified EOI or modifications to any part of it at any time prior to the EOI submission deadline. In case of modification, a cover letter with explanations of the modifications, duly signed by the authorized signatory, shall be submitted along with the modified EOI documents. Failure to submit the cover letter signed by the authorized signatory will result in disqualification.

### 3.9 COST OF PREPARATION OF EOI AND LIABILITY

The proponent shall bear all costs associated with the preparation and submission of the EOI document. DOED will, in no case, be responsible or liable for these costs, or have any other liability to any proponent, regardless of the conduct or outcome of the EOI process. DOED shall have no obligation to any proponent to reimburse any costs incurred in preparing a response to this EOI.

### 3.10 CONFIDENTIALITY OF THE DOCUMENT

If a Proponent believes that any portion of the submittal is to be treated in confidence, they shall identify such information clearly in the submittal. DOED will make every effort to treat such documents in confidence as far as possible.

### 3.11 JOINT LIABILITY FOR JOINT VENTURE COMPANIES

By submitting an EOI in joint venture (JV), the Proponent represents that, if qualified and if awarded the project after the RFP process, the proponent with its constituent members shall be jointly responsible for performing the obligations of such project.

### 3.12 SUBMISSION OF EXPRESSION OF INTEREST (EOI)

#### 3.12.1 Sealing and Marking

1. The proponent shall seal the one original and one copy of the completed EOI in separate envelopes, duly marking the envelopes as "Original" and "Copy". These envelopes shall then be sealed in an outer envelope and marked as "Expression of Interest". The inner as well as outer envelope shall clearly mention the EOI number and title of EOI.
2. The inner and the outer envelopes shall be addressed to:  
  
The Director General  
Department of Electricity Development  
Sanogaucharan, Kathmandu  
Phone No: (977-1-) 4534119, Fax: (977-1-) 5244257  
Email: [info@doed.gov.np](mailto:info@doed.gov.np)
3. The envelopes shall also indicate the name and address of the Proponent for identification purposes.
4. The Proponent shall also submit an electronic copy of the EOI documents. However, the evaluation of the EOI document shall be done only based on the hard copy of the EOI application submitted by the applicant.

#### 3.12.2 Deadline for Submission

1. The completed EOI document must be submitted to DOED before 12:00 noon on the date mentioned in section 3.4.
2. The completed EOI documents received at DOED after the deadline shall be considered late and shall be summarily rejected and returned un-opened.
3. If the deadline specified falls on a government holiday, the deadline shall be extended automatically to the next working day at the same time.

#### 3.12.3 Withdrawal of EOI Document

A proponent shall not be permitted to withdraw the EOI application that has been submitted.

### 3.13 PUBLIC OPENING OF SUBMITTED EOI DOCUMENT

The completed EOI documents received by the due date and within the time specified in Section 3.12.2 will be opened at the time and date specified in Section 3.4 in the presence of the applicants or their authorized representative who-so-ever wish to attend. The absence of the Proponent or their authorized representative, however, shall not obstruct or prevent the opening of the EOI in any way. Proponents' each designated representative must bring a letter from the Proponents stating that he/she is authorized to represent the applicants for the public opening of the EOI document. Proponents or their authorized representatives who are present at the time of opening shall sign a register evidencing their presence.

During the opening, an authorized official of DOED will read out the names of the proponent who have submitted the completed EOI document and then will open the submitted EOI envelopes.

## 4 EVALUATION OF EXPRESSION OF INTEREST

Proponent's EOI applications that meet the eligibility criteria as specified in section 4.1 will be evaluated on the basis of the evaluation criteria outlined in Section 4.2.

### 4.1 ELIGIBILITY & COMPLETENESS TEST OF THE EOI DOCUMENT

The proponent must submit the following documents, as a part of the eligibility criteria, to be eligible for further evaluation process of submitted EOI.

