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No: EMC/SPV-Wind hybrid/ 01/2018

15/05/2018

**INVITATION FOR EXPRESSION OF INTEREST FOR ROOF TOP SOLAR WIND HYBRID
TURBINE AT ENERGY MANAGEMENT CENTRE**

Energy Management Centre is inviting submission of Expression of Interest (EOI) from interested manufactures/system Integrators for “Installation and commissioning of different types of grid connected solar wind hybrid/wind turbine of capacity 1kW to 5 kW range on the roof top of Energy management Centre - Campus”. Energy Management Centre have an unshaded roof area of about 300m² with maximum load bearing of 400kg/m² at a height of 9m from ground level located at Sreekaryam having Co-ordinates 8.5482° N, 76.9106° E. Proposed EOI participants are encouraged to conduct site visit during working hours i.e. 10:00 AM to 5:00PM (Monday – Saturday) to ensure accuracy in Technical and Commercial submission.

The Interested Bidders may send their Expression of Interest comprising Eligibility Criteria & Technical Criteria in separate sealed envelopes (i.e. (i) Envelope-1- Eligibility criteria (ii) Envelope-2- Technical Criteria.(in a sealed cover) as attached in Annexure 1) super-scribing “Expression of Interest for Installation and commissioning of different types of grid connected solar wind hybrid/wind turbine of capacity 1kW to 5 kW range on roof top of Energy management Centre for demonstration”, in the prescribed format to Energy Management Centre

1.	EOI Fee	Rs 5000/-
2.	EOI Validity Period	365 days
3.	Last date and time for submission of EOI	on or before 16 th June 2018 latest by 12:00 hours
4.	Address of Submission of EOI	The Director, Energy Management Centre, Srikrishna Nagar, Sreekaryam P.O, Thiruvananthapuram 695017
5.	Time and Date of opening of EOI	To be communicated latter

Financial bid shall be invited only from empaneled agencies as decided by Energy Management Centre.

Director
Energy management Centre – Kerala

EXPRESSION OF INTEREST

Annexure - 1

A. GENERAL INFORMATION TO AGENCIES.

1. The agencies are required to submit the EoI containing Eligibility criteria and Technical Criteria in two separate sealed envelopes clearly marked "*Eligibility criteria for Installation and commissioning of different type of grid connected / off grid solar wind hybrid/wind turbine of capacity 1kW and above on the roof top of Energy management Centre - Campus*" and "*Technical criteria for Installation and commissioning of different type of grid connected / off grid solar wind hybrid/wind turbine of capacity 1kW and above on the roof top of Energy management Centre - Campus*" and
2. Both the envelopes should be put in one sealed envelope marked "*Installation and commissioning of different type of grid connected / off grid solar wind hybrid/wind turbine of capacity 1kW and above on the roof top of Energy management Centre - Campus*"
3. The EoI consisting of Eligibility Criteria, Technical Criteria and along with General Information to agencies can be seen at the website (www.keralaenergy.gov.in)
4. The cost of EoI document will not be refunded under any circumstances.
5. The EoI offer shall be valid for 365 days from the date of its submission.
6. EoI without requisite fees and not fulfilling all or any of the conditions or submitted incomplete in any respect is liable to be rejected.
7. The Agency or one of its authorized representative, having proper authority on letter head of the Agency, will be allowed into the premises where Eligible Criteria shall be opened.
8. All the pages of the EoI submitted must be numbered and signed by the authorized signatory.
9. Canvassing in connection with the EoI be strictly prohibited and such canvassed EoI submitted by the Agency is liable to be rejected.
10. The Agency shall submit only one EoI in his name for one technology / system. If Agency is applying for more than one technology / system, EoI shall be submitted for each technology / system separately.
11. Energy Management Centre reserves the right to reject or accept any or all EoI at any stage without assigning any reason whatsoever.

12. EoI which do not fulfil all or any of the conditions or are submitted incomplete in any respect is liable to be rejected. Conditional EoI shall not be accepted and will be rejected outright.
13. In case of any dispute or clarification in EoI, decision of Energy Management Centre shall be final.
14. The Agencies are required to submit all the necessary documents as mentioned in EoI along with Eligibility Criteria & Technical Criteria. All the documents required to be submitted in EoI should be in English language only. If same are not available in English, then the concerned agency will be required to get such documents translated in English and get them legally authenticated, before submitting.
15. The technology / system shall be evaluated and shortlisted by the Technical Committee constituted by Energy Management Centre for the purpose. The Agencies shall have to make presentation on the technology before the Technical Committee.
16. Technical Criteria of only those agencies will be opened who qualify in Eligibility Criteria i.e. Envelope-1.
17. The Financial Bids will be invited only from those empaneled agencies who qualify in Technical Criteria i.e. Envelope-2.
18. Only one type of JV is allowed for any Agency, which is between the Technology provider and the Agency himself.
19. In case the Agency is JV, the members of the JV shall furnish a Power of Attorney designating one of the members, as per the JV agreement, as their Lead Member. The lead member shall be fully responsible for the satisfactory performance of the JV.
20. A copy of the JV Agreement registered should be submitted at the time of financial bid. The JV agreement entered into the members of the JV should be specific to the project only.
21. . All aforesaid form must bear the signature of authorized persons of the firm / company/ contractor / developer with Common seal.

