

**No. 32/5/2020-SPV Division**  
**Government of India**  
**Ministry of New and Renewable Energy**  
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**14, CGO Complex, Lodi Road,  
New Delhi-110 003**

**Dated: 07.04.2021**

**Call for Expression of Interest**

**Subject: Invitation for Expression of Interest (EOI) for installation of innovative solar pump.**

Ministry of New and Renewable Energy (MNRE) has issued Guidelines for promoting innovative solar pumps vide OM of even number dated 22.06.2020. These guidelines are applicable for all Indian innovators/manufacturers/service providers, who wish to include innovative stand-alone solar pumps technologies/models under Schemes operated by the MNRE.

MNRE hereby invites innovators/manufacturers/service providers to submit expression of interest to participate in the above-mentioned scheme for promotion of innovative solar pump technologies.

**2. Background**

MNRE had issued updated specifications for stand-alone solar pumps on 17.7.2019. Representations were received from innovators claiming that by using different design/hardware/software for the solar pump they can achieve performance better than specified by MNRE in a cost-effective manner. At present under the MNRE Scheme, solar pumps fulfilling the MNRE specifications can be installed, however, in order to promote innovation in technology, the Ministry has decided to permit installation of innovative stand-alone solar pumps in test mode. Accordingly vide OM of even number dated 22.06.2020 MNRE had issued Guidelines for promoting innovative solar pumps.

Further, Guidelines of Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyaan (PM-KUSUM) Scheme was issued on 22.07.2019. The Scheme provides support for installation of 17.5 lakh standalone solar pumps of capacity up to 7.5 HP by the year 2022. Under the Scheme, 30% subsidy is available each from the Central and the State Government.

**3. Purpose**

Purpose of this Call for EoIs is to promote innovation in solar pumping sector by allowing the innovators to showcase their technologies in real field conditions. MNRE will shortlist the promising technologies with variable claims for improved parameters and allow the selected innovators to install solar pumps under PM-KUSUM Scheme.

#### 4. Eligibility

Indian innovators/manufacturers/service providers, who wish to install innovative stand-alone solar pumps in the country under Schemes operated by the MNRE and satisfy the following criteria are eligible to participate in the Scheme:

- i. Only those innovative products which are available for testing and field trial will be eligible for participation. Test report for the improved solar pumping system shall be available with the innovator.
- ii. New technologies for which patent/IP related filings have been done (patent may not have been awarded) will also be eligible to participate. In this case, organization which has filed the patent should be the sole applicant or lead partner in case of a consortium/JV.

#### 5. Criteria for Shortlisting of Innovators

Applications will be evaluated by an Evaluation Committee constituted by MNRE having technical and financial experts of the sector including academic experts. Test report for the proposed solar pump will be submitted by the innovator along with EoI, however, if deemed necessary, the Committee may recommend re-testing of performance of the pump at NISE or any other NABL accredited lab before allowing installation of such pumps in the field.

The elements of innovation in the context of improved performance of solar pump needs to be mentioned very clearly by the applicants in their response to EoI. A cost benefit analysis shall also be enclosed with the proposal.

In cases, where the technology is in its nascent stage, special method may be adopted to test the pumps in consultation with the innovator and NISE. The expenditure incurred on testing will be borne by the applicant. Innovators will be evaluated/ assessed based on the following criteria:

| Sl.No. | Criteria  | Weightage   |              |
|--------|---|-------------|--------------|
|        | Sub-criteria  | Criteria    | Sub-criteria |
| 1      | Profile of the innovator  | 10%         |              |
|        | <ul style="list-style-type: none"><li>• Number of patents filed</li><li>• Number of scientific papers published</li></ul> |             | 60%<br>40%   |
| 2      | General profile of qualification, experience and number of key staff (not individual CVs)                                 | 10%         |              |
|        | <ul style="list-style-type: none"><li>• Qualifications</li><li>• Relevant experience</li></ul>                            |             | 30%<br>70%   |
| 3      | Innovative technology proposed  | 80%         |              |
|        | Expected increase in performance as compared to MNRE spec. (liters per Watt per day)                                      |             | 40%          |
|        | Other improvements like cost effectiveness, monitoring, other value addition, etc.  |             | 40%          |
|        | Stage of development of technology*   |             | 20%          |
|        | <b>Totals</b>   | <b>100%</b> |              |

Innovators scoring at least 75% marks as per above marking scheme will be shortlisted and invited to participate in the scheme.