| SN | ELIGIBILITY & COMPLETENESS DOCUMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Copy of Registration of the Company (the company or partner companies in a JV must be registered in Nepal)                                                                                                                                                                                                                                                                                                                                                                                         |
| 2  | Copy of PAN Certificate                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3  | Tax Clearance Certificate for Fiscal year 2080/81                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4  | Processing Fee as stated in Section 3.5                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 5  | JV agreement (if applicable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 6  | Power of Attorney to sign JV agreement (if applicable)                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 7  | Self-declaration <ul style="list-style-type: none"> <li>that the Proponent has no conflict of interest in the proposed procurement proceedings,</li> <li>that the Proponent has not received any punishment for an offense relating to the concerned profession or business</li> <li>that the Proponent has not been declared ineligible.</li> <li>that the Proponent company, JV partners (if applicable) and its shareholders are not blacklisted by any public or regulatory entity.</li> </ul> |
| 8  | The proponent, or any partner in the joint venture (JV), must have successfully commissioned hydropower project(s) with an installed capacity of at least 1 (One) MW<br>Proof of successful commissioning must be evidenced by submitting notarized copies of the letters certifying the Commercial Operation Date (COD) issued by NEA and notarized copies of generation license issued by GON.                                                                                                   |
| 9  | Fully Completed Form 1 to Form 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

#### Note:

- Only the companies registered in Nepal are eligible. In case of JV, partner companies of JV must be registered in Nepal.
- EOI received without or with inadequate EOI Processing fee, as stated in section 3.5, shall be disqualified.
- In the case of JV, the proponent must submit the JV agreement signed by authorized signatories & stamped with company seal of each member of JV in every page of JV agreement & clearly mentioning name of the lead company, name of JV company/s, name of the authorized signatories. In case of failure to submit JV agreement between each JV partner, the EOI will be considered as non-responsive and will not be considered for evaluation. The signature of authorized signatory & stamp of companies should be on each page of JV agreement. If the JV agreement is not signed by an authorized signatory having power of attorney on each page of the JV agreement, the EOI will be considered as non-responsive and will not be considered for evaluation.
- The Proponent must submit power of attorney of authorized signatories to sign JV agreement and submit the EOI from their respective firm with signature & stamp of each member of JV. Such Power of attorney of authorized signatories of JV must be issued by executive head of organization such as Board, Managing Director, CEO or Chairperson, General Manager or equivalent. If otherwise, the EOI will be considered as non-responsive and will not be considered for evaluation.
- In case of a 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 Board of director of blacklisted firm/institution/company; shall not be eligible and will be declared non-responsive.

- 6) If the corruption case is being filed to Court against the Natural Person or Board of Director of the company or any partner of JV, such Natural Person or Board of Director of the company or any partner of JV shall not be eligible to participate in EOI process till the concerned Court has not issued the decision of clearance against the Corruption Charges.

## 4.2 DETAILED EVALUATION OF EOI DOCUMENT

The proponents are required to submit all the necessary documentation in support of the criteria specified for evaluation. The information presented in the EOI must be realistic. If faulty information is found, legal action may be taken in accordance with prevailing laws and regulations. The proponent's EOI will be evaluated as per the requirements outlined in the EOI, using the criteria specified below.

### 4.2.1 Technical Capability (30 points)

#### A. Project Implementation & Business Plan – 10 points

The Proponents should prepare a brief Project Implementation Business Plan that outlines the strategy and framework for executing the Project successfully, ensuring completion on time, within scope, and on budget. Marking will be based on the following points:

| SN | Particulars                                                         | Marking Points |
|----|---------------------------------------------------------------------|----------------|
| 1  | Project Understanding, Timeline and Milestones, Implementation Plan | 5 points       |
| 2  | Financial Plan for successful completion of project                 | 5 points       |

#### B. Project Team Composition – 20 points

The proponent must clearly propose experts for the following key positions for the execution of the project. The evaluation of key experts will be done based on the evaluation criteria mentioned below.

| SN | Key Positions                               | Required min. qualification in relevant subject | Professional experience in related field | Marking Points |
|----|---------------------------------------------|-------------------------------------------------|------------------------------------------|----------------|
| 1  | Project Manager (Hydropower/Civil Engineer) | Master's or Eqv.                                | Min. 10 years after bachelor's degree    | 5.0 Points     |
| 2  | Engineering Geologist                       | Master's or Eqv.                                | Min. 5 years after master's degree       | 2.5 Points     |
| 3  | Hydrologist/ Sedimentologist                | Master's or Eqv.                                | Min. 5 years after bachelor's degree     | 2.5 Points     |
| 4  | Electrical Engineer                         | Master's or Eqv.                                | Min. 5 years after bachelor's degree     | 2.5 Points     |
| 5  | Mechanical Engineer                         | Master's or Eqv.                                | Min. 5 years after bachelor's degree     | 2.5 Points     |
| 6  | Economist/ Financial Analyst                | Master's or Eqv.                                | Min. 5 years after master's degree       | 2.5 Points     |
| 7  | Environmental Engineer/ Environmentalist    | Master's or Eqv.                                | Min. 5 years after bachelor's degree     | 2.5 Points     |

