

SOLAR WATER PUMPING SYSTEMS (1-10 HP)

TENDER (2023)

Component-B of PM-KUSUM Scheme

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**Request for Selection (RfS) Document for
Selection of Vendors for Design, Manufacture, Supply,
Transport, Installation, Testing and Commissioning of
Off-Grid Solar Photovoltaic Water Pumping Systems
(SPWPS) of 1-10 HP capacities in selected States on
PAN India basis, including complete system warranty
and its repair and maintenance for 5 Years under
Component-B of PM-KUSUM scheme of MNRE**

RfS No. SECI/C&P/MI/00/0010/2022-23 dated: 31.12.2022

Tender Search Code on ISN-ETS: SECI-2022-TN000027

***Solar Energy Corporation of India Limited
(A Government of India Enterprise)
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi – 110023
Tel: 011 - 24666200, e-mail : contracts@seci.co.in***

DISCLAIMER

- I. Though adequate care has been taken while preparing the RfS document, the bidder(s) shall satisfy themselves that the document is complete in all respect. Intimation regarding any discrepancy shall be given by the prospective bidders to the office of SECI immediately. If no intimation is received from any bidder within **20 (Twenty) days from the date of issuance of RfS documents**, it shall be considered that the document is complete in all respect and has been received/ acknowledged by the bidder(s).
- II. Solar Energy Corporation of India Ltd (SECI) reserves the right to modify, amend or supplement this document.
- III. This RfS document has been prepared in good faith, and on best endeavor basis. Neither SECI nor their employees or advisors make any representation or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statements or omissions herein, or the accuracy, completeness or reliability of information, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this document, even if any loss or damage is caused by any act or omission on their part.
- IV. In case of any discrepancy in the documents uploaded on the websites of SECI, ISN-ETS and CPPP, the documents uploaded on the ISN-ETS website will prevail.

Place: New Delhi

Date: 31.12.2022

BID INFORMATION SHEET

The brief details of the RfS are as under:

(A)	NAME OF WORK/ BRIEF SCOPE OF WORK/ JOB	Selection of Vendors for Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of Off Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-10 HP capacities in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component-B of PM-KUSUM scheme of MNRE				
(B)	RfS NO. & DATE	RfS No. SECI/C&P/MI/00/0010/2022-23 Dated 31.12.2022				
(C)	TYPE OF BIDDING SYSTEM	<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">SINGLE BID SYSTEM</td> <td style="text-align: center;"><input type="text"/></td> </tr> <tr> <td style="text-align: center;">TWO BID SYSTEM</td> <td style="text-align: center;">Yes</td> </tr> </table>	SINGLE BID SYSTEM	<input type="text"/>	TWO BID SYSTEM	Yes
SINGLE BID SYSTEM	<input type="text"/>					
TWO BID SYSTEM	Yes					
(D)	TYPE OF RfS/ TENDER	<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">E-TENDER</td> <td style="text-align: center;">Yes</td> </tr> <tr> <td style="text-align: center;">MANUAL</td> <td style="text-align: center;"><input type="text"/></td> </tr> </table>	E-TENDER	Yes	MANUAL	<input type="text"/>
E-TENDER	Yes					
MANUAL	<input type="text"/>					
(E)	COMPLETION/ CONTRACT PERIOD	As mentioned in RfS Document				
(F)	BID PROCESSING FEE	<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">APPLICABLE</td> <td style="text-align: center;">Yes</td> </tr> <tr> <td style="text-align: center;">NOT APPLICABLE</td> <td style="text-align: center;"><input type="text"/></td> </tr> </table> <p>Amount: INR 35,500/- (Indian Rupees Thirty-Five Thousand Only) including GST, to be submitted either through NEFT/RTGS transfer in the account of SECI, or in the form of DD/Pay Order along with the response to RfS in favor of “Solar Energy Corporation of India Ltd”, payable at New Delhi.</p>	APPLICABLE	Yes	NOT APPLICABLE	<input type="text"/>
APPLICABLE	Yes					
NOT APPLICABLE	<input type="text"/>					

(G)	EARNEST MONEY DEPOSIT (EMD)	APPLICABLE	<input type="text" value="Yes"/>
		NOT APPLICABLE	<input type="text"/>
Amount: As per clause 11 of section III of this RfS to be submitted in the form of Bank Guarantee/Payment on Order Instrument, along with the Response to RfS.			
(H)	PERFORMANCE BANK GUARANTEE	APPLICABLE	<input type="text" value="Yes"/>
		NOT APPLICABLE	<input type="text"/>
Amount: As per clause 12 of section III of this RfS to be submitted in the form of Bank Guarantee/Payment on Order Instrument, along with the Response to RfS.			
(I)	DATE, TIME & VENUE OF PRE-BID MEETING	Solar Energy Corporation of India Limited (A Government of India Enterprise) 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi - 110 023 Scheduled as per NIT on ISN-ETS portal and/or SECI website. https://www.seci.co.in/	
(J)	OFFLINE & ONLINE BID-SUBMISSION DEADLINE	As per NIT on ISN-ETS portal	
(K)	TECHNO-COMMERCIAL BID OPENING	As per NIT on ISN-ETS portal	
(L)	e-REVERSE AUCTION (e-RA)	Not Applicable	
(M)	CONTACT DETAILS OF ISN-ETS PORTAL	M/s Electronic Tender.com (India) Pvt. Ltd. Contact Person: ISN-ETS Support Team Customer Support: +91-124-4229071,4229072 (From 10:00 Hrs. to 18:00 Hrs. on all working Days i.e., Monday to Friday except Govt. Holidays) Email: support@isn-ets.com	
(N)	NAME, DESIGNATION, ADDRESS AND OTHER DETAILS	Sh. Ajay Kumar Sinha Addl. General Manager (Contracts & Procurement) Solar Energy Corporation of India Limited 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi - 110023 Contact No.: 011 24666220 Email: contracts@seci.co.in	

	(FOR SUBMISSION OF RESPONSE TO RfS)	
(O)	DETAILS OF PERSONS TO BE CONTACTED IN CASE OF ANY ASSISTANCE REQUIRED	<p>1) Sh. Pratik Prasun Sr. Manager (C&P) Ph: 011-24666270 pratikpr@seci.co.in</p> <p>2) Sh. Biblesh Meena Manager (C&P) Ph: 011-24666270 biblesh@seci.co.in</p> <p>3) Sh. Swapnil Gandhi Senior Engineer (C&P) Ph: 011-24666359 swapnil.gandhi@seci.co.in</p>

- Bids must be submitted strictly in accordance with Section-2 and 3 of the RfS, depending upon Type of Tender as mentioned at Clause no. (D) of Bid Information Sheet.
- Bidders are required to quote strictly as per terms and conditions of the RfS documents and not to stipulate any deviations/ exceptions.
- Any bidder, who meets the Qualifying Requirement and wishes to quote against this RfS, may download the complete RfS document along with its amendment(s) and clarifications if any, from ISN-ETS Portal (<https://www.bharat-electronictender.com>) and/or SECI website (<https://www.seci.co.in/>) and submit their Bid complete in all respect as per terms & conditions of RfS Document on or before the due date of bid submission.
- Clarification(s)/ Corrigendum(s) if any shall also be available on the above referred websites.

Bidders are requested to remain updated for any notices/ amendments/ clarifications etc. to the RfS document through the websites <https://www.bharat-electronictender.com> and www.seci.co.in. No separate notifications will be issued for such notices/ amendments/ clarifications etc. in the print media or individually. Intimation regarding notification on the above shall be updated on www.seci.co.in and the details only will be available from <https://www.bharat-electronictender.com>

SECTION 1. INTRODUCTION & INVITATION FOR BIDS

1 Background & Introduction

- 1.1 Solar Energy Corporation of India Limited (hereinafter called “SECI”) is a Government of India Enterprise under the administrative control of the Ministry of New & Renewable Energy (MNRE). One of the main objectives of the Company is to assist the Ministry and function as the implementing and facilitating arm of the National Solar Mission (NSM) for development, promotion and commercialization of solar energy technologies in the country.
- 1.2 As a part of Intended Nationally Determined Contributions (INDCs), India has committed to increase the share of installed capacity of electric power from non-fossil-fuel sources to 40% by 2030. While Large Scale Solar power generation projects are being installed to achieve the ambitious targets for renewable Power generation, it has been planned to simultaneously develop decentralized solar energy.
- 1.3 Besides, developing decentralized renewable power, it is planned to replace Agriculture Diesel pumps with Solar Water pumps and Solarize Grid connected Agriculture pumps. At present, over 30 million agricultural pumps are installed in India, out of which nearly 10 million pumps are diesel based. The Distribution Companies (DISCOMs) are not in a position to energize these pumps through grid connection as seen from the long waiting lists with such Distribution Companies. Hence there is a need to provide energy to these pumps through solar energy. Also, over 20 million grid-connected agriculture water pumps installed in the country consume more than 17 percent of total annual electricity consumption of the country. Solarization of the same can reduce dependence of these pumps on conventional sources of energy supplied by DISCOMs and thus reducing their burden of subsidy on agriculture consumption of electricity. This will also provide additional source of income to farmers who will be in a position to sell the surplus power to DISCOMs. To provide energy and water security to farmers and enhance their income, de-dieselize the farm sector, and reduce environmental pollution, the Government of India approved PM-KUSUM scheme on 19.2.2019. As part of these initiatives, SECI has been nominated by MNRE for conducting third bidding centralized tender under the component-B of PM-KUSUM.
- 1.4 SECI shall be the bidding agency for selection of Vendors for Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of Off Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-10 HP capacities in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component-B of PM-KUSUM scheme of MNRE. Details regarding the selection process are contained in Section-8 of the RfS. SECI’s role is limited to price discovery through transparent competitive bidding mechanism. Award of work will be carried out by respective State Implementation Agencies (SIAs) designated under this scheme.
- 1.5 The Bidders will be free to avail fiscal incentives like Accelerated Depreciation, Concessional Customs and Excise Duties, Tax Holidays etc. as available for such

Projects. The same will not have any bearing on comparison of bids for selection. As equal opportunity is being provided to all Bidders at the time of tendering itself, it is up to the Bidders to avail various tax and other benefits. No claim shall arise on SECI for any liability if Bidders are not able to avail fiscal incentives and this will not have any bearing on the SPWPS. SECI does not however, give a representation on the availability of fiscal incentive and submission of bid by the Bidder shall be independent of such availability or non-availability as the case may be of the fiscal incentives.

- 1.6 Individual farmers will be supported to install standalone solar Agriculture pumps of capacity up to 7.5 HP for replacement of existing diesel Agriculture pumps / irrigation systems in off-grid areas, where grid supply is not available. Installation of new pumps shall also be permitted under this scheme except in dark zone areas. Pumps of capacity higher than 7.5 HP may be allowed, however, the CFA will be limited to the CFA applicable for pump of 7.5 HP. Water User Associations and community/State/UT based irrigation system will also be covered under this component. However, priority would be given to small and marginal farmers. In order to minimize the water usage for irrigation purpose, preference will be given to the farmers using Micro irrigation systems or covered under Micro irrigation schemes or who opt for micro irrigation system. The size of pump would be selected based on water table in the area, land covered, and quantity of water required for irrigation. For solar pumps to be set up and used by Water User Associations/ Farmer Producer Organizations/Primary Agricultural Credit Societies or for State/UT based irrigation system, the CFA will be allowed for solar pump capacity of higher than 7.5 HP considering up to 5 HP capacity for everyone in the group.
- 1.7 Solar PV capacity in kW for the pump capacity in HP will be allowed as per MNRE specifications under the scheme. It will be mandatory to use indigenously manufactured solar panels with indigenous solar cells and modules. Further, the motor-pump-set, controller and balance of system should also be manufactured indigenously. The vendor has to declare the list of imported components used in the manufacturing of solar water pumping system.
- 1.8 CFA of 30% of the benchmark cost or the tender cost, whichever is lower, of the stand-alone solar Agriculture pump will be provided. The State Government will give a subsidy of 30%; and the remaining 40% will be provided by the farmer. Bank finance may be made available for farmer's contribution, so that farmer has to initially pay only 10% of the cost and remaining up to 30% of the cost as loan. In case the State Government provides subsidy more than 30%, the beneficiary share will reduce accordingly.

However, in Northeastern States, Sikkim, Jammu & Kashmir, Himachal Pradesh and Uttarakhand, Lakshadweep and A&N Islands, CFA of 50% of the benchmark cost or the tender cost, whichever is lower, of the stand-alone solar pump will be provided. The State Government will give a subsidy of 30%; and the remaining 20% will be provided by the farmer. Bank finance may be made available for farmer's contribution, so that farmer has to initially pay only 10% of the cost and remaining up to 10% of the cost as

loan. In case the State Government provides subsidy more than 30%, the beneficiary share will reduce accordingly.

2 *Invitation for Bids*

- 2.1 A Single Stage, Two-Envelope Bidding Procedure will be adopted and will proceed as detailed in the RfS Documents. Bidding will be conducted through the competitive bidding procedures as per the provisions of Sections 2 and 3 of the RfS.
- 2.2 Interested bidders have to necessarily register themselves on the portal <https://www.bharat-electronictender.com> (“ETS portal”) through M/s Electronic Tender.com (India) Pvt. Limited to participate in the bidding under this invitation for bids. It shall be the sole responsibility of the interested bidders to get themselves registered at the aforesaid portal for which they are required to contact M/s Electronic Tender.com (India) Pvt. Limited, New Delhi to complete the registration formalities. Contact details of ISN-ETS is mentioned on the Bid Information Sheet. All required documents and formalities for registering on ISN-ETS are mentioned in the subsequent RfS documents.

They may obtain further information regarding this IFB from the registered office of SECI at the address given on the Bid Information Sheet from 10:00 hours to 17:00 hours on all working days.

For proper uploading of the bids on the ETS portal, it shall be the sole responsibility of the bidders to apprise themselves adequately regarding all the relevant procedures and provisions as detailed in the portal as well as by contacting M/s Electronic Tender.com (India) Pvt. Limited directly, as and when required, for which contact details are also mentioned on the Bid Information Sheet. SECI in no case shall be responsible for any issues related to timely or properly uploading/ submission of the bid in accordance with the relevant provisions of the Bidding Documents.

- 2.3 Bidders should submit their bid proposal complete in all aspect on or before last date and time of Bid Submission as mentioned on ISN-ETS Portal (<https://www.bharat-electronictender.com>), SECI website <http://www.seci.co.in> and as indicated in the Bid Information Sheet.
- 2.4 Bidder shall submit its proposal along with non-refundable Bid Processing Fees and Earnest Money Deposit (EMD) (if applicable) complete in all respect as per the Bid Information Sheet. Techno-Commercial bids will be opened as per the Bid Information Sheet in online presence of authorized representatives of bidders who wish to be present online. Bid proposals received without the Bid Processing Fees and/or Earnest Money Deposit (EMD) (as applicable) will be rejected. **In the event of any date indicated being declared a holiday, the next working day shall become operative for the respective purpose mentioned herein.**

RfS documents which include Eligibility Criteria, Technical Specifications, various Conditions of Contract, and Formats etc. can be downloaded from the ISN-ETS Portal or from SECI’s website. It is mandatory to download official copy of the RfS Document from Electronic Tender System (ISN-ETS) Portal to participate in the Tender. Any

amendment(s)/corrigendum(s)/clarification(s) with respect to this RfS shall be uploaded on ISN-ETS website. The Bidder should regularly check for any Amendment(s)/Corrigendum(s)/Clarification(s) on the above mentioned ISN-ETS website. The same may also be uploaded on SECI website also. However, in case of any discrepancy, the information available on ISN-ETS website shall prevail.

2.5 SECI reserves the right to cancel/withdraw/defer this invitation for bids without assigning any reason and shall bear no liability whatsoever consequent upon such a decision.

2.6 INTERPRETATIONS

- Words comprising the singular shall include the plural & vice versa.
- An applicable law shall be construed as reference to such applicable law including its amendments or re-enactments from time to time.
- A time of day shall save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time.
- Different parts of this contract are to be taken as mutually explanatory and supplementary to each other and if there is any differentiation between or among the parts of this contract, they shall be interpreted in a harmonious manner so as to give effect to each part.
- The table of contents and any headings or sub headings in the contract has been inserted for case of reference only & shall not affect the interpretation of this agreement.

SECTION 2. SPECIAL CONDITIONS OF CONTRACT

3 *Scope of Work*

Under this RfS, the selected vendors shall be required to Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of stand-alone off Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-10 HP capacity in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component- 'B' of PM-KUSUM scheme of MNRE. As per MNRE specifications and applicable BIS standards, bidder shall follow all provisions of the Scheme Guidelines as amended from time to time.

3.1 Supply and Manufacture

- a. The Selected vendor shall be responsible for design, supply, installation and commissioning of SPWPS along with 5 years of repair and maintenance. To ensure timely maintenance of SPWPS, apart from training a local person and making available necessary spare parts & tools in each district, to ensure timely maintenance of the systems the vendor shall have one authorized service center in each operational district and a helpline in local language in each operational State. Helpline number shall be indicated on the pump/ controller at suitable location easily visible to the user.
- b. Each pump should be marked with Toll Free No. of successful bidder (Toll Free No. shall be affix on controllers and shall be readable for 5 years) operating in English/Hindi and Regional language of respective state and specific pump number and same must have been captured by SIA's web-based application (as per instruction of SIA) at the time of installation at site. During the time of PDI of each component, test reports of equipments, warranty certificates, calibration certificates and any other certificates as specified in the guidelines and specification issued by MNRE should be provided by the bidder.

