



**ENERGY MANAGEMENT CENTRE -KERALA**

Department of Power, Government of Kerala

Thiruvananthapuram, Kerala – 695 017;

[www.keralaenergy.gov.in](http://www.keralaenergy.gov.in)

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**EXPRESSION OF INTEREST (EOI)**

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**Ref. No.: EMC/269/2021-ETB-5/EOI-1**

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<b>Shortlisting</b>	<b>: -</b>	<b>4<sup>th</sup> August 2021</b>

# **PROCEDURE AND GUIDELINES**

## **EXPRESSION OF INTEREST FOR:**

- 1. STUDY OF POTENTIAL ON INSTALLATION OF HYDROKINETIC ENERGY PROJECTS IN KERALA**
- 2. PILOT INSTALLATION OF 100 kW PROJECT IN AN IRRIGATION CANAL IN PALAKKAD DISTRICT ON RESCO/EPC MODE**
- 3. PHASED MANNER REPLICATION IN POTENTIAL SITES IN THE STATE, AS A JV PARTNER IN AN SPV FORMED FOR THIS PURPOSE OR OTHER MUTUALLY AGREED AND ACCEPTED MODE.**

## INFORMATION TO BIDDERS

### 1. Description of State

Kerala is one of the states located in the southern part of the Republic of India. It occupies a narrow strip of land between the Arabian Sea in the West and the Western Ghats in the East. The States of Karnataka and Tamil Nadu lie in the North – East and South – East respectively.

Kerala is gifted with appreciable fresh water resources owing to its geographical location, seasons, environment and 44 rivers out of which 41 rivers flow westwards and 3 flow eastwards.

### 2. Background

Purported to have a huge hydropower potential from available water resources, Kerala has so far harnessed only 2130 MW of it, with total installed capacity inclusive of all sources amounting to 2831 MW. This installed capacity is almost 30% below the maximum peak demand of 4316 MW recorded in April 2019. The state is dependent on external sources for more than 70% of its energy requirements while future projections indicate an increase in energy demand by about 58% in 5 years.

Given the infirm nature of renewable energy from Solar PV and Wind Power systems owing to intermittency and seasonal and diurnal variation, it places the considerable risk on the security and stability of the grid. With such higher renewable penetration, the probability of voltage and power swings in the network will increase and it may not be very conducive to industries and commercial establishments alike.

### 3. About EMC

Energy Management Centre – Kerala (EMC) was established by Kerala Government, aiming primarily to remould and instrumentalise the energy sector as a catalyst in promoting a development process which is ecologically sustainable.

With a view to making the energy sector achieve such a lead and catalytic role, EMC has evolved a novel and comprehensive energy management approach and institutional philosophy encompassing management of energy technology systems – both conventional and non-conventional, energy conservation in all sectors of the economy, energy resource management, rural and urban energy systems, energy education and training, energy generation and conservation-based employment and poverty alleviation programmes. The Small Hydro Promotion Cell, functioning in EMC under the Chairmanship of the Principal Secretary (Power), Govt. of Kerala, scrutinizes and recommends for issuing technical clearance for the small/mini/micro hydel projects in the state.

EMC is also the State Designated Agency (SDA) of Bureau of Energy Efficiency (BEE), Ministry of Power, Government of India to coordinate, enforce and

implement Energy Conservation Act-2001 (Central Act 52 of 2002) in Kerala. EMC is working towards attaining energy efficiency in all sectors of economy.

#### **4. Role of Kerala State Electricity Board Ltd (KSEBL)**

KSEBL, the state-owned utility purchase renewable power, as part of its RPO requirements. The power procured regularly from Wind, Solar and Hybrid power projects at very competitive rates as approved by the Kerala State Electricity Regulatory Commission to meet their energy demands. It may be noted that the response of the State to renewable energy generators has been overwhelming and all the power offered for sale has been purchased. We expect the same trend to continue in the future.

#### **5. Objective of EOI:**

Government is keen in addressing this challenge by supplementing the renewable power sources with power from all possible sources especially from hydrokinetic power potentials available in irrigation canals, suitable rivers and streams and tailraces of hydropower projects in Kerala state.

Before going in for implementation of the project in large scale a detailed evaluation study of the full potential of the state on Hydrokinetic Energy (HKE) generation is a requirement for planned development

Accordingly, EMC now invites Expression of Interest from the interested OEMs, Innovators, and technologists with preferably indigenous capability to develop HKE projects for preparation of a detailed report on techno-economically feasible HKE potential of Kerala.

Generators involved in the field of Generation and supply of power from indigenous technology based Hydrokinetic Power Plants are also eligible to participate in this scheme.