#### Note:

- 1) Evaluation shall be done only for the experts proposed for the key positions as mentioned in Form-4. If the proponent fails to propose expert for the key position, marks for such shall not be given.
- 2) The pass year, month and date of educational degree of the key professionals shall also be mentioned in the "Key Experts" Form.
- 3) The "Key Experts" Form must be supported by the signed Brief Curriculum Vitae (CV), notarized copies of qualification certificates of minimum and higher degree (education degree/transcript), notarized copy of Nepal Engineering Council (NEC) certificate (for the engineering professionals). In absence of Brief Curriculum Vitae, qualification certificate and NEC certificate (for the engineering professionals); such professionals will get zero marks in his/her evaluation. In case of submission of only higher qualification certificate, years of experience will be counted from submitted higher qualification certificate during evaluation.
- 4) Each page of CV must be signed by the respective key experts. If the CV is not signed on each page, it will not be considered for evaluation.

- 5) The proponent may propose individual experts or experts through consulting firm. If the experts are proposed through a consulting firm, MoU between the proponent and consulting firm must be submitted. If the proponent fails to submit the MoU, evaluation of experts for the key positions shall not be done.

#### 4.2.2 Financial Capability (40 Points)

Proponent shall demonstrate its financial capability to mobilize financial resources and develop the project on time. Financial capability will be assessed based on the cumulative net worth of the Proponent company and its shareholders as well as the net worth of JV partners (if applicable).

| SN | Description                                                                                                                | Weightage |
|----|----------------------------------------------------------------------------------------------------------------------------|-----------|
| 1  | Cumulative Net worth < 10% of the total estimated cost of the project                                                      | 0 %       |
| 2  | Cumulative Net worth ≥ 10% of the total estimated cost of the project and < 20% of the total estimated cost of the project | 70 %      |
| 3  | Cumulative Net worth ≥ 20% of the total estimated cost of the project and < 30% of the total estimated cost of the project | 85 %      |
| 4  | Cumulative Net worth ≥ 30% of the total estimated project cost.                                                            | 100 %     |

#### Note:

- The total estimated project cost is provided in the section 1.3.
- The net worth of the proponent company and its shareholders will be evaluated on a cumulative basis. In the case of JV, the net worth of partner companies within JV, along with their respective shareholders, will also be considered cumulatively for the evaluation.
- The Proponent is required to submit the following:
  - Separate net worth certificates for
    - The company itself
    - Each individual shareholder of the company
  - For Joint Ventures (JV):
    - Separate net worth certificates for each partner company in the JV
    - Separate net worth certificates for the individual shareholders of each partner company
  - In addition to the separate net worth certificates, the proponent must also submit a cumulative net worth certificate, which combines the net worth of the company and its shareholders (or JV partner companies and their shareholders) for evaluation purposes.
- All net worth certificates outlined in 3 must be prepared and signed by a Chartered Accountant (CA) and must include a Unique Document Identification Number (UDIN).

#### 4.2.3 Hydropower Project Development Experience (30 points)

The proponent shall demonstrate experience in developing at least one hydropower project that has been successfully commissioned in Nepal.

| SN | Description                                                                                 | Weightage |
|----|---------------------------------------------------------------------------------------------|-----------|
| 1  | Development of at least one hydropower project with Installed Capacity between ≥ 1 to 5 MW  | 70 %      |
| 2  | Development of at least one hydropower project with Installed Capacity between > 5 to 10 MW | 85 %      |
| 3  | Development of at least one hydropower project with Installed Capacity > 10 MW              | 100 %     |

#### Note:

- The installed capacity of a project will be considered based on the installed capacity mentioned in the generation license.
- All the relevant hydropower projects developed by the proponent must be listed in Form 5 of this EOI



- 3) The proponent's experience must be supported by notarized copies of Commercial Operation Date (COD) letter issued by NEA and the generation license issued by GON.

#### **4.2.4 General Evaluation Guideline**

- 1) The Proponent must put the signature of authorized representative and stamp of company on each page of the EOI document, except for the copies of documents issued by the public entity. Otherwise, those pages will not be considered for evaluation.
- 2) All the photocopies of the documents submitted together with the Technical Proposal should be notarized. If the copy of the documents is not notarized, the particular non-notarized copy will not be considered for evaluation.