\* Stage of development of technology may include – (1) prototype stage; (2) testing and field trial completed (to be supported with evidence); and (3) Commercial production stage wherein a number of solar pumps with the improved technology have been sold in India and /or abroad.

#### **6. Submission of Expression of Interest:**

Together with the Expression of Interest, the following details are to be sent:

- i. Full particulars of the Constitution, ownership, organizational structure and main activities of the innovators, including details of full time professionals.
- ii. General profile of key staff - qualification, experience and expertise.
- iii. Detailed technical proposal on improved technology and expected outcome. The elements of innovation in the context of improved performance of solar pump needs to be mentioned very clearly by the applicants. This shall also include details of any field trials conducted and systems installed in India and/or elsewhere. Cost benefit analysis and evidence for stage of development shall also be submitted.
- iv. Test reports of the improved solar pumping system
- v. Details and references of patents and scientific papers published
- vi. Any awards/ recognitions received
- vii. Declaration that the innovator accepts the terms and conditions/Guidelines to be submitted as per the format given in Annexure-I. Links of all the related documents are placed at Annexure-III.

#### **7. Earnest Money Deposit (EMD):**

EMD through a Demand Draft/Banker's Cheque of Rs. 5,000/- in name of DDO, MNRE payable at New Delhi. The EMD would be forfeited if the innovator withdraws the proposal during the validity period. EOI/ Proposal received without EMD will not be considered. EMD with the proposals which are not selected will be returned within 30 days of issuance of successful proposals. For successful proposals the EMD will be returned on acceptance of empanelment and providing duly signed indemnity bond as per the format placed at Annexure-II.

#### **8. Presentation**

The evaluation committee of MNRE may invite the applicants to make presentation before the committee. Date, time and venue for the presentation will be informed at least a week in advance.

#### **9. Empanelment of Innovators**

Innovators declared successful by the evaluation committee will be invited by the Ministry to install up to 50 number of improved standalone solar pumps as per the Guidelines

of PM-KUSUM Scheme dated 22.07.2019 and amendments thereon and Guidelines for innovative solar pumps dated 22.06.2020. Innovators which accept invitation of the Ministry will be empanelled and allocated sites for installation of solar pumps. Innovators will have to submit an indemnity bond as per the format placed at Annexure-II, to cover any losses incurred by the farmer in whose land the innovator has installed the pump, in case of under-performance or failure of the solar pump or its sub-systems.

#### **10. Ethic, Integrity and Quality**

Selected Innovator shall carry out the work as per terms and conditions mentioned herein and any additional requirement indicated by MNRE. Innovator shall demonstrate highest level of ethics, integrity and quality of service. The innovator shall undertake to abide by the Guidelines mentioned above, General Financial Rules and any other applicable rule & regulation of the Central Government/ State Government/ Local Government and, in case of any transgression of applicable Guidelines/ Rules, MNRE reserves the right to abandon demonstration by the concerned company, cancel the contract and encash bank guarantee to cover loss of farmer(s), if any. Solar pumps shall be installed by the innovator within 6 months of award of work order by concerned State Implementation Agency post empanelment issued by MNRE, failing which the concerned State Implementation Agency may enforce liquidated damages commensurate with the period of delay or cancel the work order or both.

#### **11. Operation & Maintenance**

Participating companies will provide Comprehensive Maintenance Contract for the installed pump(s) for a period of 5 years and follow related provisions of the Guidelines of PM-KUSUM Scheme dated 22.07.2019 and amendments thereof.

#### **12. Payment terms and conditions**

Payment terms and conditions specified in Guidelines of PM-KUSUM Scheme dated 22.07.2019 and amendments thereon and any other instructions from MNRE in this regard will be binding on the selected innovators.

Innovators will not get any additional cost over and above the cost discovered through tendering process under PM-KUSUM Scheme. Further, the innovators will have to deposit bank guarantee equivalent to payment made to him against the installation of solar pump, which will be encashed, if the pump is failed to meet at least the existing MNRE performance standards during demonstration period of one year. On successful trial of pump, the indemnity bond and bank guarantee would be released, however, the performance guarantee as applicable during the period of AMC will be retained by the State Implementation Agencies.

