



Agency For Non-conventional Energy & Rural Technology (ANERT)
Department of Power, Government of Kerala
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Notification

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EXPRESSION OF INTEREST (EoI):
NEW TECHNOLOGY DEMONSTRATION -
HYBRID SPV SYSTEMS IN ROOFTOPS OF PUBLIC BUILDINGS IN KERALA

Agency for Non-conventional Energy & Rural Technology (ANERT) invites Expression of Interest from the empanelled vendors/OEM of Solar Rooftop programmes for proposals for "New Technology Demonstration of Solar Photovoltaic hybrid Systems in Rooftops of Public Buildings in Kerala".

This EOI Document contains brief objective & scope of work, the background, submission requirement etc.

It is required to submit detailed proposal for the above assignment. The proposals in sealed envelope which reach the undermentioned within 20 days will be considered this financial year. Submissions received every 7 days will be collated ,evaluated and taken up for the next stage of implementation and those after the stipulated time will be taken up the following Financial Year or as of when required.

The Director
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The soft copy of the same is also required to be sent to empanel@anert.in

The shortlisted applications may be invited for presentation / proposal and demo before the selection committee as designated by ANERT. Tender will be invited from the agencies submitted the EoI for the implementation of the project.

Director



NEW TECHNOLOGY DEMONSTRATION - SOLAR PHOTOVOLTAIC HYBRID SYSTEMS IN ROOFTOPS OF PUBLIC BUILDINGS IN KERALA

1. BACKGROUND

ANERT, under the Department of Power, Government of Kerala since its inception have been gathering and disseminating useful knowledge in the various fields on Non-conventional Energy including Solar Photovoltaics. When the rooftop programme was initiated in 2012, we had only a handful of Kerala based firms as empanelled agencies. But, now there are over 70 firms, many of which are either Kerala based or having offices in Kerala. We were following the technical specifications provided by MNRE and are still following the same.

2. NEED FOR DEMONSTRATION PROGRAMME

Solar Photovoltaics is one of the technologies which are rapidly growing and technological advancements are made. But most of these new technologies are not being used in our State; Mostly due to the ignorance of the new technology and people's attitude towards it. Also the technology needs to be analysed for our environmental conditions and usage patterns. It is in this context that ANERT is planning to pilot some of these technologies as demonstration projects in the rooftop of selected Public buildings across the State.

The demonstration project is expected to help in acquiring the desired technical knowledge, economic & market assessment and also is expected to generate awareness amongst users so that it can be wide spread.

3. GOALS OF THE PROGRAMME

The goals of this demonstration programme are,

- To demonstrate the technical performance of the technologies in our weather condition.
- To create a faith among prospective users and authorities about the reliability of advanced technologies.

- Based on the experience from demonstration projects, understand potential market size and ways to scale up deployment in key application areas.
- Identify policy measures to support the scale up, while reducing direct public support or subsidies.

4. SCOPE OF THE PROGRAMME

The Demonstration Program will accomplish the above by assisting a set of interested applicants to pilot new SPV technologies in Kerala. Through this program, ANERT will provide technical & financial assistance to the agencies to develop <n number> demonstration projects. The specific steps of the program are as follows,

- Call for Expressions of Interest:** ANERT will identify the projects through an Expression of Interest (EOI).

Selection of Projects:

The projects would be selected based on certain parameters such as commercial viability, technical and economic feasibility, innovation, scalability, demonstrability, impact of application and business model etc. ANERT will select fixed number of viable projects to be piloted this financial year and the rest will be taken up in the next Financial year or as when required. Systems with certifications, customer feedback, testimonials, contact references, etc., will be given preference.

- Develop detailed design of projects:**

During this phase, ANERT will,

- a. Develop detailed specification and for the proposed projects
- b. Identity the feasibility of the proposals based on the recommendation of an evaluation committee and finalise the projects to be carried out.
- c. Identity the specific locations for the installation (Public buildings across Kerala) of the selected projects.
- d. Develop customized Request for Proposals (RFP) including location, standards for services, warranties etc. which would then be implemented through a transparent competitive bidding process through www.etenders.kerala.gov.in

- iii. **Implementation of projects:** ANERT will implement these projects on a pilot basis and ensure quality is maintained, and testing is undertaken during installation and commissioning. This may be with the help of other State/Central Government agencies, if required by ANERT from case to case.
- iv. **Monitoring and Evaluation (M&E):** The main objective of the demonstration process is to evaluate the performance of various new technologies in Kerala conditions which will be carried out through a separate M&E process which ranges over a period of 5 years. ANERT will evaluate the performance of the various installations and the technologies and publish the findings. These findings will help in developing the appropriate market structures, business models, performance contracts and policies for these technologies in the State, which is the prime motto of all demonstration projects.