#### **4.3 SHORTLISTING OF THE PROPONENT**

- 1) In accordance with the Public Private Partnership and Investment Act (PPPIA), 2075.
  - a. Based on the ranking of the evaluated EOI, the maximum six proponents securing at least 60 percent marks will be shortlisted.
  - b. In the event if only one EOI proposal is received, such EOI will be considered for evaluation.



## 5 EOI DOCUMENT REQUIREMENT AND FORMATS

1. The EOI document shall be prepared in accordance with the requirements specified in this document following the prescribed format for each of the above-mentioned eligibility and qualifying criteria as proof of meeting the minimum requirements.
2. The EOI must be realistic, concise, and complete. Any information not directly relevant to this EOI should be excluded.
3. The EOI shall be sealed and clearly super scribed "*Response to EOI for the Development of Lungri Khola HPP (6 MW), Ropla District on a Built-Own-Operate-Transfer (BOOT) Model*" and addressed to DOED at the address specified in this document.
4. In case of discrepancies between the information in the printed version and the contents of the USB Drive, the printed "ORIGINAL" version of the EOI document will prevail and be used for evaluation.
5. The EOI should be submitted in the sealed envelope containing the following:

### Part I – Covering Letter, Processing Fee and Eligibility Documents

- a. A Covering Letter from the Proponent as per Annexure – Form 1.
- b. A non-refundable processing fee for Rs. 1,50,000 (Rupees One Lakh Fifty Thousand only) in the form of a bank voucher deposited into GON Revenue Account No. 1000100200010000 in name of Office Code 308013501 (Department of Electricity Development) Revenue Title No. 14229 (Prashasanik Sulka) in Rastriya Baniya Bank, Teku Branch.
- c. Legal Documents, including company registration, PAN Registration, Tax Clearance Certificate of Fiscal Year 2080/81, JV agreement (if applicable), Power of Attorney and Self-declaration as outlined in Section 4.1.

### Part II – Details of the Organization

This part must include a general background of the respondent organization, along with other required organizational as per Annexure – Form 2.

### Part III – Technical Capacity

- a. This section must include brief Project Implementation Business Plan outlining the strategy and framework for successfully executing the project, ensuring completion on time, within scope, and on budget. (Annexure – Form 3)
- b. It must also, include Project Team Composition and brief CVs of the key positions (Annexure – Form 4).

### Part IV – Relevant Project Experience

Proponents must provide project experience specified in Section 4.2.3, using the format provided in the EOI (Annexure – Form 5).

### Part V - Net Worth

The proponent must provide the net worth certificate as specified in form 6. The net worth certificate of a company/shareholder can be prepared in appropriate standard format.

## **6 EOI FORMS**

**Form 1: Letter of Application**

**Form 2: Proponent's Information Form**

**Form 3: Project Implementation Business Plan**

**Form 4: Project Team Composition (include details of key positions only)**

**Form 5: Proponent's Work Experience**

- 5(a). List of completed projects as a developer
- 5(b). Hydropower Project Development Experience
- 5(c). Salient feature of the project

**Form 6: Net Worth**

Form 6(A) Cumulative Net worth Certificate

Form 6(B) Net worth Certificate

## FORM 1: LETTER OF APPLICATION

(To be printed on the letterhead paper of the proponent or the partner responsible for a joint venture, including full postal address, telephone no., fax and email address)

Date: [Insert Date]

To,  
Procurement Unit  
Department of Electricity Development  
Sanogaucharan, Kathmandu  
Telephone: +977 1 4413653, E-mail: info@DOED.gov.np

Dear Sir/Madam,

1. Being duly authorized to represent and act on behalf of [Proponent's Name], (hereinafter referred to as "the proponent") and having reviewed and fully understood all the information provided in Expression of Interest (EOI) document, the undersigned hereby applies to be shortlisted by **The Department of Electricity Development (DOED)** as Proponent for Development of Lungri Khola HPP (6 MW), Ropla District on a Built-Own-Operate-Transfer (BOOT) Model.
2. Attached to this letter are photocopies of original documents that define:
  - a) The proponent's legal status
  - b) The proponent's principal place of business
3. **Department of Electricity Development (DOED)** and its authorized representatives are hereby authorized to verify the statements, documents, and information submitted in connection with this application. This Letter of Application also serves as authorization for any individual or authorized representative of any institution referenced in the supporting information, to provide such additional information as may be deemed necessary by DOED to verify the details provided in this application, or to assess the resources, experience, and competence of the proponent.
4. The Department of Electricity Development 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's Name]*  
*[Company Name] and [Address]*  
*[Phone, Fax, Email]*
6. We hereby declare that we do not have any conflict of interest in the proposed procurement process, and that we have not been convicted for any offense related to the relevant profession or business. Additionally, our Company/firm has not been declared ineligible.
7. The undersigned affirms that all statements made, and information provided in this application are complete, true, and accurate in every detail.
8. We fully understand that the decision made by DOED regarding the evaluation of this EOI is final.