B. Eligibility Criteria:

1. Reputed, experienced, technically and financially qualified manufactures/system Integrators who will be able to meet the following eligibility criteria, shall be eligible to apply.
 - a. Registered Agency having valid statutory GST registration, PAN No.etc.
 - b. Agency should be Financially Sound to execute a project.

- c. Agency should be well experienced having successfully completed at least one such project under each category during last three years.
 - d. The proposed technology/system must have been used at least once and shall submit certificate of completion from client along with report on performance.
2. The EoI of agencies who have been debarred from undertaking any work and or blacklisted by any organization / agency in India or abroad as on the date of submission of EoI, shall be summarily rejected. An affidavit shall be submitted by the bidder that the Company is not blacklisted by any government organization
3. The agencies will be evaluated under eligible criteria on the basis of details furnished by them.
4. If any information furnished by the Agency is found incorrect at a later stage, he shall be liable to be debarred from further bidding. Energy Management Centre reserves the right to verify the contents / particulars furnished by the Agency independently including inspection of work completed by them.
5. Even if any Agency satisfies the above requirements, such agency may be liable to disqualification if the Agency has:
 - i. Made misleading or false representation or deliberately suppressed the information in the forms, statement and enclosures required in the eligibility criteria document.
 - ii. Record of poor performance such as abandoning work, not properly completing the contract, or financial failures / weaknesses etc.

List of Documents required to be submitted along with Eligibility Criteria (Envelope-1):

1. The Demand Draft of EoI fee of Approved Bank in original.
2. Audited Accounts (Balance sheet and profit and loss account) of last three financial years ending in March 2018.
3. Audited certificate showing net worth of last three financial years
4. Income tax return of last three financial years.
5. Copy of the Bank Solvency certificate (not older than six months) **(Form A)**
6. Certificate of work experience as mentioned in Eligibility Criteria **(Form B2)**
7. Performance certificate for the proposed technology as mentioned in Eligibility Criteria **(Form C)**
8. Detailed organizational structure including technical manpower. **(Form D)**
9. Declaration letter for non-performance/litigation. **(Form E)**
10. Certificate of registration of Company/Firm.
11. Details of registration/empanelment with Central/State agencies/PSUs

12. Copy of GST registration, PAN No.

C. TECHNICAL CRITERIA

1. The Technical Criteria to be submitted by Agency in a separate sealed envelope.
2. The Technical Criteria of those agencies will be opened who qualify in Eligibility Criteria.
3. The Technical Criteria shall be evaluated based on the documents submitted
4. If the Technical Committee find necessary, the agencies shall arrange visit of technical team(s) nominated by the technical committee/ Energy Management Centre to see the installation work in progress /completed.
5. The Technical Criteria shall be evaluated by the marking system as per the details in Table-1:
6. After opening of Technical Criteria, if certain clarity required, it will be intimated to the Agency and it should be clarified by the Agency within a stipulated time, if not Energy Management Centre will take appropriate decision.

List of Documents required to be submitted along with Technical Criteria (Envelope 2)

1. The interested agencies shall submit following details about the technology.
 - a. Description of Technology / System with working principles. and conformance to BIS standards or equivalent
 - b. Detailed technical information including specification of the wind turbine, solar PV, Entire system and materials and components used. Data sheets and user manuals of the SWT, solar PV panels and the solar grid inverter. System operation and maintenance manual **(Form B1)**.
 - c. Installation and commissioning methodology
 - d. Maintenance requirements –This deals with the ease with which the regular/ periodic/ preventive maintenance can happen for the proposed technology so as to attain the maximum service life period. The agencies shall provide information regarding frequency of maintenance, requirements for major or routine maintenance, availability of tools and materials for maintenance including Annual maintenance if any. The agencies should be able to demonstrate that the maintenance required is practical and can be carried out with ease without specialized equipment/manpower.
 - e. Lead time required to initiate the work from the date of award of tender and Time required for the completion of project

- f. Certification details/ BIS standards or equivalent standards adhered for the proposed technology.
- g. Information regarding speed of installation. Time period taken from start to completion of the projects completed.
- h. Suitability of the technology for the region
- i. Availability of sufficient manpower required for execution of project using alternate technology (attach details).
- j. Photograph / Sketches of the proposed Technology / System installed.
- k. Details on flexibility/expandability of in future.
- l. Details of post installation support.