5. INVITATION FOR EXPRESSION OF INTEREST (EOI)

ANERT invites Expression of Interest (EOI) from the empanelled vendors interested in developing and deploying SPV systems incorporating new and advanced technologies for demonstration purposes, on rooftops of selected public buildings across Kerala. The new technology can be in any of the components like Solar Cell/Solar Module, PCU etc. It may include,

- Hybrid Systems
- Grid Interactive Systems without export limiting generation based on the internal load requirements.
- Micro inverters
- Building Integrated Photovoltaic (BIPV)
- Solar Roof tiles
- Power optimizers
- Solar Roofing
- Cell Metallization and interconnect technology – Merlin Technology or others
- Double sided solar panels

- Frameless Solar Panels
- Silicon hetero-junction solar cells
- Solar Power Wall / Power packs
- Mobile Solar Power Packs-Plug and play models
- Solar Refrigeration for drug storage
- Solar Water purifiers
- Solar driers
- Solar cookers etc

It need not be limited to the aforementioned and can be any of the commercially viable technologies which is found feasible elsewhere in the globe. The applicants should be an empanelled vendor of ANERT solar rooftop programs. Manufactures or other agencies in the field can also join hands with empanelled agencies as consortium Leader of the consortium, and are represented by any of the ANERT empanelled vendors.

For implementation ANERT will be inviting e-tender, Empanelled agencies submitted the EoI only will be eligible for participating in the tender. If the manufactures / agencies formed consortium for submitting the EoI becomes an empanelled agencies through the process proposed to be initiated by ANERT, they will also be eligible for participating in tender process.

6. PROPOSALS

The proposals should be submitted in the prescribed format. The applicants can send as many proposals as they desire and the selection will not be limited to a single technology.

The proposals should be for capacities 2kW,3kW, 5kW and 10 kW capacities. Minimum generation of electricity from the system should be 4 KWhr/ KW/Day for the designed capacity.

6.1 Right to accept or reject any or all Applications:



- i. Notwithstanding anything contained in this EoI, ANERT reserves the right to accept or reject any application and to annul the EoI process and reject all applications, at any time without any liability or any obligation for such acceptance, rejection or annulment and without assigning any reasons, thereof. In the event that ANERT rejects or annuls all the applications, it may at its discretion, invite all eligible prospective collaborators to submit fresh applications.
- ii. ANERT reserves the right to disqualify any applicant during or after completion of EoI process, if it is found there was a material misrepresentation by any such applicant or the applicant fails to provide within the specified time, supplemental information sought by ANERT.
- iii. ANERT reserves the right to verify all statements, information and documents submitted by the applicant in response to the EoI. Any such verification or lack of such verification by ANERT shall not relieve the applicant of his obligations or liabilities hereunder nor will it affect any rights of ANERT.

8.2 Governing Laws & Jurisdiction:

The EoI process shall be governed by, and construed in accordance with, the laws of India and the Courts at Thiruvananthapuram (India) shall have exclusive jurisdiction over all disputes arising under, pursuant to and / or in connection with the EoI process.

Annexure-1 Format for submitting Technical Proposal

(For Each Technology, Separate Proposal may be submitted)

1	Name of the agency (Principle Bidder- Should be an empanelled agency of ANERT)	
1.1	Address for communication	
1.2	Name of contact Person	
1.3	Mobile Number	
1.4	Email ID	
2.	Name of the partnering agency (if bid submission is a consortium)	
2.1	Address for communication	
2.2	Name of contact Person	
2.3	Mobile Number	
2.4	Email ID	
3	Technology proposed	
4	Brief description of technology proposed (Please provide details of technology, working principle)	Attach as flag-1
5	Details of such Projects executed Site, Capacity , Date of installation, Contact details of customer etc)	Attach as Flag-2
6	Technical parameters , Specifications 1. Solar Module 2. PCU 3. Battery 4. Control / logic circuits 5. Any other	Attach as Flag-3
7	A case study of the system installed and advantages over presently used technologies	Attach as Flag-4
8	Details and copies of test certificates from IEC or NABL or MNRE test labs attach copy of certificates also	Attach as Flag-5
9	Availability spares and service. Provide details of manufacturer, Service facility etc.	Attach as Flag-6
Date		Signature Name Designation



Annexure-2 Format for submitting Price Proposal

A budgetary cost as to be provided

SL.No	Technology or Project Type	Cost inclusive of 5 years warrantee also				Remarks
		2kW	3kW	5kW	10kW	
1						
2						
3						
4						
5						

1. Bidder has to provide price details of each technology
2. Price quoted should be inclusive of GST and other duties if any

Signature

Name

Designation

Date