3.2 Installation and Commissioning

- a. Installation and commissioning of SPWPS shall be done by the vendor as per the details provided by the concerned SIA. The vendors shall co-ordinate with respective SIAs for repair and maintenance of SPWPS for 5 years.
- b. Selected vendors have to submit monthly consent of beneficiaries in their favor to SIA for which SIA's will be Notice to Proceed and for this, vendor shall complete the installation and commissioning of SPWPS within 120 days from date of issuance of NTP for general category states. However, for special category states/Hill States & UTs and Island UTs, Vendor shall complete the installation and commissioning of SPWPS within 150 days of issuance of such NTP.
- c. Selected Vendor and SIA representative should conduct site survey and submit Progress report on fortnight basis as per the requirement of SIA via PM-KUSUM App released by MNRE.

- d. Action plan should be submitting to SIAs including complete details of team, resources, and service centers in each district within 30 days of acceptance of LoA from SIA, failing of which by vendor SIA have the right to leavy penalty.
- e. Vendors will have to submit installation reports as per given format on weekly basis and Monthly basis to MNRE and SIA.
- f. Vendor will have to submit the completion reports of each district to SIA within one week from 100% completion of work as per allocation of each district.
- g. Selected Vendor shall submit monthly and quarterly progress reports to SIA in online mode.
- h. Vendor shall comply with all applicable regulatory and statutory norms. Vendor must obtain approval/ NOC from appropriate Govt body for implementing the project in each selected village.
- i. Selected vendor should have finalized sub-bidders and Purchase order for all materials such as PV Modules, Structure, Pump, Controllers, etc. within 30 days from date of award of contract and unpriced copy of such award letter/Purchase order will be submitted within 30 days from date of issuance of award.
- j. Vendor should commission minimum pumps/ quarter as defined above at Clause 3.2b of Scope of work. Vendor must submit handing over certificates in the format prescribed by MNRE.
- k. Each SPWPS is to be provided with the required details as mentioned in the specification and guidelines of the PM-KUSUM scheme.
- l. Vendor should submit the prescribed certificate and photographs of each SPWPS installed which must show complete installation setup along with beneficiary pump number etc.
- m. The selected vendors shall take all necessary permits, approvals and licenses, insurance etc., provide training and such other items and services required to complete the scope of work mentioned above.
- n. Time Schedule includes the time required for mobilization as well as testing, rectifications if any, retesting and completion in all respects to the entire satisfaction of Engineer-In Charge designated by respective SIA.

3.3 Technical Requirement and Testing

- a. SPWPS installed under this programme should meet technical specification and construction standards as specified by BIS and MNRE from time to time as given in Annexure-A.
- b. Only indigenously manufactured solar panels with indigenous solar cells and modules. Further, the motor-pump-set, controller and balance of system should also be manufactured indigenously.

- c. In case of any ambiguity in interpretation of any of the provisions of PM-Kusum Guideline, the decision of the MNRE shall be final.
- d. Systems installed under this programme should be follow OM-F.No.283/33/3029-GRID SOLAR of MNRE, Govt of India dated 23.09.2020.

3.4 Operation & Maintenance (O&M), Training, Awareness and Sensitization

- a. Selected Vendor should keep necessary spare parts (minimum 2% of allotted quantity of each component of the complete system at the service center) at each district and should ensure proper maintenance of SPWPS to 5 years from date of installation of each SPWPS. Vendor should also ensure to provide local training to local persons regarding proper maintenance of SPWPS. Vendor should submit bi-weekly installation report to SIA as per the prescribed format provided during the installation phase.
- b. Any complaint registered registered/service calls received should be attended at the earliest and the system should be repaired/restored/replaced within 3 days from date of complaint received/informed to the vendor.
- c. MNRE officials, SIA or its designated agency may inspect the systems during the installation or operational phase. In case the installed systems are not as per the standards, found non-functional on account of poor quality of installation or maintenance or not in-compliance with the guidelines and specification and tender terms and conditions. SIA reserves the right to encash the CPG and/or blacklist the vendor for the period 3 years.
- d. If any selected vendor, after getting empaneled doesn't go forward with the installation of pumps, apart from encashment of EMD, the said vendor shall also be blacklisted for 3 years period from the date of issuance of such notice of blacklisting by the respective SIA/MNRE.
- e. Vendor must submit an O&M manual in both English and local language should be provided with each SPWPS to the beneficiary. The following minimum details must be provided in the manual: -
 - i. Basic principles of PV system
 - ii. A small write-up (with a block diagram) on SPWPS- its components, PV module, electronics and expected performance
 - iii. A simple single line diagram (SLD) depicting the electrical circuits and control mechanism
 - iv. Type, model number, voltage and capacity of the motor used in the system
 - v. The make model number and country of origin of each component
 - vi. Significance of indicators
 - vii. Clear instruction on regular maintenance and troubleshooting of the SPWPS
 - viii. Preventive maintenance schedule
 - ix. Detailed information about warranty coverage
 - x. Dos and Don'ts

- xi. Name and address of the contact person for repair and maintenance in case of non-functionality.
 - xii. Description of frequent faults of PV module and pump and its remedies
 - xiii. Minimum 10 hard copies in (booklet form kept at each service center also to be provided to SIA as and when required.
- f. The O&M cost for 5 years should be inbuilt with system cost.
 - g. Vendors will mandatorily provide CMC for a period of 5 years from the date of commissioning of the systems including insurance coverage for the installed systems against natural calamities and theft. CMC will include inspection by Vendor at least once in a quarter and submission of quarterly inspection report of the installed pumps as per prescribed format. Selected Vendor shall provide a copy of valid insurance certificate of SPWPS to the beneficiary and same shall be renewed every year.
 - h. Vendors have to provide the Remote Monitoring System (RMS) with all the SPWPS installed under the scheme. Further, vendor has to maintain the RMS in working condition for the period of 5years and RMS systems shall push the accurate data of the parameters as specified in the specification and guidelines of the scheme failing which the installation of the system will not be accepted by SIA.
 - i. Vendor shall ensure that the local training, awareness and sensitization campaigns on usage of the SPWPS are conducted.

4 *Selection of Beneficiary: -*

The implementation of Scheme is demand based. However, the following shall be ensured before inclusion of a beneficiary under the Scheme:

1. Beneficiary should not have an electricity connection at the farm.
2. Installation of the new pumps not allowed in the notified areas issued by the Central Ground Water Board.
3. Priority to be given to small and marginal farmers.
4. Preference be given to the farmers using Micro irrigation systems or covered under Micro irrigation schemes or who opt for micro irrigation system.

5 *Total capacity and types of Pumps allowed*

The indicative cumulative quantities envisaged under this centralized tender for Standalone Solar Pumps under PM-KUSUM is around **6,66,250 SPWPS**. The tentative quantities of SPWPS for each selected states under this tender have been annexed as Annexure-C to the RfS. The following types of pump manufacturers are planned for empanelment under the RfS:

Pump Capacity (HP)	Pump Type	Pump Position	Controller Type
1	AC	Submersible	Normal (Without USPC)

	AC	Surface	Normal (Without USPC)
	DC	Submersible	Normal (Without USPC)
	DC	Surface	Normal (Without USPC)
2	AC	Submersible	Normal (Without USPC)
	AC	Surface	Normal (Without USPC)
	DC	Submersible	Normal (Without USPC)
	DC	Surface	Normal (Without USPC)
3	AC	Submersible	Normal (Without USPC)
	AC	Surface	Normal (Without USPC)
	DC	Submersible	Normal (Without USPC)
	DC	Surface	Normal (Without USPC)
	AC	Submersible	with USPC
	AC	Surface	with USPC
	DC	Submersible	with USPC
5	DC	Surface	with USPC
	AC	Submersible	Normal (Without USPC)
	AC	Surface	Normal (Without USPC)
	DC	Submersible	Normal (Without USPC)
	DC	Surface	Normal (Without USPC)
	AC	Submersible	with USPC
	AC	Surface	with USPC
	DC	Submersible	with USPC
7.5	DC	Surface	with USPC
	AC	Submersible	Normal (Without USPC)
	AC	Surface	Normal (Without USPC)
	DC	Submersible	Normal (Without USPC)
	DC	Surface	Normal (Without USPC)
	AC	Submersible	with USPC
	AC	Surface	with USPC
	DC	Submersible	with USPC
10	DC	Surface	with USPC
	AC	Submersible	Normal (Without USPC)
	AC	Surface	Normal (Without USPC)
	DC	Submersible	Normal (Without USPC)
	DC	Surface	Normal (Without USPC)
	AC	Submersible	with USPC
	AC	Surface	with USPC
	DC	Submersible	with USPC
	DC	Surface	with USPC

6 *Maximum Eligibility for Contracted Capacity Allocation for a Bidder*

Following conditions shall be applicable to the Bidders for submission of bids against this RfS:

A Bidder, including its Parent, Affiliate or Ultimate Parent or any Group Company shall submit a single bid offering rates for At least one State/UT and a maximum for all notified State/UT.

- 6.1 Total allocation to your vendor for a particular State/UT shall not go beyond the Annual Turn Over requirement for that particular State/UT. However, if there are no vendors available in the corresponding package, who have agreed to match the L1 prize and circumstances necessitates additional award of work, additional allocation may be done by SIA as per MNRE approvals.
- 6.2 The evaluation of bids shall be carried out as described in Section-5 of the RfS. The methodology for Allocation of SPWPS is elaborated in Section-5 of the RfS.

7 *SPWPS Locations*

This scheme proposes to install Solar Photovoltaic Water Pumping Stations on a Pan-India basis as per attached annexure-C to the RfS.

8 *Performance Monitoring*

Selected Vendor must ensure working of minimum of 95% of total installed SPWPS at any point of time. Remote monitoring system shall be installed integrated with the SPWPS controllers rather than having as a separate unit through an integral arrangement and it should be capable of providing accurate live status/parameters on State portal maintained by concern SIA and on central portal maintained by MNRE. Detailed requirements of Remote Monitoring System along with minimum performance requirements are brought out as per Annexure-A.

9 *Commissioning of Projects*

Selected vendors must submit monthly consent of beneficiaries in their favours to SIA for which SIA will give notice to proceed and for this selected vendor shall complete the installation and commissioning of allocated SPWPS within 120 days from issuance of notice to proceed for general category state. However, for, special category states/Hill States/UTs/Island UTs, selected vendor shall complete the installation and Commissioning of allotted SPWPS within 150 days of issuance of notice to proceed.

- 9.1 Commissioning of the SPWPS shall be carried out by the vendor in line with the detailed procedure as per ***clause 3.2 of section II*** of this RfS. The concerned SIA may authorize any individual or committee or organization to witness and validate the installation/commissioning on site(s). Commissioning certificates shall be issued by the concerned SIA after successful commissioning of allotted SPWPS for any particular State/UT. MNRE ***authorized representative may also be allowed for the inspection/commissioning if required.***

SECTION 3. STANDARD CONDITIONS OF CONTRACT

10 *Obtaining RfS Documents*

Interested bidders must download the official copy of RfS & other documents after login into the ISN-ETS portal by using the Login ID & Password provided by ISN-ETS during registration (Refer Annexure – B of the RfS). The bidder shall be eligible to submit/upload the bid document only after logging into the ISN-ETS portal and downloading the official copy of RfS. The Bidding documents are available free of cost.

11 *Bid Processing Fees*

Prospective Bidders interested to participate in the bidding process are required to submit their bid proposals in response to this RfS document along with a non-refundable processing fee as mentioned in the Bid Information Sheet. A Bidder will be eligible to participate in the bidding process only on submission of entire financial amounts as per the Bid Information Sheet. In case the Bidder chooses to submit the Bid Processing Fees through NEFT/RTGS (electronic transfer), the Bidder shall submit the transaction receipt instead of the corresponding DDs, as part of the offline bid submission.

The bank details of SECI are available on www.seci.co.in under the “Financials” Tab.

In case a Bidder chooses to deduct TDS while making the payments against Bid Processing Fee, such TDS details shall be submitted by the Bidder along with the transaction details, as part of online bid submission.

Bids submitted without Bid Processing Fee and/or Bank Guarantee against Earnest Money Deposit (EMD) (as applicable) (including partial submission of any one of the respective amounts), may be liable for rejection by SECI.

All MSMEs (Micro, Small and Medium Enterprises) notified as per clause 1.10.3 of GFR 2017 and as registered under NSIC/DIC/Udyog Aadhaar only are only exempted from submission of Bid Processing Fee and EMD. For claiming this exemption, at the time of bid submission, MSMEs must provide valid proof of their being registered as MSME. However, upon empanelment under this RfS, selected MSMEs must submit Performance Bank Guarantee as per clause 12 of section III of RfS.

12 *Scope of Work and Other Conditions of the Contract*

Refer Clause 3 of the RfS.

13 *Bank Guarantee/ Payment on Order Instrument (POI) against Earnest Money Deposit (EMD)*

- 13.1 Bidder shall submit Earnest Money Deposit (EMD) in the form of Bank Guarantee of 2 % of amount equivalent to the 6 % of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher, (as per Annexure-E) according to Format 7.3A/ Format 7.3B and valid for 27 months from the last date of bid submission, shall be submitted by the Bidder along with their bid, failing which the bid shall be summarily rejected. The Bank Guarantees towards EMD must be issued in the name of

the Bidding Company/ Lead Member of Bidding Consortium. In the event of encashment of EMD, the encashed amount shall include all applicable taxes.

- 13.2 The Bidder shall furnish the Bank Guarantees towards EMD from any of the Scheduled Commercial Banks as listed on the website of Reserve Bank of India (RBI) and amended as on the date of issuance of bank guarantee. Bank Guarantee issued by foreign branch of a Scheduled Commercial Bank is to be endorsed by the Indian branch of the same bank or State Bank of India (SBI).

The EMD shall be valid as per the timelines stipulated above. However, shortfall in the EMD validity, if any, up to a period of seven (7) days shall be acceptable. Further, an additional shortfall only in the following cases shall be acceptable: If the Bidder has submitted the EMD with validity as per original bid submission date or as per any revised submission date and if the deadline for submission of bids has been extended further, the Bid Guarantee shall be acceptable provided, the EMD is valid for more than two months from the actual date of bid submission and the Bidder submits the EMD extension for the requisite period within seven days from the date of actual bid submission, if required.

- 13.3 SECI has agreed to accept the EMD in the form of an unconditional and irrevocable Bank Guarantee instead of the cash deposit with the clear position intimated to the bidder that the EMD Bank Guarantee shall be encashable for being appropriated by SECI in terms of the guarantee as in the case of appropriation of the cash deposit lying with SECI.

- 13.4 The Bank Guarantee (BG) or amendment to be submitted against EMD shall be effective only when the BG issuance message is transmitted by the issuing bank through SFMS to IDFC First Bank IFSC: IDFB0020101, Client Name: Solar Energy Corporation of India Ltd and a confirmation in this regard is received by SECI. Message Type: IFN760COV is to be used by the issuing bank.

13.5 **Forfeiture of EMD:**

The BG towards EMD shall be encashed by SECI in following cases:

- a. If the Bidder withdraws or varies the bid after due date and time of bid submission and during the validity of bid.
- b. In case, the SIA issues LoA to the Selected Vendor and if the Selected Vendor does not submit the Performance Bank Guarantee within the stipulated time period (i.e. 15 days from issuance of LoA);
- c. If after empanelment of vendors or after issuance of LoA by SIA, it is found that the documents furnished by the Bidder as part of response to RfS are misleading or misrepresented in any way.

- 13.6 **Payment on Order Instrument (POI):** As an alternative to submission of EMD as above, the Bidder also has an option to submit a letter of undertaking issued by either of the following three organizations, viz. (i) Indian Renewable Development Agency Limited (IREDA) or (ii) Power Finance Corporation Limited or (iii) REC Limited. This

Letter of Undertaking shall be issued as “Payment on Order Instrument” (POI), wherein the POI issuing organization undertakes to pay in all scenarios under which the EMD would be liable to be encashed by SECI within the provisions of RfS. This instrument would have to be furnished as per Format 7.3 B of the RfS, within the timelines as per Clause 11.1 above, for the amount and validity period as per those Clause 11.1 above.

The term “Bank Guarantee (BG) towards/ against EMD” occurring in the RfS shall be read as “Bank Guarantee (BG)/ Payment on Order Instrument (POI) towards/ against EMD”.

14 Performance Bank Guarantee (PBG)

- 14.1 Bidders selected by SECI based on this RfS shall submit to the respective SIA, a Performance Guarantee for a value @ 3% of the amount equivalent to the 6% of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher (as per Annexure-E). However, if total number of SPWPS awarded to vendor is more than 25 nos. of SPWPS or 6% of the value of total state-wise allocation. Along with the first list of consent from beneficiaries in vendor’s favor, vendor shall submit another PBG equivalent to differential value of order as per notice to proceed (NTP). It may be noted that Successful Bidders shall submit the Performance Guarantee according to the Format 7.3C with a validity period up to (& including) the date as on 24 months from placement of award by respective SIA. Validity of PBG shall be extended by the vendor for every year for the first five year. Further, SIA reserves the right to encash the existing CPG, in case the vendors doesn’t renew/extend the existing PBG at-least 30 days in advance.
- 14.2 PBG(s) shall be submitted by selected vendors to SIA within 15 days from issuance of letter of award/empanelment.
- 14.3 All Performance Bank Guarantees (PBGs) shall be submitted separately for each State/UT. The PBGs will be issued in favor of respective SIA.