LETTER OF TRANSMITTAL

From:

(Name of Agency)

To,

(Name of Project Authority)

Subject: Submission of Expression of Interest for Empanelment

Name of Work: _____

Sir,

Having examined the details given in EoI for the above work, we hereby submit the EoI and relevant documents.

1. I / we hereby certify that all the statements made and information supplied in the EoI and accompanying statements are true and correct.
2. I / we have furnished all information and details necessary for EoI and have no further pertinent information to supply.
3. I / we submit the requisite certified solvency certificate and authorize Energy Management Centre to approach the Bank issuing the solvency certificate to confirm the correctness thereof. I/ we also authorize Energy Management Centre to approach individual employers, firms and corporation to verify our competency and general reputation.
4. I /we hereby certify that our company/firm has not been debarred/ blacklisted from undertaking any work by any agency/organization in India or abroad.

Signature of applicant (s)

Date of Submission and seal

FORM 'A'

FORM OF BANKERS CERTIFICATE FROM A NATIONALIZED BANK

(Solvency certificate from a nationalized bank)

This is to certify that to the best of our knowledge and information, M/s/Sh. _____
_____ a customer of our bank are / is
respectable and can be treated as good for any engagements up to a limit of INR
_____ (INR _____ in
words).

(Signature) For the Bank

NOTE:

1. Banker's certificates should be on letter head of the Bank, sealed in cover addressed to Energy Management Centre.
2. In case of partnership firm, certificate should include names of all partners as recorded with the Bank.

Form B1

Technical Details of systems available.

Wind turbine		
1.	Turbine Rated power Output (in Watts)	
2.	Wind Component Maximum Power Output at rated wind speed.	
3.	Maximum Voltage	
4.	Maximum Current	
5.	Turbine type and material	
6.	Details of major components, <ul style="list-style-type: none">• Generator type and Technical spec• Gear box type• Blade type and material.	
7.	Empaneled with MNRE (Attach copy of Empanelment)	Yes/No
8.	Whether satisfies power performance test as per IEC 61400-12-1 and Duration & safety and function tests, as per IEC 61400-2/ or equivalent BIS standard. (If Yes enclose test certificate)	
9.	Design life (years)	
10.	Efficiency	
11.	Warranty	
Solar Photo Voltaic System.		
1.	Type of Panel (Poly crystalline, Thin film etc)	
2.	Peak power Output /panel	
3.	No of Modules and total Power	
4.	Maximum Voltage	
5.	Maximum Current	
6.	Module efficiency	

7.	Warranty	
8.	Efficiency	
9.	Empaneled with MNRE (Attach copy of Empanelment)	Yes/No
10.	Whether SPV panels qualify to IEC 61215 module qualification test or equivalent BIS standard. Other than the above the SPV panels should conform to IEC 61730 and IEC 61701, the former being the safety qualification and the latter for assuring the modules to operate in a high rainfall/corrosive area	

Entire system		
1.	Mention whether system is grid connected or off grid system.	
2.	Dimension of Entire System	
3.	Weight of Entire system	
4.	Details of inverter (Capacity, THD, PF at varying ,Efficiency etc and other technical details)	
5.	Design life in years (Separate for battery and Inverter)	
6.	Warranty on entire system.	

Form B2

Details of similar work completed (last three years)

Sl No	Name of work and location	System capacity(in watts)			Time of completion and it's working status	Cost of project in INR
		Wind	Solar	Entire hybrid system		

Details of similar work under execution.

Sl No	Name of work and location	System capacity(in watts)			Time of completion and its working status	Cost of project in INR
		Wind	Solar	Entire hybrid system		

FORM 'C'

PERFORMANCE REPORT OF WORKS REFERRED TO IN FORM B

Sl No	1	2	3	4
Name of work / Projects and Location				
Type of system installed and its capacity				
Client Name (Mention whether residential or industry)				
Cost of work in INR				
Date of starting of work				
Completion date				
Project status (completed or ongoing)				

Feedback from client:

Sl No	Attributes	Very good	Good	Fair	Poor
1.	Quality of work				
2.	Timely completion				
3.	Technical Proficiency				
4.	Response to complaints /system maintenance				
5.	General behavior				
6.	Working of the system				

Third party feedback, if any:

Signature of applicant

Signature & Stamp of client

FORM 'D'

DETAILS OF ORGANIZATIONAL STRUCTURE.