The bidders for this EoI is provided with an opportunity to apply for one or more pilot implementation of HKE projects up to a capacity of 100 kW on a RESCO/ EPC mode implementation. One such identified project for implementation is in the canals of Malampuzha Irrigation project in Palakkad Districts of Kerala.

Successful bidder, based on the outcome of the pilot project will be invited to submit proposal for entering into a JV with an identified organisation in Kerala, like the EMC, for creating an SPV for large scale replication of this model in the entire State, on a phased manner.

**6. Selection procedure**

The prospective bidder must conform to the pre-qualification criteria given below and shall attach proof of documents for each of the qualifying requirements. Bids without adequate supporting documents shall be treated as non-responsive. The bids will be considered as responsive only if the lead member of the bidders satisfy all the conditions mentioned below:

**Pre-Qualification Criteria –Hydrokinetic Energy Project  
Consultancy**

**a. Technical**

Criteria	Proofs to be produced	Max. Marks (%)
<p>The agency should have been in the business of providing technological Services in India for a period of at least two or more years as on 31.03.2021. The agency should be a private/public limited company with proven track record in consultancy/implementation/ research for micro/mini/small hydropower or other renewable energy projects</p>	<p>Company incorporation certificate to be produced as proof. Minimum two years experience will earn 4 marks. Each additional year of experience above 2 years will earn 5 marks subject to a maximum of 20 marks.</p>	<p>10</p>
<p>Total turn over the agency shall be more than 50 lakhs over the last three years. The agency should be a dedicated technology company with dependable credentials and service history. For agencies with multiple service verticals, 10% of their total turnover should be from renewable energy projects.</p>	<p>Memorandum of association of the company, audited Balance Sheet and P&amp;L for the relevant financial years and unaudited Balance Sheet and P&amp;L for 2019-20, both the documents to be notarized. Turn over of above 10% in renewable energy vertical will fetch 10 marks and every further 10% will earn 5 marks subject to a maximum of 30 marks.</p>	<p>20</p>

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The agency should have an office in India, and should have at least facility for assembly of hydrokinetic equipment and spare parts availability (in case of international tie-ups) and a team of expert professionals to manage it. The core team designated for this assignment by the agency should have ample academic qualifications and practical expertise in the areas of hydrokinetic energy/renewable energy with proven track record.	Documents to establish company's presence in India; such as lease deed or office ownership documents (10 marks). Proof/Details of company's infrastructure - may be subjected to verification - (10marks) and Credentials of team of professionals (20 marks) to be self-attested.	30
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Convincing proposal to implement one or more pilot implementation of HKE projects up to a capacity of 100 kW on RESCO mode through a PPA or in EPC mode with obligation to carryout Annual maintenance contract during this period. The first pilot of 100 kW to be implemented within four months from the award of work.	Agreement in Rs. 200 stamped paper mentioning the same.	20
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Willingness and capability to enter into a JV for implementation of HKE projects in Kerala on RESCO mode through a PPA on in EPC mode, with obligation to carryout Annual maintenance contract during this period.	Agreement in Rs. 200 stamped paper mentioning the same.	20
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## **b. Financial Qualification**

The bidder shall quote (a) the total amount for the power potential assessment for an irrigation canal with Malampuzha Irrigation scheme (right bank & left bank canals), Palakkad district, Kerala, as the reference and (b) the total amount inclusive of all, for installing one 100 kW pilot plant in the irrigation canal with Malampuzha Irrigation scheme, either on RESCO route EPC or other Valid and acceptable public procurement mode, within four months from the date of work order. The amount quoted by the bidders shall be inclusive of all taxes and shall remain firm during the period of contract and shall not be varied or adjusted on whatsoever reason on any account.

## **7. Submission of EOI**

Interested agencies are required to submit the response with the complete information in all respects along with enclosed format (Refer Annexure-1).

*Following Documents to be submitted along with the EOI (certified copy):*

1. Brief write up about the Company/ Promoters/LLP Profile/ Firm/Consortium(In case of consortium, the bidder should submit the consortium Agreement between the consortium partners)
2. A brief statement of proposed plan
3. At least one proof of previous work of similar nature
4. Balance Sheet and Profit & Loss Statement for the Year 2018-19, 2019-20, 2020-21(provisional)
5. Copy of latest GST Return
6. PAN Card Copy
7. Self-Certification stating that the Company/ LLP/Firm or its Subsidiaries / Individual/ Associates are not Debarred / Blacklisted by any Central / State Governments, Government Departments, Government Bodies or PSUs.
8. Certificate from Chartered Accountant showing the Net worth of preceding three financial years.
9. Copy of MOA and AOA/ Partnership deed and certificate of incorporation/ registration in case of firms.
10. The Applicant should submit a Power of Attorney/Board Resolution/notarial document authorizing the signatory of the application to commit the Applicant.
11. Draft PPA document, if on RESCO mode
12. Proposal for JV SPV (either to be submitted along with the application or when called for, if selected as the successful bidder)
13. Any other detail which the Applicant Company/ Firms feels relevant in this regard.