Illustration 1:

Upon Placement of Letter of Award by Arunachal Pradesh’s SIA to Vendor for 25 nos. of SPWPS, Selected Vendor must submit PBG equivalent to INR 2,00,250.00 to SIA (which is 3% order value of 25 number of SPWPS, as 6% of state allocation that is 200 is equal to 12 which is less than 25). However, if Vendor submits a list of consents of 90 beneficiaries in his favor. In this case, Vendor shall also submit a PBG of 3 % of the amount equivalent to the INR 5,20,650.00 (which is equivalent to 3% of 65 (90-25) X 2,67,000.00) of SPWPS in addition to the previously submitted PBG of INR 2,00,250.00 to respective SIA to get notice to proceed for balance 65nos of SPWPS.

Illustration 2:

- 14.4 Upon Placement of Letter of Award by Karnataka’s SIA to Vendor for 600 nos. of SPWPS, Selected Vendor must submit PBG equivalent to INR 48,06,000.00 to SIA (which is 3% order value of 600 number of SPWPS, as 6% of state allocation that is 10000 is equal to 600 which is higher than 25) within 15 days of issuance of LoA. However, if Vendor submits a list of consents of 1000 beneficiaries in his favor. In this

case, Vendor shall also submit a PBG of 3 % of the amount equivalent to the INR 32,04,000.00 (which is equivalent to 3% of order value of 400 (1000-600) X 2,67,000.00) of SPWPS in addition to the previously submitted PBG of INR 48,06,000.00 to respective SIA to get notice to proceed for balance 400 nos. of SPWPS. The selected Vendor does not meet eligibility criteria upon submission of documents or does not execute the obligations towards SIA prior to allocation of SPWPS, then upon intimation either online or through letter by MNRE to SECI, the Bank Guarantee equivalent to the amount of the EMD shall be encashed by SECI from the Bank Guarantee/POI available with SECI (i.e., EMD or PBG) as liquidated damages not amounting to penalty apart from other penal provision of the scheme guideline/RFS and the selected Vendor expressly waives off its rights and objections, if any, in that respect.

- 14.5 The Successful Bidder/Selected Vendor shall furnish the PBG from any of the Scheduled Commercial Banks as listed on the website of Reserve Bank of India (RBI) and amended as on the date of issuance of bank guarantee. Bank Guarantee issued by foreign branch of a Scheduled Commercial Bank is to be endorsed by the Indian branch of the same bank or State Bank of India (SBI).
- 14.6 The Bank Guarantees must be executed on non-judicial stamp paper of appropriate value as per Stamp Act relevant to the place of execution.
- 14.7 All expenditure towards execution of Bank Guarantees such as stamp duty etc. shall be borne by the Bidders.
- 14.8 In case of Bank Guarantees issued by foreign branch of a Scheduled Commercial Bank, the same is to be endorsed by the Indian branch of the same bank or SBI.

15 Notice to Proceed/ Completion Time

Selected vendors should ensure the completion of work as per Letter of Award (LoA)/ Notice To Proceed (NTP), tender terms and conditions, specifications, and guidelines of the scheme.

- 15.1 The implementation work on ground should start within 15 days from the date of Notice to Proceed from SIA.
- 15.2 Successful vendor shall submit the unpriced purchase order copies of solar pump sets, controllers and solar PV modules to SIA within 30 days from the date of notification of award (Not applicable in case vendor itself is manufacturing all the items). In case unpriced purchase order copies are submitted within 30 days to SIA, SIA may cancel the contract and award the same quantity to another empanelled vendor.
- 15.3 In order to achieve the target, suitable numbers of team must be deployed on the field by the selected vendor.
- 15.4 Note withstanding the transfer of ownership of the plant and equipment the responsibility of care and custody thereof together with the risk of loss or damage there too shall remain with the Vendor pursuant to GCC hereof until completion of facilities or the part thereof in which such plant and equipment are incorporated.

16 *Payment Terms*

Stage-1: 90 % of the value of month wise nos. of SPWPS installed at site based on: -

- Submission of detailed work plan (Project Execution Plan) with timeline for the lot supplied duly approved by the SIA's representative.
- Submission of evidence in hard copy regarding completion of installation of SPWPS in good condition at site duly verified and acknowledged by Engineer-In Charge/SIA and Beneficiary.
- All the relevant warranty and quality (Performance Test Reports) of the lot to be submitted.
- Signing of contract agreement between SIA and Vendor.
- Submission of Original Supply invoices/bills duly verified by the SIA.
- Submission of software generated installation reports as per prescribed format by SIA which shall include following but not limited to consumer details, site survey details, asset inspection and mapping details, Remote monitoring system parameters etc.
- Proof of distribution of O&M Manual to beneficiary printed in both English and local language.
- Submission of handing over certificates of SPWPS in the format as suggested by MNRE.
- Performance report for one week after commissioning based on the accurate data of the parameters received from RMS or data logger in case of internet unavailability.
- An Undertaking with respect to withstand ability of SPWPS to the wind speed of 150 km/hr in all weather conditions.

Stage-II: **Balance 10% on completion of one month from date of completion certificate**

Note:

- Payment shall be made to vendor within 30 days after submission of three copies of invoices to Engineer-in charge, complete in all respect (showing description, quantity, unit rate and total number of systems).
- SIA has the right to seek any additional documents/certificates/information it deems fit prior to releaser of any payment.
- If the invoices are incomplete in any respect or in case on non-compliance with terms and conditions of letter of award/Notice to Proceed, the payment due date shall start from the submission of all necessary documents.

17 *Minimum Paid Up Share Capital to be Held by Project Promoter*

17.1 The Bidder shall provide complete information in their bid in reference to this RfS about its promoters and upon issuance of LoA, the Successful Bidder/Selected Vendor shall indicate its shareholding in the company indicating the controlling.

18 *Instructions to Bidders for Structuring of Bid Proposals in Response to RfS*

The bidder including its Parent, Affiliate or Ultimate Parent or any Group Company shall submit single response to RfS. Detailed Instructions to be followed by the bidders for online submission of response to RfS are stated at Annexure – B. Submission of bid proposals by Bidders in response to RfS shall be in the manner described below:

RFS for Selection of Vendors under Component-B of PM-KUSUM scheme of MNRE	<u>RfS No. SECI/C&P/MI/00/0010/2022-23 Dated 31.12.2022</u>	<u>Page 19 of 106</u>
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- i. Covering Letter as per **Format 7.1.**
- ii. In case of a Bidding Consortium, a Power of Attorney in favour of the Lead Member issued by the other Members of the Consortium shall be provided in original as per format attached hereto as **Format 7.2.**
- iii. Bank Guarantee/ Payment on Order Instrument (POI) against Earnest Money Deposit (EMD) as per **Format 7.3 A/7.3 B.**
- iv. Board Resolutions, as per prescribed formats enclosed as per **Format 7.4** duly certified by the Company Secretary or the Director of the relevant Bidder, as applicable to the Bidder and mentioned hereunder:
 - a. Board Resolution from the Bidding Company or the Lead Member of the Consortium, as the case may be, in favour of the person signing the response to RfS and in the event of selection of the Projects. Board Resolution from each of the Consortium Members in favour of the person signing Consortium Agreement.
 - b. Board Resolution from the Bidding Company committing 100% (One Hundred Percent) of the equity requirement for the Project/ Board Resolutions from each of the Consortium Members together in aggregate committing to 100% (One Hundred Percent) of equity requirement for the Project (in case of Bidding Consortium); and
 - c. Board Resolutions from each of the Consortium Members and Lead member contributing such additional amount over and above the percentage limit (specified for the Lead Member and other member in the Consortium Agreement) to the extent becoming necessary towards the total equity share in the Project Company, obligatory on the part of the Consortium pursuant to the terms and conditions in the Consortium Agreement.
- v. In case of a Consortium, the Consortium Agreement between the Members in the Consortium as per **Format 7.5** along with Board resolution from each Member of the Consortium for participating in Consortium.
- vi. Format for Financial Requirements as per **Format 7.6** along with the certificate from practicing Chartered Accountant/ Statutory Auditors showing details of computation of the financial credentials of the Bidder.
- vii. Undertaking regarding no willful default and no major litigation pending as per **Format 7.7.**
- viii. A disclosure statement as per **Format 7.8/ 7.8A** regarding participation of any related companies in the bidding process.
- ix. Signed Integrity Pact between SECI and the Bidding Company as per **Format 7.9.**
- x. Covering letter for the financial bid as per **Format 7.10.**
- xi. Declaration regarding banning, liquidation, court receivership etc. as per **Format 7.11.**
- xii. Declaration for the local content as per **Format 7.12.**
- xiii. Declaration for using same make of equipments as per the test certificate as per **Format 7.13.**
- xiv. Declaration for submitting the test certificate as per MNRE technical specifications for solar water pump sets issued in 2019 as per **Format 7.14.**
- xv. Certificate regarding compliance of MeitY notification vide file no. 1(10)/2017-CLES dt. 02.07.18 as per **Format 7.15.**

xvi. Attachments

- i. Memorandum of Association, Article of Association of the Bidder needs to be attached along with the bid. The bidder should also highlight the relevant provision which highlights the objects relating to Power/ Energy/ Renewable Energy/ Solar Water Pumping Station/Solar Power plant development/Manufacturer of pump-sets, solar panels and controllers.
 - In case, there is no mention of the above provisions in the MoA/ AoA of the Bidder, the same has to be amended and submitted, if the bidder is selected as Selected Vendor.
 - If the selected vendor wishes to execute the project through a Special Purpose Vehicle (SPV), the MoA/ AoA of the SPV highlighting the relevant provision which highlights the objects relating to Power/ Energy/ Renewable Energy/ Solar Water Pumping Station/Solar Power plant development/Manufacturer of pump-sets, solar panels and controllers has to be submitted.
- ii. Certificate of Incorporation of Bidding Company/ all member companies of Bidding Consortium.
- iii. A certificate of shareholding of the bidding company, its Parent and Ultimate Parent (if any) duly certified by a practicing Chartered Accountant/Company Secretary as on a date within 30 days prior to the last date of bid submission. SECI reserves the right to seek additional information relating to shareholding in promoter companies, their parents/ ultimate parents and other group companies to satisfy themselves that RfS conditions have been complied with and the bidder will ensure submission of the same within the required time-lines.
- iv. Certified copies of annual audited accounts for the last three financial year, i.e., FY 2021-22/2020-21/2019-20, and provisional audited accounts, along with certified copies of Balance Sheet, Profit & Loss Account, Schedules and Cash Flow Statement supported with bank statements as on the date at least 7 days prior to the due date of bid submission (if applicable), shall be required to be submitted.
- v. Details of all types of securities/instruments which are pending conversion into equity whether optionally or mandatorily.

19 Important Notes and Instructions to Bidders

- 19.1 Wherever information has been sought in specified formats, the Bidders shall fill in the details as per the prescribed formats and shall refrain from any deviations and referring to any other document for providing any information required in the prescribed format.
- 19.2 The Bidders shall be shortlisted based on the declarations made by them in relevant schedules of RfS.
- 19.3 If the Bidder/Member in a Bidding Consortium conceals any material information or makes a wrong statement or misrepresents facts or makes a misleading statement in its response to RfS, in any manner whatsoever, SECI reserves the right to reject such response to RfS and/or cancel the Letter of Award, if issued, and the Bank Guarantee/POI provided up to that stage shall be encashed. Bidder shall be solely responsible for disqualification based on their declaration in the submission of response to RfS.

- 19.4 Response submitted by the Bidder shall become the property of the SECI and SECI shall have no obligation to return the same to the Bidder.
- 19.5 All documents of the response to RfS (including RfS and subsequent Amendments/ Clarifications/Addenda) submitted online must be digitally signed by the person authorized by the Board as per Format 7.4.
- 19.6 The response to RfS shall be submitted as mentioned in Clause 16 of the RfS. No change or supplemental information to a response to RfS will be accepted after the scheduled date and time of submission of response to RfS. However, SECI reserves the right to seek additional information from the Bidders, if found necessary, during the course of evaluation of the response to RfS.
- 19.7 The Bidder shall make sure that the correct, valid and operative Pass-Phrase to decrypt the relevant Bid-part is submitted into the ‘Time Locked Electronic Key Box (EKB)’ after the deadline of Bid submission, and before the commencement of the Online Tender Opening Event (TOE) of Technical bid.
- 19.8 All the information should be submitted in English language only. In case of bidders or their foreign affiliate having documents in other than English language, then the documents shall be translated in English language by certified translator and submitted.
- 19.9 Bidders shall mention the name of the contact person and complete address and contact details including email address which shall be active for the period of 07 years in their covering letter.
- 19.10 Response to RfS that are incomplete, which do not substantially meet the requirements prescribed in this RfS, will be liable for rejection by SECI.
- 19.11 Response to RfS not submitted in the specified formats will be liable for rejection by SECI.
- 19.12 Bidders delaying in submission of additional information or clarifications sought will be liable for rejection.
- 19.13 Non-submission and/ or submission of incomplete data/ information required under the provisions of RfS shall not be construed as waiver on the part of SECI of the obligation of the Bidder to furnish the said data/information unless the waiver is in writing.
- 19.14 Only New Delhi Courts shall have exclusive jurisdiction in all matters pertaining to this RfS.
- 19.15 All the financial transactions to be made with SECI/SIA including delay charges, and any additional charges (if required), shall attract 18% GST on each transaction, irrespective of the same being mentioned in the RfS.

20 Non-Responsive Bid

The response to RfS submitted by the bidder along with the documents submitted **online** to SECI shall be scrutinized to establish “Responsiveness of the bid”. Each bidder’s

response to RfS shall be checked for compliance with the submission requirements set forth in this RfS.

Any of the following conditions shall cause the Bid to be “non-responsive”:

- (a) Non-submission of the requisite Bid Processing Fee as mentioned in the Bid Information Sheet.
- (b) Response to RfS not received by the due date and time of bid submission.
- (c) Non-submission of correct, valid and operative Pass-Phrases for both Technical and Financial Bid (Price Bid) Parts after the deadline of Bid Submission, and before the commencement of the Online Tender Opening Event (TOE) of Techno-Commercial Bid.
- (d) Any indication of price in any part of response to the RfS, other than in the financial bid.
- (e) Data filled in the Electronic Form of Financial Bid (Second Envelope), not in line with the instructions mentioned in the same electronic form.
- (f) In case it is found that the Bidding Company including Ultimate Parent Company/ Parent Company/Affiliate/Group Companies have submitted more than one response to this RfS, then all these bids submitted shall be treated as non-responsive and rejected.

In any of the above cases, the bid shall not be considered for bid opening and evaluation process.

21 Method of Submission of Response to RfS by the Bidder

21.1 Documents to be Submitted Offline (in Original)

The bidder has to submit original of following documents **offline**.

- i. DD/Pay order or NEFT/RTGS details towards Bid Processing Fee as mentioned in Bid Information Sheet.
- ii. Bank Guarantee/ Payment on Order Instrument towards EMD as mentioned in the Bid Information Sheet (as per Format 7.3A/ 7.3B). One EMD shall be submitted for the cumulative capacity quoted by the Bidder.
- iii. Pass-phrases for Techno-commercial and Financial bids submitted on the ETS portal.

No documents will be accepted in person, on or before the date of bid submission. Bank Guarantee/POI against EMD needs to be submitted in both online and offline modes. The bidders will be required to submit the bank guarantee/POI against EMD and DDs/Pay Orders (if applicable) against the bid processing fee, either in person or through post, at the office of SECI until the date as on 2 working days after the closing date of bid submission. The 2-day duration will be counted from the date of bid submission.

For e.g., if the bid submission deadline is 18:00 hrs. on 22.08.2022, the above deadline will expire at 18:00 hrs. on 24.08.2022. In case the above deadline being a holiday, the next working day in SECI will be the deadline for submission of Bank Guarantees.

Note: In all cases, the Bank Guarantee/POI against EMD along with DDs/Pay Orders (if applicable), shall be issued on or before the bid submission deadline. These instruments issued after the expiry of the deadline will be summarily rejected.

The bidding envelope shall contain the following sticker:

RFS Document for Selection of Vendors for Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of Off Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-10 HP capacities in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component-B of PM-KUSUM scheme of MNRE	
<i>Cumulative Capacity of the projects applied for</i>	_____ Nos.
<i>No. of Projects Bid for</i>	
<i>RfS Reference No.</i>	SECI/C&P/ _____ dated _____
<i>Submitted by</i>	<i>(Enter Full name and address of the Bidder)</i>
<i>Organization ID (OID) on ETS portal</i>	<i>(Enter the OID through which the Bid has been submitted online on ETS portal)</i>
<i>Authorized Signatory</i>	<i>(Signature of the Authorized Signatory)</i> <i>(Name of the Authorized Signatory)</i> <i>(Stamp of the Bidder)</i>
<i>Bid Submitted to</i>	AGM (C & P) Solar Energy Corporation of India Limited 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi-110023 Tel No. 011-71666220 Email - contracts@seci.co.in

21.2 Documents to be Submitted Online

Detailed instructions to be followed by the Bidders for online submission of response to RfS as stated as Annexure-B of the RfS. The bidders shall strictly follow the instructions mentioned in the electronic form in respective technical bid and financial bid while filling the forms.

If the Bidder has submitted bid online and fails to submit the DDs/Pay order against bid processing fee offline within 2 working days from last date of bid submission, then the same shall be treated as incomplete bid and Bid Processing fee submitted shall be encashed.

All documents of the response to RfS submitted online must be digitally signed and uploaded on the website, <https://www.bharat-electronictender.com> which should contain the following:

I. Technical Bid (First Envelope)

The Bidder shall upload single technical bid containing scanned copies of the following documents duly signed and stamped on each page by the authorized signatory as mentioned below.