#### **13. Monitoring**

The field demonstration will continue for at least one year from date of installation of such pumps and during that period the performance of the pump will be monitored on real time basis. Access to remote monitoring facility for the installed pumps shall also be provided to NISE so that field data may be accumulated and evaluated. MNRE will ensure

availability of platform for uploading performance data. Remote Monitoring System shall be as MNRE specifications.

Innovator will submit on monthly basis a detailed performance report of the pump including a comparative analysis with similar capacity pump specified by the MNRE, along with feedback from SIA & beneficiary farmers to the Evaluation Committee. MNRE/NISE may also conduct field inspection to check the performance as and when required.

#### **14. Adoption of technology**

After detailed examination and deliberations, the Evaluation Committee may recommend for adoption of specifications of innovative pump, with certain modifications, if required. Installed innovative pumps shall meet at least the existing MNRE performance standards. However, only the innovations showing substantial improvement from the MNRE specifications shall be considered for adoption.

On recommendations of the Evaluation Committee, the MNRE may adopt the innovative technology and update the existing specification after having detailed stakeholders' consultation on the same. For innovations with outstanding performance the innovators may get certificate of appreciation from MNRE.

#### **15. Submission of Expression of Interest**

Innovators are invited to submit Expression of Interest along with requisite documents and EMD by sending it to **Ministry of New and Renewable Energy, Block No. 14, CGO Complex, Lodi Road, New Delhi-110003** by **22.04.2021**, in a sealed cover superscribing "**Expression of Interest under Scheme for promotion of innovative solar pumps**". EoI can also be submitted through email on [shobhit.srivastava@nic.in](mailto:shobhit.srivastava@nic.in), however, EMD shall be received in form of banker's cheque/ demand draft by the given date. EoI/ EMD received after the given date will be summarily rejected.



(Shobhit Srivastava)  
Scientist-D

**DECLARATION**

I/We \_\_\_\_\_[Name] on behalf on \_\_\_\_\_[Company Name] solemnly affirm that I/We have thoroughly read the PM-KUSUM Guidelines dated 22.07.2019 and amendments thereon; Guidelines for innovative solar pumps dated 22.06.2020; and the Call for EoI issued by MNRE on 23.09.2020 and with no doubt what-so-ever, completely understand the terms & condition laid down in the above mentioned documents.

I/We on behalf of \_\_\_\_\_[Company Name] accept all the terms and conditions of the above mentioned documents and am/are willing to submit an indemnity bond as placed at Annexure-II of the Call for EoI dated 23.09.2020, if declared successful and invited by MNRE for field trails for the innovative solar pump technology proposed by our company/organization, to cover any losses incurred by the farmer in whose land such solar pump is installed, in case of any under-performance or failure of the solar pump or its sub-systems.

Signed on \_\_\_\_\_ day of April, 2021

Name

Designation

Authorised Signatory of \_\_\_\_\_[Company Name]

## Annexure-II

### INDEMNITY BOND (to be executed on stamp paper of appropriate value)

This deed of Indemnity is executed on \_\_\_\_\_[DAY], the \_\_\_\_ [DATE] of \_\_\_\_ [MONTH], \_\_\_\_ [YEAR] at \_\_\_\_\_[PLACE] by \_\_\_\_\_ [ORGANISATION] having its registered office at \_\_\_\_\_[ADDRESS], through Ms./Mr. \_\_\_\_\_ as the authorized representative, hereinafter referred to as the 'Indemnifier', the expression which shall, unless repugnant to the context or meaning thereof, include its administrators, successors, representative and assignees;

In favour of

The Ministry of New and Renewable Energy, Government of India and the \_\_\_\_\_ [NAME OF STATE IMPLEMENTATION AGENCY] which is the State Implementation Agency of MNRE for Component-B of PM-KUSUM Scheme, in the state of \_\_\_\_\_[STATE] hereinafter jointly and severally referred to as the 'Indemnified', the expression which shall, unless repugnant to the context or meaning thereof, include its administrators, successors, representative, and assignees.