1.	Name of the consultant /firm	
2.	Telephone No. /Telex No./ Fax No	
3.	Legal Status of the applicant (attach copies of original document defining the legal status(s) (a) An individual (b) A proprietary firm (c) A firm in partnership (d) A limited company or corporation (e) Joint Venture (JV)	
4.	Particulars of Registration with various Government bodies (attach attested photocopy). (a) Registration number (b) Organization / place of Registration (Copy of GST, PAN)	
5.	Name and titles of Director & Officer with designation to be concerned with this work.	
6.	Designation of individual authorized to act for the organization	
7.	Name of the partner organization, if any	
8.	Brief Description of Applicant including major projects if any	
9.	Address of the Registered Office of the Applicant (With PIN code) (including phone/fax number with STD Code and email id)	
10.	Contact details of the Applicant (including phone/fax number with STD Code and email id)	
11.	Total number of Years of operation of the registered company	
12.	Details of current solar wind hybrid projects (if any)	
13.	Has the applicant or any constituent partner in case of partnership firm ever abandoned the awarded work before its completion? If so, give name of the project and reason for abandonment	

14.	Has the applicant or any partnership firm, ever been debarred / black listed for tendering in any organization at any time? If so give details	
15.	Has the applicant or any constituent partner in case of partnership firm ever been convicted by court of law? If so, give details	
16.	List of the key technical Persons with qualification & experience	
17.	Any other information considered necessary but not included above	

Signature: _____

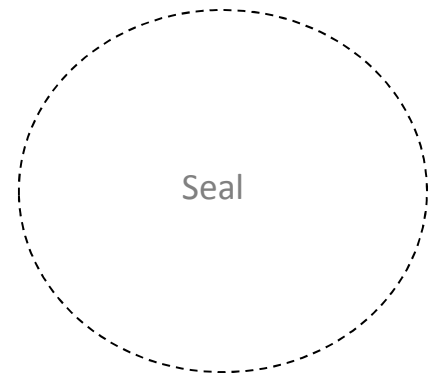
Name: _____

Designation: _____

Company/Firm: _____

Place: _____

Date: _____



FORM 'E'
DECLARATION LETTER FOR NON-PERFORMANCE/LITIGATION.

Declaration Letter on official letter head stating the following:

We are not involved in any major litigation that may have an impact of affecting or compromising the delivery of services as required under this contract. We are not black-listed by any Central / State Government / Public Sector Undertaking in India

Witness

Consultant

Signature:

Signature:

Name:

Name:

Address:

Address:

Date:

Date:

Table 1: Evaluation Criteria

SI No	Description	Marks	
1.	Fulfilment of the requirements of EoI	Mandatory	
2.	Assessment of technology through presentation The presentation shall, inter-alia, focus on the following: <ul style="list-style-type: none"> i. The technology along with specifications ii. Conformance to standards iii. Execution of the project within stipulated time iv. Manpower and machineries required (The Committee may consider giving weightage to experienced manpower) v. Detailed executed projects reinforcing the claim about quality, time and customer satisfaction. 	10	
3.	Number of projects completed in India	1 project	2
		2 projects	3
		2-5 projects	4
		More 5projects	5
	Number of projects outside India	5 or more projects	5
4.	Maintenance requirement	10	
	- No major maintenance requirement and could be done without any specialist manpower and equipment		
	- No major maintenance requirement but specialist manpower and equipment needed		5
	- Major maintenance requirement	0	
5.	Empanelment with State /Central Government	10	
6.	Possibility of future flexibility/expandability	10	
	Max marks	50	

The qualifying criteria of eligibility for financial bid shall be minimum 30 marks in technical criteria. In order to qualify, the technology needs to fulfill mandatory requirements as per appendix 1.

APPENDIX I

The technology must have been evaluated for the following broad mandatory requirements:

Mandatory Requirements –The technology shall have to fulfil the mandatory requirements as follows Otherwise it is liable to be rejected.

1. Wind turbines shall qualify to Power performance test as per IEC 61400-12-1 and Duration & safety and function tests, as per IEC 61400-2 or equivalent BIS standard
2. SPV panels qualify to IEC 61215/IEC61648 module qualification test or equivalent BIS standard. Other than the above the SPV panels should conform to IEC 61730 and IEC 61701, the former being the safety qualification and the latter for assuring the modules to operate in a high rainfall/corrosive area or equivalent BIS standard
3. The inverter shall confirm to IEC 62109-1, IEC 62109-2 safety compliance or equivalent BIS standard in case of grid connected system anti islanding protection as per As per VDE 0126-1-1, IEC 60255.5 / IEC 60255.27 provided. The inverter shall also confirms to IS/IEC 61683 and IEC 60068-2 (1,2,14,30) the former being Efficiency measurement procedure and latter Environmental Testing.
4. Structural safety (Strength & Serviceability) of the system against vertical and lateral load (wind & seismic loads as applicable) as per relevant Indian Standards.