- a. Formats - 7.1, 7.2 (if applicable), 7.3 A/7.3 B, 7.4, 7.5 (if applicable), 7.6, 7.7, 7.8/7.8A and 7.9, 7.11, 7.12, 7.13, 7.14, 7.15 as elaborated in Clause 16 of the RfS.
- b. All attachments elaborated in Clause 16 of the RfS, under the sub-clause xi: Attachments, with proper file names.
- c. All supporting documents regarding meeting the eligibility criteria.
- d. Scanned Copies of NEFT/RTGS details towards Bid Processing Fee as mentioned in Bid Information Sheet.

The Bidder will have to fill the Electronic Form provided at the ISN-ETS portal as part of Technical Bid.

Submission of Pass-phrases: In line with Clause 17.7 and Annexure-B, the Bidder shall be required to submit the Pass-Phrase to decrypt the relevant Bid-part is submitted into the 'Time Locked Electronic Key Box (EKB)' after the deadline of Bid submission, and before the commencement of the Online Tender Opening Event (TOE) of Technical bid.

II. Financial Bid (Second Envelope)

- a) Bidders shall submit the single Financial Bid containing the scanned copy of following document(s):
 - i. Covering letter as per **Format 7.10** of the RfS
 - ii. Duly signed and stamped strictly as per price bid **Format 7.16** of the RfS.
- b) Bidding Parameter:**
 - i. A single fixed price per line item as a bidding parameter: Under this RfS, the bidding parameter shall be the Price quoted by the Bidder i.e., a fixed price per line item (exclusive of GST) in INR.
 - ii. The above fixed price shall include all costs related to the Scope of Work as per the RfS and Obligations of the Successful Bidder/Selected Vendor. The Bidder shall quote for the entire facilities on a "single responsibility" basis such that the fixed price covers all the obligations in respect of Design, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance (05 years), inclusive of all taxes.
 - iii. The price shall remain firm and fixed and shall be binding on the Selected Vendor irrespective of actual cost of execution of the Project. No escalation on the price will be granted for any reason whatsoever. The Selected Vendor shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever.

- iv. The fixed price for each line item shall be exclusive of all duties and taxes, insurance etc. The prices quoted by the firm shall be complete in all respect.
- v. **Only a single price bid for each line item (i.e., type of pump in each State/UT), for the cumulative Project capacity quoted by the bidders, shall have to be filled online in the Electronic Form provided at the ISN-ETS portal. The instructions mentioned in the Financial Bid Electronic Form have to be strictly followed without any deviation, else the bid shall be considered as non-responsive.**
- vi. **Important Note:**
- (a) The Bidding envelope shall be properly sealed with the signature of the Authorized Signatory running across the sealing of the envelope.
- (b) In case the Bidder submits the online documents on ISN-ETS within the bid submission deadline and fails to submit the pass phrases in the ETS portal within 2 working days after bid submission deadline, the online bid of the Bidder shall not be opened and shall be ‘archived’ on the ISN-ETS portal. Similarly, bids submitted offline but without any online submission on ISN-ETS portal shall not be opened.

For e.g., if the bid submission deadline is 18:00 hrs. on 05.10.2022, the above deadline will expire at 18:00 hrs. on 07.10.2022. In case of the above deadline being a holiday, the next working day in SECI will be the deadline for online submission of Pass-phrases in the ETS portal.

22 *Validity of the Response to RfS*

The Bidder shall submit the response to RfS which shall remain valid up to the date as on 12 months from the last date of bid submission (“Bid Validity”). SECI reserves the right to reject any response to RfS which does not meet the aforementioned validity requirement.

23 *Bid Preparation Cost*

The Bidder shall be responsible for all the costs associated with the preparation of the response to RfS and participation in discussions and attending pre-bid meeting(s) etc. SECI shall not be responsible in any way for such costs, regardless of the conduct or outcome of the bid process.

24 *Clarifications/ Pre-Bid Meeting/ Enquiries/ Amendments*

- 24.1 Clarifications/ Doubts, if any, on RfS document may be emailed and/ or through ISN-ETS portal. The format for submission of clarifications is available on the portal.
- 24.2 SECI will make effort to respond to the same in the Pre-Bid Meeting to be held as mentioned in the Bid Information Sheet. A compiled list of such questionnaire and SECI’s response will be uploaded in the ISN-ETS portal <https://www.bharat-electronictender.com>. If necessary, amendments, clarifications, elaborations shall be

issued by SECI which will be notified on SECI/ ISN-ETS web site. No separate reply/intimation will be given for the above, elsewhere.

- 24.3 A Pre-Bid Meeting shall be held as mentioned in the Bid Information Sheet (Venue to be notified later on SECI's website).
- 24.4 Enquiries/ Clarifications up to award of contract may be sought by the Bidder from following point of contacts in SECI.

<u>Name of the Authorized Person of SECI:</u>	<u>Contact Details:</u>
Shri Pratik Prasun Sr. Manager (C & P)	Phone (Off): 011-24666237 Email: pratikpr@seci.co.in
Shri Biblesh Meena Manager (C & P)	Phone (Off): 011-24666270 Email: biblesh@seci.co.in

25 *Right of SECI to Reject a Bid*

SECI reserves the right to reject any or all of the responses to RfS or cancel the RfS or annul the bidding process for any project at any stage without assigning any reasons whatsoever and without thereby any liability. In the event of the tender being cancelled at any stage, the processing fee (excluding GST, if amount credited to SECI's account), without any interests, and EMD submitted by the Bidders shall be returned to the respective Bidders (if applicable).

26 *Post Award Compliances*

Timely completion of all the milestones will be the sole responsibility of Vendor. SECI/Client Organization shall not be liable for issuing any intimations/reminders to Vendor for timely completion of milestones and/or submission of compliance documents.

Any checklist shared with Vendor by Client Organization for compliance of above-mentioned milestones to be considered for the purpose of facilitation only. Any additional documents required as per the conditions of RfS must be timely submitted by the Vendor.

27 *Adjudicator*

Adjudicator under the contract shall be appointed by the Appointing Authority of SIA. If the bidder does not accept the Adjudicator proposed by SIA, it should so state in its bid form and make a counter proposal of an adjudicator. If on the day the contract agreement is signed, the SIA and contractor have not agreed on the appointment of adjudicator, the adjudicator shall be appointed, at the request of either party, by the MNRE.

28 *Arbitration*

Arbitration shall be carried out as per Arbitration Act 1996 and its subsequent amendment. The Contract shall be governed by and interpreted in accordance with the

laws in force in India. The Courts of respective cluster where programme is to be implemented shall have exclusive jurisdiction in all matters arising under the contract.

29 Force Majeure

29.1 Definition

"Force Majeure Event" means any act or event that prevents the affected Party from performing its obligation in accordance with the Agreement, if such act or event is beyond the reasonable control of the affected Party and such Party had been unable to overcome such act or event with the exercise of due diligence (including the expenditure of reasonable sums). Subject to the foregoing conditions, "Force Majeure Event" shall include without limitation the following acts or events: (i) natural phenomena, such as storms, hurricanes, floods, lightning, volcanic eruptions and earthquakes; (ii) explosions or fires arising from lighting or other causes unrelated to the acts or omissions of the Party seeking to be excused from performance; (iii) acts of war or public disorders, civil disturbances, riots, insurrection, sabotage, epidemic, terrorist acts, or rebellion. A Force Majeure Event shall not be based on the economic hardship of either Party. In case of any damage because of force majeure event, the System shall be repaired/commissioned in line with the penal provisions of Scheme guideline/RfS.

29.2 Excused Performance

Except as otherwise specifically provided in the Agreement, neither Party shall be considered in breach of the Agreement or liable for any delay or failure to comply with the Agreement (other than the failure to pay the amounts due hereunder), if and to the extent that such delay or failure is attributable to the occurrence of a Force Majeure Event; provided that the Party claiming relief under this Clause 27 shall immediately (i) notify the other Party in writing of the existence of the Force Majeure Event, (ii) exercise all reasonable efforts necessary to minimize delay caused by such Force Majeure Event, (iii) notify the other Party in writing of the cessation or termination of said Force Majeure Event and (iv) resume performance of its obligations hereunder as soon as practicable thereafter; provided, however, that SIA shall not be excused from making any payments and paying any unpaid amounts due in respect of Vendor to SIA prior to the Force Majeure Event performance interruption.

29.3 Termination as a Consequence of Force Majeure Event

If a Force Majeure Event shall have occurred that has affected the Vendor's performance of its obligations hereunder and that has continued for a continuous period of one hundred eighty (180) days, then SIA shall be entitled to terminate the Agreement upon ninety (90) days' prior written notice to the Vendor. If at the end of such ninety (90) day period such Force Majeure Event shall still continue, the Agreement shall automatically terminate. Upon such termination for a Force Majeure Event, neither Party shall have any liability to the other (other than any such liabilities that have accrued prior to such termination).

30 Vendor's Indemnity

The Vendor agrees that it shall indemnify and hold harmless SIA/MNRE/SECI and its members, officers, employees, students, casual labourers, persons permitted to run any business or service, such as canteens, stores, photocopy units, banks, post office, courier service, hospital and to any lawful visitors (collectively, the "SIA/MNRE/SECI Indemnified Parties") from and against any and all Losses incurred by the SIA/MNRE/SECI Indemnified Parties to the extent arising from or out of the following any claim for or arising out of any injury to or death of any Person or loss or damage to property of any Person to the extent arising out of the Vendor's negligence or willful misconduct. The Vendor shall not, however, be required to reimburse or indemnify any SIA/MNRE/SECI Indemnified Party for any Loss to the extent such Loss is due to the negligence or willful misconduct of any SIA/MNRE/SECI Indemnified Party.

31 Insurance

The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery. For delivery of goods at site, the insurance shall be obtained by the Contractor/selected Vendor, for an amount not less than the Contract Price of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War risks and strikes. The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft & burglary etc. during 5 years warranty period.

32 Transportation, Demurrage, Wharfage, etc.

Contractor/Selected Vendor is required under the Contract to transport the Goods to place of destination defined as Site. Transport to such place of destination in India including insurance, as shall be specified in the Contract, shall be arranged by the Contractor/Selected Vendor, and the related cost shall be included in the Contract Price.

Subsequent to an order being placed against bidder's quotation, received in response to this 'enquiry', if it is found that the materials supplied are not of the right quality or not in accordance with our specifications (required by us) or received in damaged or broken conditions, not satisfactory owing to any reason of which we shall be the sole judge, SIA shall be entitled to reject the materials, cancel the contract and buy our requirement from the open market / other sources and recover the loss, if any, from the supplier reserving to ourselves the right to forfeit the security deposit, furnished by the supplier against the contract. The supplier will make his own arrangements to remove the rejected material within a fortnight of instruction to do so. Thereafter material will lie entirely at the supplier's risk and responsibility and storage charges, along with any other charges applicable, will be recoverable from the supplier.

SIA reserve the right to accept or reject any quotation in full or in part without assigning any reason thereof. We also reserve the right to split and place order on more than one supplier.

33 *Liquidated damages*

In case of any delay in the execution of the order or delay in maintenance beyond the stipulated time schedule decided including any extension permitted in writing, SIA's reserves the right to recover from the bidder a sum equivalent to 0.5 % of the value of the delayed SPWPS installation or on the unexecuted portion of the work for each week of the delay and part thereof subject to a maximum of 3 % of the total value of the contract.

Alternatively, SIA's reserves the right to purchase of the material and completion of the works including maintenance from elsewhere at the sole risk and cost of the successful bidder/ contractor and recover all such extra cost incurred by SIA in procuring the material from resources available including encashment of the bank guarantee or any other sources etc. Further, if any extra cost is incurred by SIA's due to delay in work completion by the party beyond the completion time as per PO/LOA, the same shall be recovered from the party's Invoice/BG/PBG etc.

Alternatively, SIA may cancel the order completely or partly without prejudice to his right under the alternatives mentioned above.

34 *Statutory Compliance/ Certification regarding Cyber Security Products*

A certificate as per format 7.15 is to be submitted by the bidders that the items offered meet the definition of domestically manufactured/produced Cyber Security Products as per MeitY notification vide File no. 1(10)/2017-CLES dt. 02.07.18. The above certificate shall be on Company's letterhead and signed by Statutory Auditor or Cost Auditor of the Company.

'Cyber Security Products means a product or appliance or software manufactured/ produced for the purpose of protecting, information, equipment, devices computer, computer resource, communication device, and information stored therein from unauthorized access, use, disclosure, disruption, modification or destruction'.

35 *Warranty and Maintenance*

The complete Solar Photovoltaic Water Pumping System and display board / Name Plate (SIA's will provide the details) shall be warranted and maintained for 05 years from the date of installation.

The maintenance service provided shall ensure proper functioning of the system as a whole. All preventive/routine maintenance and breakdown/corrective maintenance required for ensuring maximum uptime shall have to be provided by the Contractor.

Successful bidder, on whom letter of award is placed, is to ensure all safety guidelines, rules and regulations, labour laws etc. Successful bidder indemnifies SIA for any accident, injury met by its labour, employee or any other person working for him. Any compensation sought by its labour, employee or any other person working for him shall be paid by successful bidder as per settlement solely.

Local representative of bidder should meet governing authorities of each block and should submit the minutes of meeting to SIA's on quarterly basis.

36 Declaration Of Local Content

Bidder shall submit a certificate stating the percentage of local content as per the format 7.12 of RfS Document. The certificate shall be from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. It is mandatory to mention UDIN No in the certificate.

NOTE: False declarations will be in breach of the code of integrity under Rule 175(1)(i)(h) of the General Financial rules for which a bidder or its successors can be debarred for up to 2 years as per Rule 151(iii) of the General Financial rules along with such other actions as may be permissible under law. Only those bidders who comply with the minimum local content requirement as mentioned above shall be eligible to bid.

37 Role of SECI

Apart from discovery of rates, role of SECI under this RfS is limited to Selection of Vendors for Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of Off Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-10 HP capacities in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component-B of PM-KUSUM scheme of MNRE.

38 Price basis

Price basis of the price quoted shall be on F.O.R (Freight on Road) destination basis for site. Price mentioned in the quotation must be firm. Hence prices in Letter of Award shall be firm and not subject to escalation till the execution of the complete order and its subsequent amendments accepted by the bidder even though the completion / execution of the order may take longer time than the delivery period specified and accepted in the Letter of Award.

39 Roles and Responsibilities of Implementation Agency

The Implementing Agencies will be responsible for the following activities:

- i. Demand aggregation for solar Agriculture pumps through online portal or offline application.
- ii. Prepare proposal and submit to MNRE for sanction
- iii. Oversee installation of systems.
- iv. Inspection of installed systems and online submission of completion reports to MNRE along with availability of the accurate data of the parameters of the SPWPS on the central portal of the MNRE.
- v. Submission of utilization certificates and audited statement of expenditure through EAT module and disbursement of MNRE CFA.
- vi. Online submission of monthly and quarterly progress reports.

- vii. Ensure project completion within the given timelines and compliance of MNRE Guidelines and Standards.
- viii. Online and offline maintenance for records.
 - ix. Real time monitoring through dedicated web-portal which will be maintained by SIA.
 - x. Performance monitoring of installed system through third party
 - xi. Ensure compliance of CMC and training of locals by the vendors.
 - xii. Carrying out publicity of the scheme so as to increase awareness, for which purpose advice of MNRE may also be adopted apart from its own publicity.
- xiii. Any other activity to ensure successful implementation of the programme.

SECTION 4. QUALIFICATION REQUIRMENTS FOR BIDDERS

Short listing of Bidders will be based on the following Criteria:

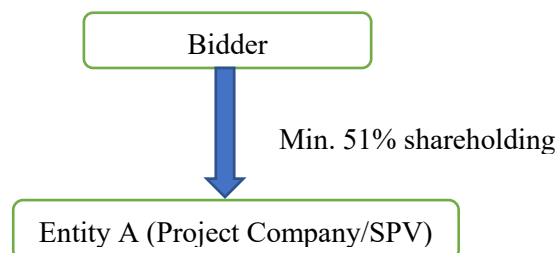
40 *General Eligibility Criteria*

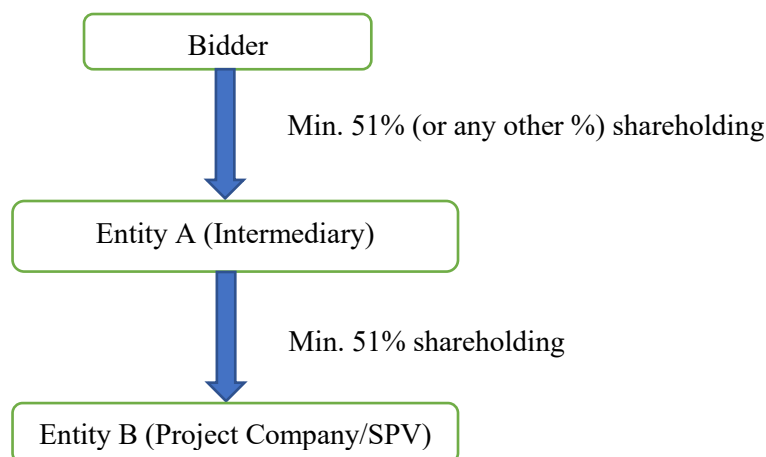
Bidders participating in the RfS will be required to meet the following eligibility criteria (as applicable).

