



ENERGY MANAGEMENT CENTRE -KERALA
Department of Power, Government of Kerala
Thiruvananthapuram, Kerala – 695 017;
www.keralaenergy.gov.in

Invitation for Expression of Interest (EOI) for, the Installation & Commissioning of 20kW (2 x 10kW) Micro Hydroelectric Power Project Using Vortex Technology as a R&D project at the suitable location/ premises of interested parties.

This invitation for Expression of Interest does not call for a solicitation. The Energy Management Centre- Kerala (Hereinafter referred to as 'EMC'), reserves the right to change or cancel the requirement at any time during the EOI and/or solicitation process. EMC also reserves the right to seek for other compliance norms with additional conditions as and when the final solicitation documents are issued.

1. INTRODUCTION

Energy Management Centre, Department of Power, Government of Kerala a Designated Government agency to co-ordinate, regulate and enforce the provisions of the Energy Conservation Act 2001 and the Technical Secretariat for Small Hydro Power Development invites Expression of Interest (EOI) from interested parties/ agencies for, the Installation & Commissioning of 20kW (02 X 10kW) Micro Hydroelectric Power Project Using Vortex Technology as a R&D Project at the suitable location/ premises of the parties.

The vortex turbine and other associated parts sourced as part of the R&D project for the complete vortex turbine technology implementation is available with EMC. This was installed at Kaduvetty, Thiruvananthapuram in 2018 year. The project was successfully installed and operated at this location and but due to the flood happened in 2018, the equipment and other associated electrical control units are dismantled and stored at another locations.

2. OBJECTIVES OF THE PROJECT:

- To install and commission a grid-connected 20 KW (02X10kW) Micro Hydroelectric Power Project using vortex turbine technology as a research and demonstration scheme.

3. EXPRESSION OF INTEREST

- EMC invites Expressions of Interest from interested parties/agencies located in India for the installation and commissioning of a grid-connected 20 kW (2 x 10kW) Micro Hydroelectric Project using Vortex Turbine Technology as a R&D project on a land lease arrangement with EMC.

4. OBJECTIVE OF THE EOI

- The objective of the EOI is to shortlist suitable interested parties/ agencies for the installation and commissioning of a grid connected 20kW (2 x 10kW) Micro Hydro Electric Project using Vortex Turbine Technology as a R&D project at their suitable location. The vortex turbine and associated electro-mechanical parts are available with 2 EMC. The EOI is intending to identify a suitable location for installing the said

machines through a lease rent route. The successful bidder shall execute a land lease agreement with EMC for utilizing the land required for the project. The land lease cost will be paid by EMC on monthly basis.

5. ELIGIBILITY CRITERIA

The respondent should have the available own land with suitable head and required water availability to implement the Vortex Turbine Project. (The required site specification and features are given in clause 7). The respondent can be any private party/ organization/ Trust /institution or LSGDs etc.

1. EOI can be submitted by an individual/ organization/ institution/ LSGDs/ Cooperative Institutions/ trusts or a consortium.
2. In case of consortium, they should be limited to a maximum of 3 members where the Principal Bidder will be the single point of contact for the tenderer and will be entirely responsible for the implementation of the proposed project.
3. In the case of a consortium, the Principal Bidder should only respond to the EOI but shall submit the credentials of all the consortium members.
4. The bidder/bidding agency must have land ownership documents where the proposed vortex turbine is planned to be implemented.
5. The bidder/bidding agency must have suitable land and water availability for the complete installation of the project.
6. The bidder/bidding agency who having suitable land for the implementation of the project will be selected on the basis of minimum lease amount offered to the implementing agency, EMC- Kerala.

6. FORMAT OF EOI RESPONSE AND INSTRUCTIONS TO BIDDERS

Detailed response to the EOI consisting of the following: -

- a. Forwarding letter
- b. Bidder Information (as per Proforma 1)
- c. A brief Proposal on the Bidder's offerings.
- d. Letter of Authority/Power of Attorney from the competent authority for the authorized legal representative of the organization
- e. In the case of a consortium to be formed for this purpose: -
 - I. An authenticated document (such as Memorandum of Understanding/an³ undertaking in a stamp paper) which describes the Bidder's willingness to form a

consortium.

II. A brief description of the Principal Bidder along with the consortium members details and a summary of the activities to be carried out by the Principal Bidder as well as the consortium members.

III. The Land Ownership certificate issued by Land- revenue department will be the necessary documentary evidence proving the eligibility criteria.

f. Compliance to the EOI Terms and Conditions (as per Proforma 2)

7. SPECIFIC SITE NEEDS

- Minimum Water Flow of around 1.5 m³/sec (1500 ltrs/sec) (ideally minimum 0.5 m³/s to maximum 3m³/s)
- Head requirement: 1.5 – 2 mtrs
- Clear area of minimum 6 m diameter for one installation of 10 kW plus an area of 6 sqm for control panel room.
- Application area of technology are: Irrigation channels, run-off river or tail race of large hydro projects etc.
- Work involves civil concrete construction work along with excavation and diversion of water from stream through bank
- Ideally suited in location with a check dam on a stream for small diversion with release back in maximum of 15m downstream;

8. EVALUATION AND SHORTLISTING

- EMC will make a preliminary examination of the EOI to determine whether the Bidder / consortium of Bidders qualify as per EMC's requirements. The Participant's eligibility will be evaluated based on the criteria stipulated vide section 5 of the request for EOI.
- The EMC team will visit the project location to ensure the suitability of the land for the implementation of the project. The boarding and lodging for the site visit shall be arranged by the bidder.
- The successful bidder will be entered into an MoU/agreement with EMC.