Signed:

[Name of Signatory]:

[Designation]

For and on behalf of [Name of Proponent or Joint Venture Partner]:

---

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

## FORM 2: PROPONENT'S INFORMATION FORM

*(To be filled separately for each constituent member in case of a joint venture)*

1. Name of Firm/Company:
2. Type of Constitution (Partnership/ Pvt. Ltd/Public Ltd/ Public Sector)
3. Date of Registration / Commencement of Business (Please specify the date):
4. Registered Office/Place of Business:
5. Contact Information  
Telephone No; Fax No; E-Mail Address
6. Name of Authorized Contact Person  
/ Designation/ Address/Telephone:
7. Proponent's Organization:  
(Provided details of the organizational structure, management and business focus, etc)
8. Shareholders & Latest Shareholding Structure  
(List the names of shareholders and the current shareholding structure.)
9. Total number of staff:
10. Number of regular professional staff:

Additional Information:

(Please provide a Company Profile, including a description of the background and organization of the Proponent, and, if applicable, the joint venture partners for this assignment.)



### FORM 3. PROJECT IMPLEMENTATION BUSINESS PLAN

Briefly describe the project implementation business plan including the key features like the strategy and framework for executing a project successfully, ensuring that it is completed on time, within scope, and on budget.

#### FORM 4. PROJECT TEAM COMPOSITION (INCLUDE DETAILS OF KEY EXPERTS ONLY)

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

| S<br>N | Name                  | Position                                             | Academic Qualification and Pass<br>Year/Month                                                                                                                           | Work<br>Experience<br>(In year)              | Specific<br>Experience<br>(year)              | Work<br>(in |
|--------|-----------------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------|-------------|
| 1      | Eg...<br>Name Surname | Eg...<br>Project<br>Manager<br>(Hydropower Engineer) | Eg...<br>Bachelor of Engineering (Civil),<br>Dec 2010, Tribhuvan University<br>Master of Engineering<br>(Hydropower Development),<br>Dec. 2013, Tribhuvan<br>University | Eg...<br>10 years in<br>Engineering<br>Field | Eg...<br>5 years in<br>Hydropower<br>projects |             |
| 2      |                       |                                                      |                                                                                                                                                                         |                                              |                                               |             |
| 3      |                       |                                                      |                                                                                                                                                                         |                                              |                                               |             |
| 4      |                       |                                                      |                                                                                                                                                                         |                                              |                                               |             |
| 5      |                       |                                                      |                                                                                                                                                                         |                                              |                                               |             |

(Please insert more rows as necessary)

Also, include brief CV signed of the key experts on each page, followed by the enforcement of the Authorized Representative.

## FORM 5: PROPONENT'S WORK EXPERIENCE

### 5(a). List of Completed Hydropower Projects as a Developer

(Details of project development. Each Firms or member of a JV must fill in this form.)

| SN | Name of Project | Location | Project Scheme | Generation License Issuance Date and Number | Capacity | Commercial Operation Date |
|----|-----------------|----------|----------------|---------------------------------------------|----------|---------------------------|
| 1. |                 |          |                |                                             |          |                           |
| 2. |                 |          |                |                                             |          |                           |
| 3. |                 |          |                |                                             |          |                           |
| 4. |                 |          |                |                                             |          |                           |
| 5. |                 |          |                |                                             |          |                           |
| 6. |                 |          |                |                                             |          |                           |
| 7. |                 |          |                |                                             |          |                           |

### **5(B). Hydropower Project Development Experience**

Details of similar assignments undertaken

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

|                                                                                                             |                               |
|-------------------------------------------------------------------------------------------------------------|-------------------------------|
| Project name:<br>Generation License Number:<br>Generation License Issue Date:<br>Commercial Operation Date: | Approx. Project Cost:         |
| Country:<br><br>Location within country:                                                                    | Construction period (months): |
| Name of Developer:                                                                                          | Address:                      |
| Start date (month/year):                                                                                    | Completion date (month/year): |
| Narrative description of Project:                                                                           |                               |

Company's Name:



### **5(C). Salient Feature of the Project**

Salient Feature of similar assignments undertaken.