- 40.1 The Bidder shall be a Company or a Limited Liability Partnership as defined.
- 40.2 Bidding Consortium with one of the Companies as the Lead Member. Consortium shortlisted and selected based on this RfS has to necessarily form a Project Company and get it registered under the Companies Act, 2013, keeping the original shareholding of the Bidding Consortium unchanged. In case applications for multiple Projects have been made by a Consortium, separate Project Companies can be formed for each Project. For the avoidance of doubt, it is hereby clarified that the shareholding pattern of the Project Company shall be the identical to the shareholding pattern of the Consortium as indicated in the Consortium Agreement (Format 7.5).
- 40.3 A foreign company cannot participate on a standalone basis or as a member of consortium under this RfS.
- 40.4 In line with the O.M. issued by the Department of Expenditure, Ministry of Finance, vide No. 6/18/2019-PPD dated 23.07.2020 and subsequent amendments and clarifications thereto, the Bidder shall meet the following criteria for its bid to be considered for evaluation under the RfS:
- i. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority (as defined in the OM as referred above).
 - ii. “Bidder” in this reference, means any person or firm or company, including any member of a consortium, every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in this tender.
 - iii. “Bidder from a country which shares a land border with India” for the purpose of this clause, means:
 - i. An entity incorporated, established or registered in such a country; or
 - ii. A subsidiary of an entity incorporated, established or registered in such a country; or
 - iii. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - iv. An entity whose beneficial owner is situated in such a country; or
 - v. An Indian (or other) agent of such an entity; or
 - vi. A natural person who is a citizen of such a country; or
 - vii. A consortium where any member of the consortium falls under any of the above.

- iv. In support of the above, the Bidder shall be required to submit necessary Undertaking, as per Format 7.8/7.8A of the RfS.
- v. Other provisions of the referred OM dated 23.07.2020, except Sl. 11 of the OM, will also be applicable for this tender. Any interpretation of the above clauses will be made in line with the referred OM, including subsequent amendments and clarifications thereto.
- 40.5 In case of a Limited Liability Partnership (LLP) participating as a Bidder and in case of the LLP being declared as a Selected Vendor, the LLP shall be required to incorporate an SPV.
- 40.6 The Bidder should not be under any liquidation, court receivership or similar proceedings on due date of submission of bid.
- 40.7 A Bidder which has been selected as Selected Vendor based on this RfS can also execute the Project through a Special Purpose Vehicle (SPV) i.e., a Project Company especially incorporated/acquired as a subsidiary Company of the Selected Vendor for setting up of the Project, with at least 51% shareholding in the SPV which has to be registered under the Indian Companies Act, 2013. Multiple SPVs may also be utilized for executing more than one Project.
- 40.8 Any consortium, if selected as Selected Vendor for the purpose of supply of power to SECI, shall incorporate a Project company with equity participation by the Members in line with consortium agreement (to be submitted along with the response to RfS) i.e., the Project Company incorporated shall have the same shareholding pattern as that indicated in the Consortium Agreement given at the time of submission of response to RfS.
- 40.9 The Bidder or any of its Affiliates should not be a wilful defaulter to any lender, and that there is no major litigation pending or threatened against the Bidder or any of its Affiliates which are of a nature that could cast a doubt on the ability or the suitability of the Bidder to undertake the Project. The Bidder shall submit an undertaking to this effect as per format 7.7 of this RfS.
- 40.10 For avoidance of doubt, it is clarified that the fully owned subsidiary Company as mentioned in Clauses 38.3 and 38.6 above should be an immediate subsidiary of the bidder, without any intermediaries involved. The following illustrations are provided to clarify the same:

Scenario 1:



Scenario 2:

As per provisions of the RfS, only Scenario 1 will be permissible under this RfS.

41 Technical Eligibility Criteria

41.1 Under this RfS, it is proposed to promote only commercially established and operational technologies to minimize the technology risk and to achieve timely commissioning of the Projects. The Bidder is required to undertake to furnish evidence of meeting the above criteria in line with provisions of the RfS. The undertaking shall be submitted as per enclosed Format 7.8.

41.2 The bidder should be, either of the following:

- i. Manufacturer of Solar PV Module or
- ii. Manufacturer of Solar Pump or
- iii. Manufacturer of Solar Pump Controller using indigenous technology or
- iv. EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology.

'Similar Works' means - Design, Supply, Erection, Testing and Commissioning of standalone (off-grid) solar PV based water pump sets. Experience required for the bidders to be counted for the past 7 years from the last date of bid submission shall be as per Table below.

Sl. No.	State/UT	Quantity State-Wise (Nos.)	Technical QR	
			For Solar Pumps/Controller (number of solar pumps installed/Controller installed or supplied)	For Solar PV Modules (Experience in kWp)
1	Andaman & Nicobar	100	25	120
2	Andhra Pradesh	1000	60	288

3	Arunachal Pradesh	200	25	120
4	Assam	5000	300	1440
5	Bihar	5000	300	1440
6	Chhattisgarh	25000	1500	7200
7	Delhi	1000	60	288
8	Goa	200	25	120
9	Gujarat	7000	420	2016
10	Haryana	160000	9600	46080
11	Himachal Pradesh	700	42	202
12	Jammu & Kashmir	4500	270	1296
13	Jharkhand	8000	480	2304
14	Karnataka	10000	600	2880
15	Kerala	100	25	120
16	Ladakh	1600	96	461
17	Lakshadweep	100	25	120
18	Madhya Pradesh	50000	3000	14400
19	Maharashtra	180000	10800	51840
20	Manipur	150	25	120
21	Meghalaya	200	25	120
22	Mizoram	1700	102	490
23	Nagaland	100	25	120
24	Odisha	4500	270	1296
25	Puducherry	100	25	120
26	Punjab	50000	3000	14400

27	Rajasthan	110000	6600	31680
28	Sikkim	100	25	120
29	Tamil Nadu	4000	240	1152
30	Telangana	400	25	120
31	Tripura	3000	180	864
32	Uttarakhand	1500	90	432
33	Uttar Pradesh	30000	1800	8640
34	West Bengal	1000	60	288
	Total	666250		

41.3 Detailed technical parameters of the Pumps to be met by Vendors is at Annexure-A. The Bidders shall strictly comply with the technical parameters detailed in the Annexure-A. Further, the provisions as contained in the O.M. dated 10.03.2021 issued by MNRE on the subject “Approved Models and Manufacturers of Solar Photovoltaic Modules (Requirement of Compulsory Registration) Order, 2019-Implementation-Reg.” and its subsequent amendments and clarifications issued until the bid submission deadline, shall be applicable for this RfS. The modules used in the Project under this RfS should have been included in the List-I under the above Order, valid as on the date of invoicing of such modules.

42 Financial Eligibility Criteria

42.1 Net-Worth

- v. The Net Worth of the Bidder should as per the table below, as on the last date of previous Financial Year, i.e., FY 2021-22.
- vi. The net worth to be considered for the above purpose will be the cumulative net-worth of the Bidding Company or Consortium, together with the Net Worth of those Affiliates of the Bidder(s) that undertake to contribute the required equity funding and PBG in case the Bidder(s) fail to do so in accordance with the RfS.
- vii. Net Worth to be considered for this clause shall be the total Net Worth as calculated in accordance with the Companies Act, 2013 and any further amendments thereto.

AND

42.2 Minimum Average Annual Turnover

The Bidder shall demonstrate a Minimum Average Annual Turnover (MAAT) as per the table below, during the last three financial years, i.e., 2021-22, 2020-21 and 2019-

20. It is hereby clarified that “Other Income” as indicated in the annual accounts of the Bidder shall not be considered for arriving at the annual turnover.

AND

42.3 Liquidity

The Bidder shall demonstrate Working Capital or Line of Credit for the last Financial Year, 2021-22, as per the table below.

Sl. No	State/UT	Quantity State-Wise (Nos.)	MAAT/ Annual Turn Over Requirement (in lakhs INR) in last three years	Profitability	Net Worth
1	Andaman & Nicobar	100	66.75	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
2	Andhra Pradesh	1000	160.2	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
3	Arunachal Pradesh	200	66.75	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
4	Assam	5000	801	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
5	Bihar	5000	801	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
6	Chhattisgarh	25000	4005	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
7	Delhi	1000	160.2	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
8	Goa	200	66.75	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
9	Gujarat	7000	1121.4	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
10	Haryana	160000	25632	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
11	Himachal Pradesh	700	112.14	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
12	Jammu & Kashmir	4500	720.9	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22

13	Jharkhand	8000	1281.6	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
14	Karnataka	10000	1602	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
15	Kerala	100	66.75	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
16	Ladakh	1600	256.32	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
17	Lakshadweep	100	66.75	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
18	Madhya Pradesh	50000	8010	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
19	Maharashtra	180000	28836	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
20	Manipur	150	66.75	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
21	Meghalaya	200	66.75	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
22	Mizoram	1700	272.34	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
23	Nagaland	100	66.75	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
24	Odisha	4500	720.9	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
25	Puducherry	100	66.75	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
26	Punjab	50000	8010	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
27	Rajasthan	110000	17622	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
28	Sikkim	100	66.75	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
29	Tamil Nadu	4000	640.8	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22

30	Telangana	400	66.75	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
31	Tripura	3000	480.6	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
32	Uttarakhand	1500	240.3	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
33	Uttar Pradesh	30000	4806	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
34	West Bengal	1000	160.2	Profitable in at least two of the last four Years	Not less than paid up capital in last FY 2021-22
	Total	666250			

42.4 The Bidder may seek qualification on the basis of financial capability of its Affiliate(s) for the purpose of meeting the qualification requirements as per Clauses 40.1, 40.2 and 40.3 above. In case of the Bidder being a Bidding Consortium, any Member may seek qualification on the basis of financial capability of its Affiliate. In this case, a Bidder can use the credential of only a single affiliate to meet all the financial eligibility criteria. In such cases, the Bidder shall be required to submit Board Resolutions from the respective Affiliate, undertaking to contribute the required equity funding and Performance Bank Guarantees/POI in case the Bidder(s) fail to do so in accordance with the RfS. In case of non-availability of the Board Resolution as required above, a letter from the CEO/ Managing Director of the respective Affiliate, undertaking the above, shall be required to be submitted and the requisite Board Resolution from the Affiliate shall be required to be submitted.

42.5 For the purposes of meeting financial requirements, only latest unconsolidated audited annual accounts shall be used. However, audited consolidated annual accounts of the Bidder may be used for the purpose of financial requirements provided the Bidder has at least twenty six percent (26%) equity in each Company whose accounts are merged in the audited consolidated account.

42.6 A Company/Consortium would be required to submit annual audited accounts for the last FY, 2021-22, or as on the day at least 7 days prior to the bid submission deadline, along with net worth, annual turnover, working capital certificate (if applicable) from a practicing Chartered Accountant/Statutory Auditor to demonstrate fulfillment of the criteria.

Note: In case of bidder seeking eligibility using credential of foreign Parent/Ultimate Parent/Affiliate entity, in the event the Bidder is unable to furnish the audited annual accounts for the previous financial year as per the prevalent norm in the respective country, the Bidder shall submit the annual audited accounts of the last financial year for which the audited accounts are available. This, however, would be acceptable, subject to the condition that the last date of response to this RfS falls on or within the

deadline for completion of audit of annual accounts of companies, as stipulated by the laws/rules of the respective country, and the Bidder shall submit the corresponding documentary evidence against the same. In case the annual accounts or provisional accounts as on the day at least 7 days prior to the bid submission deadline, are submitted in a language other than English, a certified English translation from an approved translator shall be required to be submitted by the Bidder.

- 42.7 For meeting the above financial eligibility criteria, if the data is provided by the Bidder in a foreign currency, equivalent Indian Rupees of Net Worth and other financial parameters will be calculated by the Bidder using Reserve Bank of India's reference rates prevailing on the date of closing of the accounts for the respective financial year. In case of any currency for which RBI reference rate is not available, Bidders shall convert such currency into USD as per the exchange rates certified by their banker prevailing on the relevant date and used for such conversion. After such conversion, Bidder shall follow the procedure/ submit document as elaborated in Clause 40.6 above.
- 42.8 In case the response to RfS is submitted by a Consortium, then the financial eligibility requirement to be met by each Member of the Consortium shall be computed in proportion to the equity commitment made by each member in the Project Company. For example, if two companies A and B form a Consortium with equity participation in 70:30 ratio and submit their bid for a capacity of 10 MW, then, total Net-Worth to be met by the Consortium is Rs. 90 Lakhs x 10 MW = Rs. 9 Crores. Minimum requirement of Net-Worth to be met by Member A would be Rs. 6.3 Crores and the one to be met by Member B would be Rs. 2.7 Crores. Similar methodology shall be followed for computation of other requirements.
- 42.9 **Note:** Wherever applicable, audited accounts for the last FY, 2021-22 will be required to be submitted for meeting the qualification requirements.

SECTION 5. BID EVALUATION AND SELECTION OF PROJECTS

43 *Bid Evaluation*

Bid evaluation will be carried out considering the information furnished by Bidders as per provisions of this RfS. The detailed evaluation procedure and selection of bidders are described in subsequent clauses in this Section.

44 *Techno-Commercial Evaluation of Bidders (Step 1)*

44.1 Bid opening (online) will be done only after the deadline for submission of pass-phrases in the ETS portal.

For e.g., if the bid submission deadline is 18:00 hrs. on 09.03.2023, the online bid opening will be conducted on 12.03.2023. In case of the above deadline being a holiday, the bids will be opened on the next working day.

44.2 Documents (as mentioned in the previous clause) received after the bid submission deadline as specified by SECI, shall be rejected and returned unopened, if super-scribed properly with address, to the bidder.

44.3 Subject to Clause 18 of the RfS, SECI will examine all the documents submitted by the Bidders and ascertain meeting of eligibility conditions prescribed in the RfS. During the examination of the bids, SECI may seek clarifications/additional documents to the documents submitted etc. from the Bidders if required to satisfy themselves for meeting the eligibility conditions by the Bidders. Bidders shall be required to respond to any clarifications/additional documents sought by SECI within 07 (seven) days from the date of such intimation from SECI. All correspondence in this regard shall be made through email/ISN-ETS portal only. It shall be the responsibility of the Bidder to ensure that the email id of the authorized signatory of the Bidder is functional. The Bidder may provide an additional email id of the authorized signatory in the covering letter. No reminders in this case shall be sent. It shall be the sole responsibility of the Bidders to remove all the discrepancies and furnish additional documents as requested. SECI shall not be responsible for rejection of any bid on account of the above.

44.4 The response to RfS submitted by the Bidder shall be scrutinized to establish Techno-Commercial eligibility as per the RfS.

45 *Financial Bid Evaluation (Step 2)*

45.1 In this step evaluations of Techno-Commercially Qualified Bids shall be done based on the “Fixed Price”, quoted by the Bidder for each line item (i.e., type of pump for each State/UT) as per price bid format Annexure-D to the RfS (i.e., type of pump for each State/UT) in the Electronic Form of Financial Bid.

45.2 Second Envelope (containing Fixed Price) of only those bidders shall be opened whose technical bids are found to be qualified as per the RfS.

45.3 For each line item (i.e., type of pump for each State/UT) the Bidder including its Parent, Affiliate or Ultimate Parent or any Group Company will have to submit a single bid (single application) quoting a Fixed Price in Indian Rupee for all the line items applied

for. **The Price has to be quoted in Indian Rupee up to two places of decimal only.** If it is quoted with more than two digits after decimal, digits after first two decimal places shall be ignored. (For e.g., if the quoted price is INR 47,800.455, then it shall be considered as INR 47,800.45).

45.4 In this step, evaluation will be carried out for the each line item (i.e., type of pump for each State/UT), separately for each State/UT within the maximum capacities as mentioned in Annexure-C to the RfS, based on the price quoted by Bidders.

45.5 Each State/UT has following types of pumps as per table below:

Pump Capacity	Pump Type	Pump Position	Pump Cooling Category	Controller Type
1	AC	Submersible	Waterfilled	Normal (Without USPC)
	AC	Surface	Waterfilled	Normal (Without USPC)
	DC	Submersible	Waterfilled	Normal (Without USPC)
	DC	Surface	Waterfilled	Normal (Without USPC)
2	AC	Submersible	Waterfilled	Normal (Without USPC)
	AC	Surface	Waterfilled	Normal (Without USPC)
	DC	Submersible	Waterfilled	Normal (Without USPC)
	DC	Surface	Waterfilled	Normal (Without USPC)
3	AC	Submersible	Waterfilled	Normal (Without USPC)
	AC	Surface	Waterfilled	Normal (Without USPC)
	DC	Submersible	Waterfilled	Normal (Without USPC)
	DC	Surface	Waterfilled	Normal (Without USPC)
	AC	Submersible	Waterfilled	with USPC
	AC	Surface	Waterfilled	with USPC
	DC	Submersible	Waterfilled	with USPC
	DC	Surface	Waterfilled	with USPC
5	AC	Submersible	Waterfilled	Normal (Without USPC)
	AC	Surface	Waterfilled	Normal (Without USPC)
	DC	Submersible	Waterfilled	Normal (Without USPC)
	DC	Surface	Waterfilled	Normal (Without USPC)
	AC	Submersible	Waterfilled	with USPC
	AC	Surface	Waterfilled	with USPC
	DC	Submersible	Waterfilled	with USPC
	DC	Surface	Waterfilled	with USPC
7.5	AC	Submersible	Waterfilled	Normal (Without USPC)
	AC	Surface	Waterfilled	Normal (Without USPC)
	DC	Submersible	Waterfilled	Normal (Without USPC)
	DC	Surface	Waterfilled	Normal (Without USPC)
	AC	Submersible	Waterfilled	with USPC
	AC	Surface	Waterfilled	with USPC
	DC	Submersible	Waterfilled	with USPC

	DC	Surface	Waterfilled	with USPC
10	AC	Submersible	Waterfilled	Normal (Without USPC)
	AC	Surface	Waterfilled	Normal (Without USPC)
	DC	Submersible	Waterfilled	Normal (Without USPC)
	DC	Surface	Waterfilled	Normal (Without USPC)
	AC	Submersible	Waterfilled	with USPC
	AC	Surface	Waterfilled	with USPC
	DC	Submersible	Waterfilled	with USPC
	DC	Surface	Waterfilled	with USPC

- 45.6 On completion of Techno-Commercial bid evaluation, if it is found that for each State/UT, only one or two Bidder(s) is/are eligible for the next stage, opening of the financial bid of the Bidder(s) will be at the discretion of SECI. Thereafter, SECI will take appropriate action as deemed fit.
- 45.7 Bidder has an option to choose out of the 34 State/UTs for the ones he/she wishes to quote for. Bidder has to mandatorily submit declaration for State/UTs it wishes to quote for (i.e., Format 7.1), subject to fulfillment of cumulative qualifying requirements of quoted State/UTs.
- 45.8 For each line item (i.e., type of pump for each State/UT), based on the fixed Price quoted by the bidders, SECI shall arrange the bids in the ascending order i.e., L1, L2, L3, etc. (L1 being the lowest quote).