WHEREAS the Indemnifier had approached the Indemnified with a proposal for the installation of innovative stand-alone solar pumps in test mode under the guidelines for installation of innovative stand-alone solar pumps released by MNRE vide OM No. 32/05/2020-SPV Division dated 22.06.2020;

WHEREAS the Indemnified has accepted the proposal of the Indemnifier for the installation of innovative stand-alone solar pumps in test mode and approved the installation of \_\_\_\_ nos. of innovative stand-alone solar pump(s) vide its Order No. \_\_\_\_\_ dated \_\_\_\_\_;

WHEREAS the Indemnified has identified the number of farmers/end-users as specified in the Allocation Order no. \_\_\_\_\_ dated \_\_\_\_\_, hereinafter referred to as "beneficiaries" in whose fields/land the Indemnifier will be installing the innovative stand-alone solar pumps and has taken their acceptance in writing for such installations after enumerating the terms of installation of innovative pumps by the indemnifier;

WHEREAS, the indemnifier provides indemnity that the products supplied by the Indemnifier to the beneficiaries as per the provisions of PM-KUSUM Guidelines issued vide Order No. 32/645/2017-SPV Division dated 22.07.2019 and amendments thereof and Allocation Order no. \_\_\_\_\_ dated \_\_\_\_\_ shall meet, at the minimum, the MNRE performance standards applicable at the time signing of this bond;

NOW IT IS HEREBY AGREED that the Indemnifier hereby irrevocably agrees to indemnify and keep the Indemnified harmless in the event of any damages or financial loss that may be caused to the beneficiaries in whose land the indemnifier installs the innovative stand-alone solar pump due to the under-performance or failure of such stand-alone solar pump as per the performance specified in MNRE specifications for standalone solar pumps. This indemnity covers claims raised by the beneficiaries for losses or damages that are a result of under-performance or failure of the installed solar pumps and/or its sub-systems in meeting the MNRE performance specifications.

This indemnity bond is valid for a period of twelve (12) calendar months from the date of commissioning of the standalone solar water pump.

IN WITNESS WHEREOF, the Indemnifier hereto have set and subscribed his hand hereunto on the \_\_\_\_\_ day and year first above written.

Signed on behalf of the Indemnifier by Ms./Mr. \_\_\_\_\_ [NAME] in the presence of the following witnesses.

Signature:

Name:

Designation:

(Company Seal)

Date:

Place:

WITNESSED BY:

1.

Signature:

Name & Address:

2.

Signature:

Name & Address:

Accepted on behalf of the Indemnified by Ms./Mr. \_\_\_\_\_ [NAME]

Signature:

Name:

Designation:

(Seal)

Date:

Place:



**Links for Related Guidelines/ Specifications**

- Guidelines for promoting innovative solar pumps dated 22.06.2020
  - [https://mnre.gov.in/img/documents/uploads/file\\_s-1592828609942.pdf](https://mnre.gov.in/img/documents/uploads/file_s-1592828609942.pdf))
- Guidelines of PM-KUSUM Scheme dated 22.07.2019 and amendments
  - <https://mnre.gov.in/img/documents/uploads/8065c8f7b9614c5ab2e8a7e30dfc29d5.pdf>
  - <https://mnre.gov.in/img/documents/uploads/bbc66101b25544a4b370095c1825b1e3.PDF>
  - [https://mnre.gov.in/img/documents/uploads/file\\_s-1584510231432.PDF](https://mnre.gov.in/img/documents/uploads/file_s-1584510231432.PDF)
- Specifications for standalone solar pumps
  - [https://mnre.gov.in/img/documents/uploads/file\\_s-1584510667387.pdf](https://mnre.gov.in/img/documents/uploads/file_s-1584510667387.pdf)
- Guidelines on Testing Procedure for Solar Photovoltaic Water Pumping System
  - [https://mnre.gov.in/img/documents/uploads/file\\_s-1584510806957.pdf](https://mnre.gov.in/img/documents/uploads/file_s-1584510806957.pdf)
- Universal Solar Pump Controller (USPC) Specifications for Stand-alone applications
  - [https://mnre.gov.in/img/documents/uploads/file\\_s-1584510928507.pdf](https://mnre.gov.in/img/documents/uploads/file_s-1584510928507.pdf)