The Salient feature should include minimum these Key features of the project.

Project name:

Location:

River source:

Scheme:

Accessibility:

Installed capacity:

Gross head:

Net head:

Hydrology and catchment characteristics:

Headworks:

Settling basin:

Water conveyance:

Surge tank:

Penstock:

Power House:

Tailrace:

Power and energy:

Power evacuation:

Project Cost and Financial Parameter:

Key Project Timeline:

You may include project browser if any.

## FORM 6: NET WORTH

### Form 6(A) Cumulative Network Calculation

The cumulative net worth of the (*shareholders/shareholders and the company*) of (*name of the company*) as of (*date*) is *NPR* ..... The detailed calculation has been presented in the following table.

| SN | Shareholder's Name/Company Name | Net Worth     |
|----|---------------------------------|---------------|
| 1. |                                 |               |
| 2. |                                 |               |
| 3. |                                 |               |
| 4. |                                 |               |
|    | <i>Add Rows as required</i>     |               |
|    | Cumulative Net Worth            | (1+2+3+4+...) |

Cumulative Net Worth Amount in Words: .....

Authorized Signature {In full and initials}:

Name and Title of Signatory:

### Form 6(B) Net Worth Certificate

It is to certify that the net worth of *(name of shareholder/company)* as of *(date)* is NPR .....

The detailed calculation has been presented in the following table.

| SN                         | Description                 | Amount      |
|----------------------------|-----------------------------|-------------|
| <b>A. Immovable Assets</b> |                             |             |
| A1.                        |                             |             |
| A2.                        |                             |             |
|                            | <i>Add rows as required</i> |             |
| A.                         | Total Immovable Assets      | (A1+A2+...) |
| <b>B. Movable Assets</b>   |                             |             |
| B1.                        |                             |             |
| B2.                        |                             |             |
|                            | <i>Add rows as required</i> |             |
| B.                         | Total Movable Assets        | (B1+B2+...) |
| C.                         | Total Assets                | A+B         |
| D.                         | Total Liabilities           | D           |
| E.                         | Net Worth                   | C-D         |

Net Worth Amount in Words: .....

Declaration: The valuation of both movable and immovable assets presented above has been done after duly verifying the valid legal documents related to the assets including the valuation report dated ..... prepared by *(valuing firm/valuator name: NEC number)*.

Name of the Chartered Accountant:

Name of the Firm:

Membership No.:

UDIN No.:

Signature and Seal:

## **ANNEX 1: PROJECT SALIENT FEATURE**

## SALIENT FEATURES OF LUNGRI KHOLA HPP (6 MW)

| S.No.      | Descriptions                                        | Characteristics                                                                                                                                       |
|------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1.</b>  | <b>General</b>                                      |                                                                                                                                                       |
|            | Name of Project                                     | Lungri Khola Hydropower Project                                                                                                                       |
|            | Name of the River                                   | Lungri Khola                                                                                                                                          |
|            | Project Layout                                      | Right Bank of Lungri Khola                                                                                                                            |
|            | Type of Project                                     | Run of River (ROR)                                                                                                                                    |
|            | Development Region                                  | Mid-Western Development Region                                                                                                                        |
|            | District                                            | Rolpa                                                                                                                                                 |
|            | Project VDCs/Rural Municipality                     | Subarnawati Rural Municipality (Mijhing); Sunchahari Rural Municipality (Phagam and Jaimakasala), Lungri Rural Municipality (Harjang and Gumchal VDC) |
|            | Affected VDCs                                       | Jaimakasala-6, Phagam-9, Mijhing-6                                                                                                                    |
|            | Geographical Location                               | Project Boundary<br>Latitude 28°14' 00" N to 28°18' 30" N<br>Longitude 82° 43' 00" E to 82° 47' 45" E                                                 |
|            | Location of Proposed Weir and Intake                | Harjang VDC at approximately 82°46' E and 28°18' N and about 5 km northeast of Sulichour Bazaar of Bhaluwang-Pyuthan-Liwang Road.                     |
|            | Location of Powerhouse                              | At Ruiniban ( Left Bank of Phagam Khola )                                                                                                             |
| <b>2.</b>  | <b>Hydrology</b>                                    |                                                                                                                                                       |
|            | Catchment Area                                      | 301 km <sup>2</sup>                                                                                                                                   |
|            | Design flow discharge, Q <sub>35</sub>              | 5.75 m <sup>3</sup> /s                                                                                                                                |
|            | Average Annual Flow                                 | 9.39 m <sup>3</sup> /s                                                                                                                                |
| <b>3.</b>  | <b>Power and Energy</b>                             |                                                                                                                                                       |
|            | Total Gross Head                                    | 124.2m                                                                                                                                                |
|            | Gross Head at Surge tank H <sub>gr</sub>            | 120m                                                                                                                                                  |
|            | Installed Power Capacity                            | 6 MW                                                                                                                                                  |
|            | Total Annual Gross Marketable Seasonal (Wet Energy) | 25.68 GWh                                                                                                                                             |
|            | Total Annual Gross Marketable Seasonal (Dry Energy) | 5.87 GWh                                                                                                                                              |
|            | Total Annual Marketable Energy after outage         | 31.56 GWh                                                                                                                                             |
| <b>4.</b>  | <b>Design Features</b>                              |                                                                                                                                                       |
| <b>4.1</b> | <b>Diversion Weir</b>                               |                                                                                                                                                       |
|            | Type of Weir                                        | Ogee Shaped Concrete Gravity                                                                                                                          |
|            | Foundation Condition                                | Thick Alluvial Deposit                                                                                                                                |
|            | Full Supply Level                                   | 905m a.s.l                                                                                                                                            |
|            | Weir Height above foundation level                  | 5m                                                                                                                                                    |
|            | Weir Length                                         | 26m                                                                                                                                                   |
|            | Intake(Opening)                                     | 2 in no. with dimension of 2.0 m x 2.0 m                                                                                                              |
|            | Geology                                             | Gravel/boulder of quartzite, schist and Gneiss deposit                                                                                                |
| <b>4.2</b> | <b>Gravel Trap</b>                                  |                                                                                                                                                       |
|            | Design Flow                                         | 5.75 m <sup>3</sup> /s                                                                                                                                |
|            | Gradient                                            | 1 in 50                                                                                                                                               |
|            | Length                                              | 15m                                                                                                                                                   |
|            | Width                                               | 5m                                                                                                                                                    |
|            | Spillway Length                                     | 12m                                                                                                                                                   |

|     |                                         |                                                                       |
|-----|-----------------------------------------|-----------------------------------------------------------------------|
|     | Geology                                 | Boulders - gravel of schist, quartzite, silty clay and sand           |
| 4.3 | <b>Approach Canal after gravel trap</b> |                                                                       |
|     | Design Flow                             | 6.33 m <sup>3</sup> /s                                                |
|     | Section                                 | Rectangular, Open RCC                                                 |
|     | Size                                    | 2.2 m x 2 m                                                           |
|     | Length                                  | 110m                                                                  |
|     | Gradient                                | 1:1000                                                                |
|     | Geology                                 | Alluvial and Colluvial Deposits                                       |
| 4.4 | <b>Desanding Basin</b>                  |                                                                       |
|     | Design Flow                             | 5.75 m <sup>3</sup> /s                                                |
|     | Type                                    | Double chamber with Continuous Flushing                               |
|     | Section                                 | Rectangular concrete lined                                            |
|     | Number of Basins                        | 2                                                                     |
|     | Length                                  | 76m (including transitions) silt particle size larger than 0.20mm     |
|     | Width                                   | 5m of each bay                                                        |
|     | Depth                                   | 3m                                                                    |
|     | Settling velocity                       | 0.021 m/s                                                             |
|     | Mean flow velocity                      | 0.197m/s                                                              |
|     | Geology                                 | Alluvial and Colluvial deposit                                        |
| 4.5 | <b>Headrace Canal</b>                   |                                                                       |
|     | Design flow                             | 5.75 m <sup>3</sup> /s                                                |
|     | Section                                 | Rectangular, Open, Concrete Lined                                     |
|     | Size                                    | 2.2m x 2m                                                             |
|     | Gradient                                | 1:1400                                                                |
|     | Length                                  | 3825 m                                                                |
|     | Geology                                 | Phyllites and Slate                                                   |
| 4.6 | <b>Head Pond</b>                        |                                                                       |
|     | Section                                 | Rectangular, Open, Concrete Lined                                     |
|     | Size                                    | 20m x 4m x 4m (L x B x H)                                             |
| 4.6 | <b>Headrace Tunnel</b>                  |                                                                       |
|     | Design flow                             | 5.75 m <sup>3</sup> /s                                                |
|     | Section                                 | Inverted D-shaped                                                     |
|     | Tunnel Length                           | 4060 m                                                                |
|     | Clear size                              | 2.6m x 2.6m                                                           |
|     | Gradient                                | 1:500                                                                 |
|     | Geology                                 | Phyllites and Slate for 2510m and remaining 1550m limestone and shale |
| 4.7 | <b>Surge Tank</b>                       |                                                                       |
|     | Type                                    | Simple Orifice                                                        |
|     | Design flow                             | 5.75 m <sup>3</sup> /s                                                |
|     | Water Level                             | 900.8 masl                                                            |
|     | Size                                    | 25m (H) x 7m (dia)                                                    |
|     | Maximum Upsurge                         | 912.30 masl                                                           |
|     | Minimum Down surge                      | 895.50 masl                                                           |
|     | Geology                                 | Phyllites and Schist                                                  |
| 4.8 | <b>Penstock</b>                         |                                                                       |
|     | Design flow                             | 5.75 m <sup>3</sup> /s                                                |
|     | Internal Diameter                       | 1.4m before bifurcation, 1m after bifurcation                         |