If the fixed price (exclusive of GST (in INR) on F.O.R Destination Basis) quoted is same for two or more Bidders, then all the Bidders with same price shall be considered of equal rank/standing in the order.

46 L-1 Matching and Selection of Selected Vendors

- 46.1 For each line item (i.e., type of pump for each State/UT), the Bidder quoting the lowest price (L1 price) will be identified and shall be declared as the Selected Vendor. In case of multiple Bidders quoting the L1 price, all such Bidders (“L1 Bidders”) will be declared as Selected Vendors.
- 46.2 For each line item (i.e., type of pump for each State/UT), option to match L1 price will be initially extended to all bidders falling under L1+25% and in case number of bidders in this range is less than five the same will be further extended to other bidders in the ascending orders of price bid quoted by them till at-least five bidders agreed for L1 matching or all bidders have been given option to match L1 price, whichever is earlier.
- 46.3 For each line item, the Bidders other than the L1 Bidder(s) will be given a period of 7 days to match the L1 price. In case a Bidder wishes to match the L1 price, such matching shall be communicated to SECI only through email. The 7-day period shall commence from the date on which the L1 price is intimated to all the eligible Bidders (through email), and will culminate at 11:59:59 PM of the 7th day after such intimation by SECI. For example, in case SECI intimates the L1 price on 05.10.2023, the above deadline for L1 matching shall expire at 11:59:59 PM on 12.10.2023. Any

communication after the expiry of the above deadline will not be entertained, and decision taken by SECI in this regard shall be final and binding on all parties.

Note: In all cases, matching of Prices will be on individual line items (for a particular State/UT) within the price bid table on total landed cost (including GST) for complete scope of work.

- 46.4 SIA reserves the right for the variation of allocated quantity State/UT wise.
- 46.5 Further, in case a Vendor is not able to supply quantity allocated to them as per scheduled timelines, SIA reserves the right to shift the part/full quantity to another Vendor, who has matched the price.

47 Validity of discovered prices for each State/UT

In order to allow States/SIA sufficient time to implement SPWPS based on the prices discovered under this tender, all prices discovered under this tender will remain valid for **24 months** from the date of opening the price bids, which will be announced by MNRE/SECI. Within this **24-month** period, empanelled vendors have no right of refusal to complete the allocated work.

48 Recommendation and Issuance of LoAs

At the end of selection process, SECI will issue the recommendation to MNRE for announcement of prices discovered and empanelment of Vendors / Letters of Award (LoAs) to the MNRE and the LoAs will be issued to the Selected Vendors identified, by the respective SIA as per the recommendation.

In case of a Consortium being selected as the Selected Vendor, the LoA shall be issued to the Lead Member of the Consortium.

Each Selected Vendor shall acknowledge the LoA and return duplicate copy with signature of the authorized signatory of the Selected Vendor to respective SIA within 15 (Fifteen) days of issue of LoA, failing which it will be deemed to have been accepted by the Bidder.

If the Selected Vendor, to whom the LoA has been issued does not fulfil any of the conditions specified in Bid document, then SIA reserves the right to annul/cancel the award of the LoA of such Selected Vendor also imposing the penalty such as encashment of BG or/and Blacklisting.

In all cases, SECI's decision regarding selection of Bidder based on price or annulment of tender process shall be final and binding on all participating bidders.

49 Inspection and Audit by the Government/MNRE

All materials / equipments manufactured by the bidder/consortium of bidders against the Letter of Award shall be subject to inspection, check and/or test by the SIA/MNRE or his authorized representative at all stages and place, before, during and after the manufacture. All these tests shall be carried out in the as per technical specifications and bidder shall submit the relevant test reports at the time of bid submission to SECI. If upon delivery the material/equipment does not meet the specification, the materials/equipment shall be rejected and returned to the bidder for repairs/modification etc. or for

replacement and SIA may also impose the penalty or/and blacklist the vendor. In such cases all expenses including the to-and-fro freight, repacking charges, any other costs etc. shall be to the account of the Vendor.

50 Debarment from Participating in SECI's Future Tenders

- 50.1 SECI reserves the right to carry out the performance review of each Bidder from the time of submission of Bid. In case it is observed that a bidder has not fulfilled its obligations in meeting the various timelines envisaged, in addition to the other provisions of the RfS, such Bidders may be debarred from participating in SECI's any future tender for a period as decided by the competent authority of SECI.

SECTION 6. DEFINITIONS OF TERMS

51 Following terms used in the documents will carry the meaning and interpretations as described below:

- 51.1 **“ACT” or “ELECTRICITY ACT, 2003”** shall mean the Electricity Act, 2003 and include any modifications, amendments and substitution from time to time.
- 51.2 **“AFFILIATE”** shall mean a company that, directly or indirectly,
- i. controls, or
 - ii. is controlled by, or
 - iii. is under common control with, a company developing a Project or a Member in a Consortium developing the Project and control means ownership, directly or indirectly, of more than 50% (fifty percent) of the voting shares of such company or right to appoint majority Directors.
- 51.3 **“B.I.S.”** shall mean specifications of Bureau of Indian Standards (BIS).
- 51.4 **“BID” or “PROPOSAL”** shall mean the documents submitted by the Bidder towards meeting the techno-commercial and financial qualifying requirements, along with the price bid submitted by the Bidder and submissions during the e-Reverse Auctions, if applicable, as part of its response to the RfS issued by SECI.
- 51.5 **“BIDDER”** shall mean Bidding Company or a Bidding Consortium submitting the Bid. Any reference to the Bidder includes Bidding Company/ Bidding Consortium, Member of a Bidding Consortium including its successors, executors and permitted assigns and Lead Member of the Bidding Consortium jointly and severally, as the context may require.
- 51.6 **“BIDDING CONSORTIUM” or “CONSORTIUM”** shall refer to a group of Companies that collectively submit the response in accordance with the provisions of this RfS under a Consortium Agreement.
- 51.7 **“CEA”** shall mean Central Electricity Authority.
- 51.8 **“CHARTERED ACCOUNTANT”** shall mean a person practicing in India or a firm whereof all the partners practicing in India as a Chartered Accountant(s) within the meaning of the Chartered Accountants Act, 1949.
- For Bidders incorporated in countries other than India, “Chartered Accountant” shall mean a person or a firm practicing in the respective country and designated/ registered under the corresponding Statutes/ laws of the respective country.
- 51.9 **“COMPANY”** shall mean a body corporate incorporated in India under the Companies Act, 2013 or any law in India prior thereto relating to Companies, as applicable.
- 51.10 **“CONTRACT YEAR”** shall mean the period beginning from the Effective Date of the Contract Agreement and ending on the immediately succeeding 31st March and thereafter each period of 12 months beginning on 1st April and ending on 31st March provided that:

- i. in the financial year in which the Scheduled Commissioning Date would occur, the Contract Year shall end on the date immediately before the Scheduled Commissioning Date and a new Contract Year shall commence once again from the Scheduled Commissioning Date and end on the immediately succeeding 31st March, and thereafter each period of 12 (Twelve) Months commencing on 1st April and ending on 31st March, and
 - ii. Provided further that the last Contract Year of this Agreement shall end on the last day of the Term of this Agreement.
- 51.11 **“CONTROL”** shall mean the ownership, directly or indirectly, of more than 50% (fifty percent) of the voting shares of such Company or right to appoint majority Directors.
- 51.12 **“CONTROLLING SHAREHOLDING”** shall mean more than 50% of the voting rights and paid up share capital in the Company/ Consortium.
- 51.13 **“DAY”** shall mean calendar day.
- 51.14 **“EQUITY”** shall mean Net Worth as defined in Companies Act, 2013.
- 51.15 **“GROUP COMPANY”** of a Company means
- i. a Company which, directly or indirectly, holds 10% (Ten Percent) or more of the share capital of the Company or;
 - ii. a Company in which the Company, directly or indirectly, holds 10% (Ten Percent) or more of the share capital of such Company or;
 - iii. a Company in which the Company, directly or indirectly, has the power to direct or cause to be directed the management and policies of such Company whether through the ownership of securities or agreement or any other arrangement or otherwise or;
 - iv. a Company which, directly or indirectly, has the power to direct or cause to be directed the management and policies of the Company whether through the ownership of securities or agreement or any other arrangement or otherwise or;
 - v. a Company which is under common control with the Company, and control means ownership by one Company of at least 10% (Ten Percent) of the share capital of the other Company or power to direct or cause to be directed the management and policies of such Company whether through the ownership of securities or agreement or any other arrangement or otherwise;

Provided that a financial institution, scheduled bank, foreign institutional investor, Non-Banking Financial Company, and any mutual fund, pension funds and sovereign funds shall not be deemed to be Group Company, and its shareholding and the power to direct or cause to be directed the management and policies of a Company shall not be considered for the purposes of this definition unless it is the Project Company or a Member of the Consortium developing the Project.

- 51.16 **“IEC”** shall mean specifications of International Electro-Technical Commission.

- 51.17 **“JOINT CONTROL”** shall mean a situation where a company has multiple promoters (but none of the shareholders has more than 50% of voting rights and paid-up share capital).
- 51.18 **“LEAD MEMBER OF THE BIDDING CONSORTIUM”** or **“LEAD MEMBER”**: There shall be only one Lead Member, having the shareholding of not less 51% in the Bidding Consortium.
- 51.19 **“LETTER OF AWARD”** or **“LoA”** shall mean the letter issued by State Implementing Agency (SIA) to the selected vendor for award of the cumulative SPWPS capacity.
- 51.20 **“LIMITED LIABILITY PARTNERSHIP”** or **“LLP”** shall mean a Company governed by Limited Liability Partnership Act 2008 or as amended.
- 51.21 **“MEMBER IN A BIDDING CONSORTIUM”** or **“MEMBER”** shall mean each Company in a Bidding Consortium. In case of a Technology Partner being a member in the Consortium, it has to be a Company.
- 51.22 **“MONTH”** shall mean calendar month.
- 51.23 **“NET-WORTH”** shall mean the Net-Worth as defined section 2 of the Companies Act, 2013.
- 51.24 **“O&M/ AMC”** shall mean Operation & Maintenance/ Annual Maintenance Contract of the supplied equipments.
- 51.25 **“PAID-UP SHARE CAPITAL”** shall mean the paid-up share capital as defined in Section 2 of the Companies Act, 2013.
- 51.26 **“PARENT”** shall mean a Company, which holds more than 50% voting rights and paid up share capital, either directly or indirectly in the Project Company or a Member in a Consortium developing the Project.
- 51.27 **“PROJECT”** shall mean Solar Photovoltaic Water Pumping Systems (SPWPS).
- 51.28 **“PROJECT INSTALLATION”** The Project (SPWPS) will be considered as installed if all equipment as per rated project capacity has been installed.
- 51.29 **“RfS”** or **“RfS DOCUMENT”** or **“BIDDING DOCUMENT(S)”** or **“TENDER DOCUMENTS”** shall mean the “Request for Selection” document issued by SECI including standard Power Purchase Agreement along with subsequent clarifications and amendments thereof, vide RfS No. SECI/C&P/MI/00/0010/2022-23 Dated 31.12.2022.
- 51.30 **“SECI”** shall mean Solar Energy Corporation of India Limited.
- 51.31 **“TOE”** shall mean Tender Opening Event.
- 51.32 **“ULTIMATE PARENT”** shall mean a Company, which owns more than 50% (Fifty Percent) voting rights and paid up share capital, either directly or indirectly in the Parent and Affiliates.

- 51.33 **“VENDOR”** or **“SUCCESSFUL BIDDER”** or **“SELECTED VENDOR”** shall mean the Bidding Company or a Bidding Consortium participating in the bid and having been selected and allocated a Project capacity by SECI (through a competitive bidding process) {in case of the Selected Vendor/Bidding Consortium itself executing the Project}, or the SPV formed by the selected vendor/consortium for the purpose of setting up of the Project {in case of Project execution through SPV}.
- 51.34 **“WEEK”** shall mean calendar week.

SECTION 7. SAMPLE FORMS & FORMATS FOR BID SUBMISSION

The following formats are required to be submitted as part of the RfS. These formats are designed to demonstrate the Bidder's compliance with the Qualification Requirements set forth in Section 4 and other submission requirements specified in the RfS.

Format 7.1

COVERING LETTER

**(The Covering Letter should be submitted on the Letter Head of the Bidding Company/
Lead Member of Consortium)**

Ref. No. _____

Date:

From: _____ *(Insert name and address of Bidding Company/ Lead Member of Consortium)*

Tel.#: _____

Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. dated for(Insert title of the RfS)

Dear Sir/ Madam,

We, the undersigned *[Insert name of the 'Bidder']* having read, examined and understood in detail the RfS including Qualification Requirements in particular, hereby submit our response to RfS.

We confirm that in response to the aforesaid RfS, neither we nor any of our Ultimate Parent Company/ Parent Company/ Affiliate/ Group Company has submitted response to RfS other than this response to RfS, directly or indirectly, in response to the aforesaid RfS (as mentioned in Format 7.8 under Disclosure) **OR** We confirm that in the response to the aforesaid RfS, we have a Group Company who owns more than 10% but less than 26% in the bidding company as well as other companies who may participate in this RfS, and accordingly, we have submitted requisite undertaking as per Format 7.8A in this regard {strike out whichever not applicable}.

We are submitting our response to the RfS as:

RFS for Selection of Vendors under Component-B of PM-KUSUM scheme of MNRE	<u>RfS No. SECI/C&P/MI/00/0010/2022-23 Dated 31.12.2022</u>	<u>Page 51 of 106</u>
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Type of Bidder	Applicability (Yes/No)
Pump/ Pump set Manufacturer	
Solar PV Module Manufacturer	
Solar Pump Controller Manufacturer	
Joint Venture	

In case of Joint Venture:

Lead Bidder	Non-Lead Bidder
EPC/ Pump Manufacturer/ Solar PV Module Manufacturer/ Solar Pump Controller Manufacturer	EPC/ Pump Manufacturer/ Solar PV Module Manufacturer/ Solar Pump Controller Manufacturer

We are submitting application for the installation of SPWPS(s) in following State/UTs: -

S. No	State/UT	Participation (Yes/No) (No/Blank cell will be assumed as No only)	Capacity of Pumps Quoted for (Such as 1HP AC/DC, 2HP AC/DC, 3HP AC/DC, 5HP AC/DC, 7.5 HP AC/DC & 10 HP AC/DC)
1	Andaman & Nicobar		
2	Andhra Pradesh		
3	Arunachal Pradesh		
4	Assam		
5	Bihar		
6	Chhattisgarh		
7	Delhi		
8	Goa		
9	Gujarat		
10	Haryana		
11	Himachal Pradesh		
12	Jammu & Kashmir		
13	Jharkhand		
14	Karnataka		
15	Kerala		
16	Ladakh		
17	Lakshadweep		
18	Madhya Pradesh		

19	Maharashtra		
20	Manipur		
21	Meghalaya		
22	Mizoram		
23	Nagaland		
24	Odisha		
25	Puducherry		
26	Punjab		
27	Rajasthan		
28	Sikkim		
29	Tamil Nadu		
30	Telangana		
31	Tripura		
32	Uttarakhand		
33	Uttar Pradesh		
34	West Bengal		

1. We give our unconditional acceptance to the RfS, dated [Insert date in dd/mm/yyyy], issued by SECI. In token of our acceptance to the RfS along with the amendments and clarifications issued by SECI, the same have been digitally signed by us and enclosed with the response to RfS. Further, we confirm that the SPWPS shall be installed within the deadline as per panel provisions of scheme guidelines and RfS.
2. Earnest Money Deposit (EMD): - (Please read Clause 11 carefully before filling)

We have enclosed EMD of INR (Insert Amount), in the form of Bank Guarantee/Payment on Order Instrument (POI) no. [Insert bank guarantee/Payment on Order Instrument number] dated [Insert date of bank guarantee/POI] as per Format 7.3A/7.3B from [Insert name of bank providing bank guarantee/POI] and valid up to.....in terms of Clause 11 of this RfS. (Strike off whichever is not applicable)
3. We hereby declare that in the event our bid get selected and we are not able to submit Bank Guarantee of the requisite value(s) towards PBG, within due time as mentioned in Clauses 11 & 12 of this RfS, SECI shall have the right to encash the EMD/PBG submitted by us and return the balance amount (if any) for the value of EMD pertaining to unsuccessful capacity.

4. We have submitted our response to RfS strictly as per Section 7 (Sample Forms and Formats) of this RfS, without any deviations, conditions and without mentioning any assumptions or notes in the said Formats.
5. Acceptance: -
We hereby unconditionally and irrevocably agree and accept that the decision made by SECI in respect of any matter regarding or arising out of the RfS shall be binding on us. We hereby expressly waive and withdraw any deviations and all claims in respect of this process.