Prospective parties may submit their 'Expression of Interest' duly signed by the authorised signatory along with relevant details as sought in the data sheets latest by Date till 17:30 hrs. in a sealed cover super scribing

**“Expression of Interest for (a) Study of Potential on Installation of Hydrokinetic Energy Projects in Kerala (b) pilot installation of 100 kW plant and (c) phased manner replication in potential sites through a JV SPV”, to**

**The Director,**

Energy Management Centre - ,  
Sreekrishna Nagar, Sreekariyam P O  
Thiruvananthapuram -695017, Kerala  
Phone: 0471-2594922, 2594924

For any clarification, prospective parties are requested to contact 9446075212.or  
Email to [dinesh@keralaenergy.gov.in](mailto:dinesh@keralaenergy.gov.in)

The date of any discussion meeting after receipt of EDJs, will be informed to the respondents by e-mail / through PSU's website.

## 8. Bid Evaluation

A 2-stage selection process will be involved in finalizing and selecting the agency/agencies.

*In the first stage* technical proposals will be opened online with opportunity for presence of representatives of agencies submitting proposals for verification of documents submitted and fulfilment of eligibility criteria. Only those Applicants whose credentials are found appropriate Technical Proposals and considered acceptable by a selection committee constituted by EMC shall be ranked as per score achieved by them, from highest to the lowest technical score (ST). The applicants will be evaluated basis their experience as per above criteria. Overall weightage for technical qualification will be 60% of total.

*In the second stage*, the financial evaluation will be carried out as below. Each Financial Proposal will be assigned a financial score (SF). EMC will determine whether the Financial Proposals are complete, unqualified and unconditional. The cost indicated in the Financial Proposal shall be deemed as final and reflecting the total cost of services. The lowest Financial Proposal (FM) will be given a financial score (SF) of 100 points. The financial scores of other proposals will be computed as follows:

$$SF = 100 \times FM / F$$

(F = Amount of Financial Proposal)

Overall weightage for financial qualification will be 40% of total.

*Combined final evaluation:* Proposals will finally be ranked according to their combined technical (ST) and financial (SF) scores as follows:

$$S = ST \times TW + SF \times FW$$

## 9. Other conditions

*Prospective respondent (Applicants) to this EOI acknowledges and agrees that:*

- EMC has issued this document for Expression of Interest with the best intention to explore the market for eligible and interested bidders and has no compulsions to enter into definitive contractual agreements. This EOI does not guarantee conversion of this EOI into any definitive contractual agreements.
- It is also agreed that EMC in its sole discretion, may reject any and all proposals made by respondents, may change the conditions relating to the EOI or cancel this EOI at any time without assigning any reason.
- Prospective respondent(s) acknowledge and agree that response to the EOI is purely voluntary action on their part and for any expenditure on this



account shall be borne by the respondent(s).

- EMC will have the right to award more pilot projects, if different technologies are to be validated.
- EMC will have no obligation or liability to the respondent(s) in the event of cancellation of EOI.

Note: Applicants are requested to keep themselves updated with the website [www.keralaenergy.gov.in](http://www.keralaenergy.gov.in) on regular basis for any addition / deletion / modification/clarification or notification in respect of this, at EOI stage and at bidding stage. No separate notification will be issued in any other media.

**10. Annexure -1 - Details of the Bidder**

Sl. No.	Parameters	Details (may attach separate sheets)
i.	<b>Name of the Company</b>	
ii.	Country where the company is registered	
iii.	Status of the Company: a) Whether registered under the Companies Act 1956 / the Companies Act 2013 b) If not, other details (like sole proprietorship firm/partnership firm etc)	
iv.	Nature/Origin/Status/Recognition of Technology options and Operational Requirements of Proposed Technology	
v.	* Expected Generation Cost * Expected PPA/Tariff * Timeline for Plant Execution * Nature of plant (Type of power plant) * PLF Details * Land requirement * Grid requirements, * Environmental Impact	
vi.	Indicative tariff (Rs/kWh at State Utility grid), along with copy of the draft PPA. Applicant may indicate that this information may be kept confidential, if they wish to do so	