|            |                                           |                                                                                |
|------------|-------------------------------------------|--------------------------------------------------------------------------------|
|            | Length                                    | 137 m                                                                          |
|            | Thickness                                 | 8mm to 17mm                                                                    |
|            | Geology                                   | Limestone with slate and Colluvium with thin residual soil                     |
| <b>4.9</b> | <b>Powerhouse and Tailrace</b>            |                                                                                |
|            | Type                                      | Semi Underground                                                               |
|            | Size(L x B x H)                           | 34.5m x 17.5m x 28m                                                            |
|            | Turbine Axis                              | 780.8 masl                                                                     |
|            | Installed capacity                        | 6 MW                                                                           |
|            | Number of generating units                | 2                                                                              |
|            | Tailrace Water Level                      | 784 masl                                                                       |
|            | Gross Head                                | 124.2 m                                                                        |
|            | Net Head                                  | 118.8 m                                                                        |
|            | Tailrace Canal Type                       | Rectangular Canal                                                              |
|            | Tailrace Canal Size                       | 3 m x 1.5 (B x H) (After unification)                                          |
|            |                                           | 2 m x 1.5 (B x H) (Before unification)                                         |
|            | Length                                    | 142m                                                                           |
|            | Minimum Flow in Tailrace                  | 2.875 m <sup>3</sup> /s (Before unification)                                   |
|            | Geology                                   | Alluvium Deposits, Gravel/boulder of gneiss with medium to coarse sand deposit |
| <b>5.0</b> | <b>Generating Equipments</b>              |                                                                                |
|            | Turbine Type                              | Horizontal Shaft, Francis                                                      |
|            | Number                                    | 2                                                                              |
|            | Capacity each with output                 | 3 MW and Synchronous speed 1000 rpm                                            |
| <b>6.0</b> | <b>Transmission Line</b>                  |                                                                                |
|            | Length                                    | 14 km                                                                          |
|            | Power Evacuation                          | To the Switchyard of Madi Khola HPP (under Detail Engineering Study by DoED)   |
|            | Transmission Voltage/Number of Circuits   | 33KV/Single Circuit                                                            |
| <b>7.0</b> | <b>Project Road</b>                       | 1.82 km                                                                        |
| <b>8.0</b> | <b>Economic and Financial Parameters</b>  |                                                                                |
| <b>8.1</b> | <b>Economic Indicators</b>                |                                                                                |
|            | Project Cost                              | NRs. 1071 million                                                              |
|            | Benefit-Cost Ratio(B/C)                   | 1.20                                                                           |
|            | Specific Cost                             | 5.25 NRs/kWh                                                                   |
|            | Economical Internal Rate of Return (EIRR) | 14.32 %                                                                        |
|            | Net Present Value (NPV)                   | NRs 261.06 million                                                             |
| <b>8.2</b> | <b>Financial Indicators</b>               |                                                                                |
|            | Payback Period                            | 8.28 years                                                                     |
|            | FIRR                                      | 11.0%                                                                          |
|            | Net Present Value (NPV)                   | 117.34 million                                                                 |
|            | Benefit-Cost Ratio(B/C)                   | 1.08                                                                           |
|            | Specific Energy Cost                      | 5.83 NRs/kWh                                                                   |
| <b>9.0</b> | <b>Effective Construction Period</b>      | 24 months                                                                      |