We also unconditionally and irrevocably agree and accept that the decision made by SECI in respect of award of SPWPS in line with the provisions of the RfS, shall be binding on us.
6. Familiarity with Relevant Indian Laws & Regulations: -
We confirm that we have studied the provisions of the relevant Indian Laws and Regulations as required to enable us to submit this response to RfS, in the event of our selection as Selected Vendor.
7. In case of our selection as the Selected Vendor under the scheme and the Project (SPWPS) being executed by a Special Purpose Vehicle (SPV) incorporated by us which shall be our subsidiary, we shall infuse necessary equity to the requirements of RfS.
8. We are submitting our response to the RfS with formats duly signed as desired by you in the RfS online for your consideration.
9. It is confirmed that our response to the RfS is consistent with all the requirements of submission as stated in the RfS, including all clarifications and amendments and subsequent communications from SECI.
10. The information submitted in our response to the RfS is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our response to the RfS.
11. We confirm that all the terms and conditions of our Bid are valid up to _____ (Insert date in dd/mm/yyyy) for acceptance [i.e., a period upto the date as on 12 months from the last date of submission of response to RfS].

12. Contact Person

Details of the representative to be contacted by SECI are furnished as under:

Name :

Designation :

Company :

Address :

Phone Nos. :

Mobile Nos. :

Fax Nos. :

E-mail address:

13. We have neither made any statement nor provided any information in this Bid, which to the best of our knowledge is materially inaccurate or misleading. Further, all the confirmations, declarations and representations made in our Bid are true and accurate. In case this is found to be incorrect after our selection as Selected Vendor, we agree that the same would be treated as our event of default.

Dated the _____ day of _____, 20....

Thanking you,
We remain,
Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

FORMAT FOR POWER OF ATTORNEY*(Applicable Only in case of Consortiums)*

*(To be provided by each of the other members of the Consortium in favor of the Lead Member)
 (To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)*

KNOW ALL MEN BY THESE PRESENTS THAT M/s..... having its registered office at,, and M/s having its registered office at, (Insert names and registered offices of all Members of the Consortium) the Members of Consortium have formed a Bidding Consortium named (Insert name of the Consortium if finalized) (hereinafter called the 'Consortium') vide Consortium Agreement dated..... and having agreed to appoint M/s.....as the Lead Member of the said Consortium do hereby constitute, nominate and appoint M/s.....a company incorporated under the laws ofand having its Registered/ Head Office atas our duly constituted lawful Attorney (hereinafter called as Lead Member) to exercise all or any of the powers for and on behalf of the Consortium in regard to submission of the response to RfS No.....

We also authorize the said Lead Member to undertake the following acts:

- i) To submit on behalf of Consortium Members response to RfS.
- ii) To do any other act or submit any information and document related to the above response to RfS Bid.

It is expressly understood that in the event of the Consortium being selected as Selected Vendor, this Power of Attorney shall remain valid, binding and irrevocable until 05 years from installation.

We as the Member of the Consortium agree and undertake to ratify and confirm all whatsoever the said Attorney/ Lead Member has done on behalf of the Consortium Members pursuant to this Power of Attorney and the same shall bind us and deemed to have been done by us.

IN WITNESS WHEREOF M/s, as the Member of the Consortium have executed these presents on this..... day ofunder the Common Seal of our company.

For and on behalf of Consortium Member

M/s.....

----- (Signature of person authorized by the board)

(Name

Designation

Place:

Date:)

Accepted

(Signature, Name, Designation and Address
of the person authorized by the board of the Lead Member)

Attested

(Signature of the executant)

(Signature & stamp of Notary of the place of execution)

Place: -----

Date: -----

Lead Member in the Consortium shall have the controlling shareholding in the Company as defined in Section-6, Definition of Terms of the RfS.

**FORMAT FOR BANK GUARANTEE TOWARDS EARNEST MONEY DEPOSIT
(EMD)**

(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)

Reference:

listNo.:

Date:

In consideration of the _____ [*Insert name of the Bidder*] (hereinafter referred to as 'Bidder') submitting the response to RfS inter alia for _____ [*Insert title of the RfS*] for State/UTs declared in Format 7.1, in response to the RfS No. _____ dated _____ issued by Solar Energy Corporation of India Limited (hereinafter referred to as SECI) and SECI considering such response to the RfS of[*Insert the name of the Bidder*] as per the terms of the RfS, the _____ [*Insert name & address of bank*] hereby agrees unequivocally, irrevocably and unconditionally to pay to SECI at [*Insert Name of the Place from the address of SECI*] forthwith without demur on demand in writing from SECI or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees _____ [*Insert amount not less than that derived on the basis of 2% of the amount equivalent to the 6% of the value of total state wise allocation or 25 nos. of SPWPS, whichever is higher*], only, on behalf of M/s _____ [*Insert name of the Bidder*].

This guarantee shall be valid and binding on this Bank up to and including _____ [*insert date of validity in accordance with Clause 11 of this RfS*] and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ only). Our Guarantee shall remain in force until _____ [*insert date of validity in accordance with Clause 11 of this RfS*]. SECI shall be entitled to invoke this Guarantee till _____ [*insert date of validity in accordance with Clause 11 of this RfS*].

The Guarantor Bank hereby agrees and acknowledges that the SECI shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by SECI, made in any format, raised at the above-mentioned address of the Guarantor Bank, in order to make the said payment to SECI.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by _____ [*Insert name of the Bidder*] and/ or any other person. The Guarantor Bank shall not require SECI to justify the

invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against SECI in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at New Delhi shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly SECI shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Bidder, to make any claim against or any demand on the Bidder or to give any notice to the Bidder or to enforce any security held by SECI or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

This BANK GUARANTEE shall be effective only when the Bank Guarantee issuance message is transmitted by the issuing Bank through SFMS to IDFC First Bank and a confirmation in this regard is received by SECI.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only) and it shall remain in force until _____ [*Date to be inserted on the basis of Clause 11 of this RfS*].

We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if SECI serves upon us a written claim or demand.

Signature: _____

Name: _____

Power of Attorney No.: _____

For

_____ [*Insert Name and Address of the Bank*] _____

Contact Details of the Bank:

E-mail ID of the Bank:

Banker's Stamp and Full Address.

Dated this _____ day of _____, 20____

Format 7.3 B**FORMAT OF PAYMENT ON ORDER INSTRUMENT TO BE ISSUED BY
IREDA/REC/PFC (IN LIEU OF BG TOWARDS EMD)**

No. _____ Date _____
SECI, _____ Registered _____
_____,

**Reg: M/s _____ (insert name of the Bidder) – Issuance of Payment on
Order Instrument for an amount of Rs. _____**

Dear Sir,

1. It is to be noted that M/s. _____ (*insert name of the POI issuing Agency*) ('IREDA/REC/PFC') has sanctioned a non-fund based limit loan of Rs. _____ (Rupees _____ only) to M/s _____ under the loan Agreement executed on _____ to execute Renewable Energy Projects.
2. At the request of M/s _____, on behalf of _____ (*insert name of the Bidder*), this Payment on Order Instrument (POI) for an amount of Rs. _____ (Rupees _____ (in words)). This Payment on Order Instrument comes into force immediately.
3. In consideration of the _____ [*Insert name of the Bidder*] (hereinafter referred to as 'Bidder') submitting the response to RfS inter alia for _____ [*Insert title of the RfS*] for the State/UTs declared in Format 7.1, in response to the RfS No. _____ dated _____ issued by Solar Energy Corporation of India Limited (hereinafter referred to as SECI) and SECI considering such response to the RfS of [*Insert the name of the Bidder*] as per the terms of the RfS, the _____ [*Insert name & address of IREDA/PFC/REC*] hereby agrees unequivocally, irrevocably and unconditionally to pay to SECI at [*Insert Name of the Place from the address of SECI*] forthwith without demur on demand in writing from SECI or any Officer authorized by it in this behalf, any amount up to and not exceeding Rupees _____ [*Insert amount not less than that derived on the basis of 2% of the amount equivalent to the 6% of the value of total state wise allocation or 25 nos. of SPWPS, whichever is higher*], only, on behalf of M/s _____ [*Insert name of the Bidder*].
4. In consideration of the above facts, IREDA/REC/PFC, having its registered office at _____, agrees to make payment for the sum of Rs. _____ lakhs (in words.....) to SECI on the following conditions:-
 - (a) IREDA/REC/PFC agrees to make payment of the above said amount unconditionally, without demur and without protest within a period of _____ days of receipt of request from SECI within the validity period of this letter as specified herein;

- (b) The commitment of IREDA/REC/PFC, under this Payment of Order Instrument will have the same effect as that of the commitment under the Bank Guarantee issued by any Public Sector Bank and shall be enforceable in the same manner as in the case of a Bank Guarantee issued by a Bank and the same shall be irrevocable and shall be honored irrespective of any agreement or its breach between IREDA/REC/PFC or its constituents notwithstanding any dispute that may be raised by the against SECI;
- (c) The liability of IREDA/REC/PFC continues to be valid and binding on IREDA/REC/PFC and shall not be terminated, impaired and discharged, by virtue of change in its constitution and specific liability under letter of undertaking shall be binding on its successors or assignors.
- (d) The liability of IREDA/REC/PFC shall continue to be valid and binding on IREDA/REC/PFC and shall not be terminated/ impaired/ discharged by any extension of time or variation and alternation made given or agreed with or without knowledge or consent of the parties (SECI and Bidding Party), subject to the however to the maximum extent of amount stated herein and IREDA/REC/PFC is not liable to any interest or costs etc.;
- (e) This Payment on Order Instrument can be invoked either partially or fully, till the date of validity.
- (f) IREDA/REC/PFC agrees that it shall not require any proof in addition to the written demand by SECI made in any format within the validity period. IREDA/REC/PFC shall not require SECI to justify the invocation of the POI against the Selected Vendor, to make any claim against or any demand against the SPV/Vendor or to give any notice to the SPV/Vendor;
- (g) The POI shall be the primary obligation of IREDA/REC/PFC and SECI shall not be obliged before enforcing the POI to take any action in any court or arbitral proceedings against the Selected Vendor;
- (h) Neither SECI is required to justify the invocation of this POI nor shall IREDA/REC/PFC have any recourse against SECI in respect of the payment made under letter of undertaking;
5. Notwithstanding anything contrary contained anywhere in this POI or in any other documents, this POI is and shall remain valid up to _____ and IREDA/REC/PFC shall make payment thereunder only if a written demand or request is raised within the said date and to the maximum extent of Rs. and IREDA/REC/PFC shall in no case, be liable for any interest, costs, charges and expenses and IREDA's/REC's/PFC's liability in no case will exceed more than the above amount stipulated.
6. In pursuance of the above, IREDA/REC/PFC and SECI have signed an Umbrella Agreement dated ____ setting out the terms and conditions for issue of letter of undertaking by IREDA/REC/PFC to SECI and the said terms and conditions shall be read as a part of this letter of undertaking issued for the project of the project of PP mentioned above.

Thanking you,

Yours faithfully
 For and on behalf of
 M/s. _____
(Name of the POI issuing agency).

()
 General Manager (TS)

Copy to:-

M/s. __PP_____

_____ As per their request

()
 General Manager (TS)

FORMAT FOR PERFORMANCE BANK GUARANTEE (PBG)*(To be submitted Separately for each Project)**(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)*

Reference:

Bank Guarantee No.:

Date:

In consideration of the _____ [*Insert name of the Bidder*] (hereinafter referred to as 'selected Vendor') submitting the response to RfS inter alia for [*Insert title of the RfS*] for the State/UTs declared in Format 7.1, in response to the RfS dated..... issued by Solar Energy Corporation of India Limited (hereinafter referred to as SECI) and SECI considering such response to the RfS of [*Insert name of the Bidder*] (which expression shall unless repugnant to the context or meaning thereof include its executors, administrators, successors and assignees) issuing Letter of Award No. _____ to _____ (*Insert Name of selected Vendor*) as per terms of RfS, M/s _____ {a Special Purpose Vehicle (SPV) formed for this purpose}, if applicable].

As per the terms of the RfS, the _____ [*Insert name & address of Bank*] hereby agrees unequivocally, irrevocably and unconditionally to pay to SIA at _____ [*Insert Name of the Place from the address of the SIA*] forthwith on demand in writing from SIA or any Officer authorised by it in this behalf, any amount up to and not exceeding Indian Rupees _____ [Total Value] only, on behalf of M/s _____ [*Insert name of the selected Vendor*].

This guarantee shall be valid and binding on this Bank up to and including and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only).

Our Guarantee shall remain in force until..... SIA shall be entitled to invoke this Guarantee till

The Guarantor Bank hereby agrees and acknowledges that SIA shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by SIA, made in any format, raised at the above-mentioned address of the Guarantor Bank, to make the said payment to SIA.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by _____ [*Insert name of the*

selected Vendor] and/ or any other person. The Guarantor Bank shall not require SIA to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against SIA in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at _____ shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly SIA shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the selected Vendor, to make any claim against or any demand on the selected Vendor or to give any notice to the selected Vendor or to enforce any security held by SIA or to exercise, levy or enforce any distress, diligence or other process against the selected Vendor.

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to SIA and may be assigned, in whole or in part, (whether absolutely or by way of security) by SIA to any entity to whom SIA is entitled to assign its rights and obligations.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only) and it shall remain in force until We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if SIA serves upon us a written claim or demand.

Signature: _____

Name: _____

Power of Attorney No.: _____

For

_____ [*Insert Name and Address of the Bank*] _____

Contact Details of the Bank:

E-mail ID of the Bank:

Banker's Stamp and Full Address.

Dated this ____ day of ____, 20__

Witness:

1.

Signature
Name and Address

2.

Signature
Name and Address

Notes:

1. The Stamp Paper should be in the name of the Executing Bank and of appropriate value.
2. The Performance Bank Guarantee shall be executed by any of the Scheduled Commercial Banks as listed on the website of Reserve Bank of India (RBI) and amended as on the date of issuance of Bank Guarantee. Bank Guarantee issued by foreign branch of a Scheduled Commercial Bank is to be endorsed by the Indian branch of the same bank or State Bank of India (SBI).

FORMAT FOR BOARD RESOLUTIONS

The Board, after discussion, at the duly convened Meeting on [Insert date], with the consent of all the Directors present and in compliance of the provisions of the Companies Act, 1956 or Companies Act 2013, as applicable, passed the following Resolution:

1. RESOLVED THAT Mr./ Ms....., be and is hereby authorized to do on our behalf, all such acts, deeds and things necessary in connection with or incidental to our response to RfS vide RfS No. _____ for _____ (insert title of the RfS), including signing and submission of all documents and providing information/ response to RfS to Solar Energy Corporation of India Limited (SECI), representing us in all matters before SECI, and generally dealing with SECI in all matters in connection with our bid for the said Project. ***(To be provided by the Bidding Company or the Lead Member of the Consortium)***

2. FURTHER RESOLVED THAT pursuant to the provisions of the Companies Act, 1956 or Companies Act, 2013, as applicable and compliance thereof and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded to invest total equity in the Project. ***(To be provided by the Bidding Company)***

[Note: In the event the Bidder is a Bidding Consortium, in place of the above resolution at Sl. No. 2, the following resolutions are to be provided]

FURTHER RESOLVED THAT pursuant to the provisions of the Companies Act, 1956 or Companies Act, 2013, as applicable and compliance thereof and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded to invest (-----%) equity [Insert the % equity commitment as specified in Consortium Agreement] in the Project. ***(To be provided by each Member of the Bidding Consortium including Lead Member such that total equity is 100%)***

FURTHER RESOLVED THAT approval of the Board be and is hereby accorded to participate in consortium with M/s ----- [Insert the name of other Members in the Consortium] and Mr/ Ms....., be and is hereby authorized to execute the Consortium Agreement. ***(To be provided by each Member of the Bidding Consortium including Lead Member)***

And

FURTHER RESOLVED THAT approval of the Board be and is hereby accorded to contribute such additional amount over and above the percentage limit (specified for the Lead Member in the Consortium Agreement) to the extent becoming necessary towards the total equity share in the Project Company, obligatory on the part of the Consortium pursuant to the terms and conditions contained in the Consortium Agreement dated executed by the Consortium as per the provisions of the RfS. ***[To be passed by the Lead Member of the Bidding Consortium]***

3. NOT USED

Certified True Copy

(Signature, Name and Stamp of Company Secretary)**Notes:**

- 1) This certified true copy should be submitted on the letterhead of the Company, signed by the Company Secretary/ Director.
- 2) The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution.
- 3) This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act, 1956 or Companies Act, 2013 as applicable may be suitably modified to refer to the law applicable to the entity submitting the resolution. However, in such case, the foreign entity shall submit an unqualified opinion issued by the legal counsel of such foreign entity, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing Company and the authorizations granted therein are true and valid.

FORMAT FOR CONSORTIUM AGREEMENT

(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)

THIS Consortium Agreement (“Agreement”) executed on this ___ Day of _____ Two Thousand ____ between M/s _____ [Insert name of Lead Member] a Company incorporated under the laws of _____ and having its Registered Office at _____ (hereinafter called the “**Member-1**”, which expression shall include its successors, executors and permitted assigns) and M/s _____ a Company incorporated under the laws of _____ and having its Registered Office at _____ (hereinafter called the “**Member-2**”, which expression shall include its successors, executors and permitted assigns), M/s _____ a Company incorporated under the laws of _____ and having its Registered Office at _____ (hereinafter called the “**Member-n**”, which expression shall include its successors, executors and permitted assigns), [The Bidding Consortium should list the details of all the Consortium Members] for the purpose of submitting response to RfS and execution of Power Purchase Agreement (in case of award), against RfS No. _____ dated _____ issued by Solar Energy Corporation of India Limited (SECI) a Company incorporated under the Companies Act, 2013, and having its Registered Office at 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi - 110023

WHEREAS, each Member individually shall be referred to as the “Member” and all of the Members shall be collectively referred to as the “Members” in this Agreement.