9. FINANCIAL PARAMETERS FOR THE EVALUATION OF THE EOI

- Approx land requirement during construction stage: approximately 20 cents, (1 cent = 40.46m²).
- Land requirement post-construction stage: 5-10 cents depending on the suitability⁴ of the location.

- Lease Rent Offer: The interested party may offer lease rent per square metre. The bidder offering the lowest lease rent per square metre may be selected.
- **Additional Financial Evaluation Criteria:**
 - The overall financial proposal will be evaluated based on the lease rent offered and the feasibility of the land for the project implementation.
 - The cost-effectiveness of the location in terms of access, construction ease, and maintenance will also be considered during the financial evaluation.

The bidder shall fill out the per square meter lease rent in proforma- 1

10. OTHER FINANCIAL ASPECTS

- The installation and commissioning cost will be borne by EMC.
- The land lease cost shall be paid to the land owner by EMC on a rental basis from the revenue generated through the energy production.

11. TECHNICAL SUPPORT

- EMC will directly carryout the project implementation activities. This includes:
 - ✚ Site Assessment: Conducting a thorough site assessment to determine the suitability for installing the vortex turbine.
 - ✚ Complete installations and commissioning
 - ✚ Grid connection interface
 - ✚ Monitoring of the power generation to ensure optimal performance.
 - ✚ Time period expected for completion of the project: 06 Months.

12. OTHER REQUIREMENTS

- ✚ If the location is prone to floods, this must be informed to EMC through proforma 1 of this document.
- ✚ The successful bidder must agree to provide unhindered vehicular access to the project location for the implementation.
- ✚ The successful bidder must give provision for temporary storage of materials during the installation stage.
- ✚ The decision on the implementation of the project as a single unit or a double installation will be EMC's prerogative.

All the above requirements shall be duly agreed upon by the successful bidder and included in the terms and conditions of the MoU/Agreement.

13. SCHEDULE OF EOI PROCESS

EOI Schedule		
Sl No.	Activity	Timeline
1	Date of Issuance of EOI	11.07.2024
2	Pre submission online clarification meeting	17.07.2024
3	Last date and time for submission of EOI	24-07.2024
	Date and Time of EOI opening	25-07-2024, 3 pm

14. The responses / queries should be addressed to:

The Director
 Energy Management Centre- Kerala
 Department of Power, GoK
 Sreekrishna Nagar, Sreekaryam PO
 Thiruvananthapuram- 695017
 Kerala - 695036

a. Terms & Conditions:

- The eligible and interested vendors may send detailed response with EOI in the prescribed format by 15:00 hours on or before 24.07.2024.
- Any EOI received by EMC after the deadline of submission of EOI will be rejected. In the event of the specified date and time of the EOI, being declared a holiday for EMC, the EOI will be received up to the appointed time on the next full working day. Extension of submission date and time will be at the sole discretion of EMC.
- The Hardcopy of the EOI documents shall be submitted EMC on before the last date.
- EOIs received by facsimile or electronic mail will be rejected.
- Any inter lineation, errors or overwriting shall be valid only if the person signing the EOI initials them.
- Any form of canvassing/lobbying/influencing regarding short listing etc. will be a disqualification
- EMC reserves the right to verify any / all of the credentials provided by the Bidder.
- During evaluation and finalization of the EOI, EMC may, at its discretion, ask the Bidders for any clarification on its EOI. The request for clarification and the response shall be through e-mail followed by letter in writing.
- The Bidder / consortium is expected to examine all instructions, forms, terms and conditions in these documents. Failure to furnish all information required by EMC or to submit EOI not substantially responsive in every aspect will be at the risk of the Bidder / consortium and may result in the rejection of its EOI.

- Any assumptions made by the Bidder / consortium in response of this request for EOI will be at their own risk and cost. EMC will not be liable for any such assumptions.
- EOI submitted should remain valid for a period of 90 days from the scheduled date of opening.
- Enquiries for clarifications should be sent to the e-mail emck@keralaenergy.gov.in least 3 days prior to the last date of submission of EOI

Proformas

Proforma 1 – Bidder Information

Contact details	
Name of the Bidder	
Address and other contact details of the Participant submitting the EOI	7

Name, designation and address of the authorized legal representative and signatory of the EOI	
Name, designation, address and other contact details of the Contact person to whom all correspondence is to be addressed in respect of this EOI	
Address and contact details of Office	
The land ownership proof details:	
Whether the location is prone to floods. (If Yes, mention the flooding pattern details, like maximum level rise, approximate number of flooding days, etc)	
The lease rent proposed per square metre (INR):	

** In case of consortium, the Bidder has to give the details of the Prime Bidder only.*

Proforma 2 - Statement of Deviations from EOI Terms and Conditions

Date:

Ref.

No.:

To

The Director

Energy Management Centre- Kerala

Department of Power, Govt of Kerala

Sreekrishna Nagar, Sreekaryam PO
 Thiruvananthapuram- 695017
 Kerala- 695036

Sir,

There are no deviations (null deviations) from the terms and conditions of the EOI document. All the terms and conditions of the EOI document are acceptable to us.

OR (Strike out whatever is not applicable)

Following are the deviations from the terms and conditions of the EOI document. These deviations and variations are exhaustive. Except these deviations and variations, all other terms and conditions of the EOI document are acceptable to us.

SI No.	Section No.	Page No.	Paragraph	Statement of Deviations and Variations
1.				
2.				

Dated _____

Signature and Seal of the Bidder

The participating vendors are required to submit unambiguous documentary evidence in support of their meeting the said eligibility criteria. EMC will evaluate the EOI of the vendors who are found eligible as per the above eligibility criteria. The decision of EMC would be final and binding on all the bidders to this document.