WHEREAS SIA desires to install SPWPS under RfS for _____ (insert title of the RfS);

WHEREAS, SECI had invited response to RfS vide its Request for Selection (RfS) dated _____

WHEREAS the RfS stipulates that in case response to RfS is being submitted by a Bidding Consortium, the Members of the Consortium will have to submit a legally enforceable Consortium Agreement in a format specified by SECI wherein the Consortium Members have to commit equity investment of a specific percentage for the SPWPS.

NOW THEREFORE, THIS AGREEMENT WITNESSTH AS UNDER:

In consideration of the above premises and agreements all the Members in this Bidding Consortium do hereby mutually agree as follows:

1. We, the Members of the Consortium and Members to the Agreement do hereby unequivocally agree that Member-1 (M/s _____), shall act as the Lead Member as defined in the RfS for self and agent for and on behalf of Member-2, -----, Member-n and to submit the response to the RfS.

2. The Lead Member is hereby authorized by the Members of the Consortium and Members to the Agreement to bind the Consortium and receive instructions for and on their behalf.
3. Notwithstanding anything contrary contained in this Agreement, the Lead Member shall always be liable for the equity investment obligations of all the Consortium Members i.e. for both its own liability as well as the liability of other Members.
4. The Lead Member shall be liable and responsible for ensuring the individual and collective commitment of each of the Members of the Consortium in discharging all of their respective equity obligations. Each Member further undertakes to be individually liable for the performance of its part of the obligations without in any way limiting the scope of collective liability envisaged in this Agreement.
5. Subject to the terms of this Agreement, the share of each Member of the Consortium in the issued equity share capital of the Vendor is/shall be in the following proportion:

Name	Percentage
Member 1	---
Member 2	---
Member n	---
Total	100%

6. In case of any breach of any equity investment commitment by any of the Consortium Members, the Lead Member shall be liable for the consequences thereof.
7. Except as specified in the Agreement, it is agreed that sharing of responsibilities as aforesaid and equity investment obligations thereto shall not in any way be a limitation of responsibility of the Lead Member under these presents.
8. It is further specifically agreed that the financial liability for equity contribution of the Lead Member shall not be limited in any way so as to restrict or limit its liabilities. The Lead Member shall be liable irrespective of its scope of work or financial commitments.
9. This Agreement shall be construed and interpreted in accordance with the Laws of India and courts at New Delhi alone shall have the exclusive jurisdiction in all matters relating thereto and arising thereunder.
10. It is hereby further agreed that in case of being selected as the Selected Vendor, the Members do hereby agree that they shall furnish the Performance Guarantee in favour of SIA in terms of the RfS.
11. It is further expressly agreed that the Agreement shall be irrevocable and shall form an integral part of the Contract Agreement and shall remain valid until the expiration or early termination of the Contract Agreement in terms thereof, unless expressly agreed to the contrary by SECI.

12. The Lead Member is authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Members respectively from time to time in the response to RfS.
13. It is hereby expressly understood between the Members that no Member at any given point of time, may assign or delegate its rights, duties or obligations under the Contract Agreement except with prior written consent of SECI.
14. This Agreement
- a) has been duly executed and delivered on behalf of each Member hereto and constitutes the legal, valid, binding and enforceable obligation of each such Member;
 - b) sets forth the entire understanding of the Members hereto with respect to the subject matter hereof; and
 - c) may not be amended or modified except in writing signed by each of the Members and with prior written consent of SECI.
15. All the terms used in capitals in this Agreement but not defined herein shall have the meaning as per the RfS.

IN WITNESS WHEREOF, the Members have, through their authorized representatives, executed these present on the Day, Month and Year first mentioned above.

For M/s----- [Member 1]

(Signature, Name & Designation of the person authorized vide Board Resolution Dated _____)

Witnesses:

1) Signature-----

2) Signature -----

Name:

Name:

Address:

Address:

For M/s-----[Member 2]

(Signature, Name & Designation of the person authorized vide Board Resolution Dated _____)

Witnesses:

1) Signature -----

2) Signature -----

Name:

Name:

Address:

Address:

For M/s-----[Member n]

(Signature, Name & Designation of the person authorized vide Board Resolution Dated _____)

Witnesses:

1) Signature -----

(2) Signature -----

Name:

Name:

Address:

Address:

Signature and stamp of Notary of the place of execution

FORMAT FOR FINANCIAL REQUIREMENT*(This should be submitted on the Letter Head of the Bidding Company/ Lead Member of Consortium)*

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidding Company/ Lead Member of Consortium)*

Tel. #:

Fax #:

E-mail address#

To**Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023**

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We certify that the Bidding Company/Member in a Bidding Consortium is meeting the financial eligibility requirements as per the provisions of the RfS. Accordingly, the Bidder, with the support of its Affiliates, (strike out if not applicable) is fulfilling the minimum Net Worth criteria, by demonstrating a Net Worth of Rs..... Cr. (..... in words) as on the last date of Financial Year 2021-22.

This Net Worth has been calculated in accordance with instructions provided in Clause 40.1 of the RfS.

Exhibit (i): Applicable in case of Bidding Company

For the above calculations, we have considered the Net Worth by Bidding Company and/ or its Affiliate(s) as per following details:

Name of Bidding Company	Name of Affiliate(s) whose net worth is to be considered	Relationship with Bidding Company*	Net Worth (in Rs. Crore)
Company 1			
Total			

**The column for “Relationship with Bidding Company” is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/ chartered accountant is required to be attached with the format.*

Exhibit (ii): Applicable in case of Bidding Consortium

(To be filled by each Member in a Bidding Consortium separately)

Name of Member: [Insert name of the Member]

Net Worth Requirement to be met by Member in Proportion to the Equity Commitment: INR ----- Crore (Equity Commitment (%) * Rs. [] Crore)

For the above calculations, we have considered Net Worth by Member in Bidding Consortium and/ or its Affiliate(s) per following details:

Name of Consortium Member Company	Name of Affiliate(s) whose net worth is to be considered	Relationship with Bidding Company* (If any)	Net Worth (in Rs. Crore)	Equity Commitment (in %) in Bidding Consortium	Committed Net Worth (in Rs. Crore)
Company 1					

Total					

** The column for “Relationship with Bidding Company” is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/chartered accountant is required to be attached with the format*

Further, we certify that the Bidding Company/ Member in the Bidding Consortium, with the support of its Affiliates, (strike out if not applicable) is fulfilling the Minimum Average Annual Turnover Criteria, by demonstrating a MAAT of INR _____ (_____ in words) for the last three Financial Years, namely _____, _____ and _____.

Exhibit (i): Applicable in case of Bidding Company

For the above calculations, we have considered the MAAT by Bidding Company and/ or its Affiliate(s) as per following details:

Name of Bidding Company	Name of Affiliate(s) whose MAAT is to be considered	Relationship with Bidding Company*	MAAT (in Rs. Crore) FY 2019-20	MAAT (in Rs. Crore) FY 2020-21	MAAT (in Rs. Crore) FY 2021-22
Company 1					

Total					

**The column for "Relationship with Bidding Company" is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/chartered accountant is required to be attached with the format.*

Exhibit (ii): Applicable in case of Bidding Consortium

(To be filled by each Member in a Bidding Consortium separately)

Name of Member: [Insert name of the Member]

MAAT requirement to be met by Member in Proportion to the Equity Commitment: INR -----
-----Crore (Equity Commitment (%) * Rs. [] Crore)

For the above calculations, we have considered MAAT by Member in Bidding Consortium and/ or its Affiliate(s) as per following details:

Name of Consortium Member Company	Name of Affiliate(s) whose MAAT is to be considered	Relationship with Bidding Company* (If Any)	MAAT (in Rs. Crore) FY 2019-20	MAAT (in Rs. Crore) FY 2020-21	MAAT (in Rs. Crore) FY 2021-22	Equity Commitment (in %) in Bidding Consortium	Proportionate MAAT (in Rs. Crore)
Company 1							

Total							

** The column for "Relationship with Bidding Company" is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/chartered accountant is required to be attached with the format*

Further, we certify that the Bidding Company/ Member in the Bidding Consortium, with the support of its Affiliates, (strike out if not applicable) is fulfilling the minimum Liquidity Criteria by demonstrating a Working Capital of INR _____ (in words) as on the end of Financial Year 2021-22. (Strike out if not applicable)

Exhibit (i): Applicable in case of Bidding Company

For the above calculations, we have considered Working Capital by Bidding Company and/ or its Affiliate(s) as per following details:

RFS for Selection of Vendors under Component-B of PM-KUSUM scheme of MNRE	<u>Rfs No. SECI/C&P/MI/00/0010/2022-23 Dated 31.12.2022</u>	<u>Page 74 of 106</u>
---	--	------------------------------

Name of Bidding Company	Name of Affiliate(s) whose Working Capital is to be considered	Relationship with Bidding Company*	Working Capital (in Rs. Crore)
Company 1			
Total			

*The column for "Relationship with Bidding Company" is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/chartered accountant is required to be attached with the format.

**Exhibit (ii): Applicable in case of Bidding Consortium
(To be filled by each Member in a Bidding Consortium separately)**

Name of Member: [Insert name of the Member]

Working Capital requirement to be met by Member in Proportion to the Equity Commitment:
INR -----Crore (Equity Commitment (%) * Rs. [] Crore)

For the above calculations, we have considered Working Capital by Member in Bidding Consortium and/ or its Affiliate(s) as per following details:

Name of Consortium Member Company	Name of Affiliate(s) whose Working Capital is to be considered	Relationship with Bidding Company* (If Any)	Working Capital (in Rs. Crore)	Equity Commitment (in %) in Bidding Consortium	Proportionate Working Capital (in Rs. Crore)
Company 1					

Total					

* The column for "Relationship with Bidding Company" is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/chartered accountant is required to be attached with the format

(Signature & Name of the Authorized Signatory)

**(Signature and Stamp of CA)
Membership No.
Regn. No. of the CA's Firm:**

Date:

- Note: (i) Along with the above format, in a separate sheet on the letterhead of the Chartered Accountant's Firm, provide details of computation of Net Worth and Annual Turnover duly certified by the Chartered Accountant.
- (ii) Certified copies of Balance sheet, Profit & Loss Account, Schedules and Cash Flow Statements are to be enclosed in complete form along with all the Notes to Accounts.

UNDERTAKING

(To be submitted on the letterhead of the Bidder)

We, hereby provide this undertaking to Solar Energy Corporation of India Limited, in respect to our response to RfS vide RfS No. _____ dated _____, that M/s _____ (insert name of the Bidder), or any of its Affiliates is not a willful defaulter to any lender, and that there is no major litigation pending or threatened against M/s _____ (insert name of the Bidder) or any of its Affiliates which are of a nature that could cast a doubt on the ability or the suitability of the Bidder to undertake the Project.

(Name and Signature of the Authorized Signatory)

FORMAT FOR DISCLOSURE

(To be submitted on the Letter Head of the Bidding Company/ Each Member of Consortium)

DISCLOSURE

Ref.No. _____

Date: _____

From: _____ (Insert name and address of Bidding Company/ Lead Member of Consortium)

_____Tel.#: Fax#:
E-mail address#To
Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____

Dear Sir/ Madam,

We hereby declare and confirm that only we are participating in the RfS Selection process for the RfS No. _____ dated _____ and that our Parent, Affiliate or Ultimate Parent or any Group Company with which we have direct or indirect relationship are not separately participating in this selection process.

We further declare that the above statement is true & correct. We undertake that if at any stage it is found to be incorrect, in addition to actions applicable under the RfS including but not limited to cancellation of our response to this RfS and LoA, we, i.e. M/s _____ (enter name of the bidding company/member in a consortium), including our Parent, Ultimate Parent, and our Affiliates shall be suspended/debarred from participating in any of the upcoming tenders issued by SECI for a period of 2 years from the date of default as notified by SECI.

We also understand that the above is in addition to the penal consequences that may follow from the relevant laws for the time being in force.

We further declare that we have read the provisions of Clause 30.4 of the RfS, and are complying with the requirements as per the referred OM dated 23.07.2020 except Sl.11 of the OM, including subsequent amendments and clarifications thereto. Accordingly, we are also enclosing necessary certificates (Annexure to this format) in support of the above compliance under the RfS. We understand that in case of us being selected under this RfS, any of the above certificates is found false, SECI shall take appropriate action as deemed necessary.

We further declare that we are fully aware of the binding provisions of the ALMM Order and the Lists(s) thereunder, while quoting the price in RfS for _____ (Enter the name of the RfS).

We further understand that the List-I (Solar PV Modules) of ALMM Order, Annexure-I of the OM, issued by MNRE on 10th March, 2021 will be updated by MNRE from time to time. We also understand that the Modules to be procured for this project, shall be from the List-I of the ALMM Order applicable on the date of invoicing of such modules.

We also further understand and accept that we shall be liable for penal action, including but not limited to blacklisting and invocation of Performance Bank Guarantee, if we are found not complying with the provisions of ALMM Order, including those mentioned above.

Dated the _____ day of _____, 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

FORMAT FOR DISCLOSURE

(To be submitted on the Letter Head of the Bidding Company/ Each Member of Consortium)

(To be submitted by all such bidders in which a common Company/companies directly/indirectly own(s) more than 10% but less than 26% shareholding)

DISCLOSURE

Ref.No. _____

Date:

From: _____ (Insert name and address of Bidding Company/ Lead Member of Consortium)

Tel.#: Fax#:

E-mail address#

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We hereby declare and confirm that in terms of the definitions of the RfS, M/s _____ (enter name of the common shareholder) is our Group Company, and has a direct/indirect shareholding of less than 26% in the bidding company. M/s _____ (enter name of the common shareholder) also holds directly/indirectly less than 26% shareholding in other Companies which may participate in this RfS, i.e., RfS No. _____.

We undertake that M/s _____ (enter name of the above common shareholder) is not a party to the decision-making process for submission of response to this RfS by M/s _____ (enter name of the bidding company/member in the consortium). We further undertake that while undertaking any action as part of our response to RfS, we are not complicit with other such bidders participating in this RfS, in which M/s _____ (enter name of the common shareholder) has less than 26% direct/indirect shareholding, if any.

We further declare that the above statement is true & correct. We undertake that if at any stage it is found to be incorrect, in addition to actions applicable under the RfS including but not limited to cancellation of our response to this RfS and LoA, we, i.e. M/s _____ (enter name of the bidding company/member in a consortium), including our Parent, Ultimate Parent, and our Affiliates shall be suspended/debarred from participating in

any of the upcoming tenders issued by SECI for a period of 2 years from the date of default as notified by SECI.

We also understand that the above is in addition to the penal consequences that may follow from the relevant laws for the time being in force.

We further declare that we have read the provisions of Clause 38 of the RfS, and are complying with the requirements as per the referred OM dated 23.07.2020 except Sl. 11 of the OM, including subsequent amendments and clarifications thereto. Accordingly, we are also enclosing necessary certificates (Annexure to this format) in support of the above compliance under the RfS. We understand that in case of us being selected under this RfS, any of the above certificates is found false, SECI shall take appropriate action as deemed necessary.

We further declare that we are fully aware of the binding provisions of the ALMM Order and the Lists(s) thereunder, while quoting the price in RfS for _____ (Enter the name of the RfS). We further understand that the List-I (Solar PV Modules) of ALMM Order, Annexure-I of the OM, issued by MNRE on 10th March, 2021 will be updated by MNRE from time to time. We also understand that the Modules to be procured for this project, shall be from the List-I of the ALMM Order applicable on the date of invoicing of such modules.

We also further understand and accept that we shall be liable for penal action, including but not limited to blacklisting and invocation of Performance Bank Guarantee, if we are found not complying with the provisions of ALMM Order, including those mentioned above.

Dated the _____ day of _____, 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

DECLARATION**RESTRICTION ON PROCUREMENT FROM CERTAIN COUNTRIES:
MoF OM No 6/18/2019-PPD dated 23.07.2020***(To be submitted on the Letter Head of the Bidding Company/ Each Member of Consortium)*

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidding Company/Member of Consortium)*_____

Tel.#: _____

Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to the RfS No dated

Dear Sir/ Madam,

This is with reference to attached order No. OM no. 6/18/2019-PPD dated 23rd July 2020 issued by Department of Expenditure, MoF, Govt of India.

We are hereby submitting the following declaration in this regard:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. Where applicable, evidence of valid registration by the Competent Authority shall be attached]."

We further declare that the above statement is true & correct. We are aware that if at any stage it is found to be incorrect, our response to the tender will be rejected.

Dated the _____ day of _____, 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Signatory.

Enclosure: OM dated 23.07.2020, as referred above

RFS for Selection of Vendors under Component-B of PM-KUSUM scheme of MNRE	<u>RfS No. SECI/C&P/MI/00/0010/2022-23 Dated 31.12.2022</u>	<u>Page 82 of 106</u>
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Format 7.9

(This format is for reference purpose only. The scanned version of the format, duly signed by SECI's authorized signatory, is available on the ETS portal as addendum to the RfS. Bidders are required to submit signed and scanned copy of the document available on ETS portal)

INTEGRITY PACT

Between

Solar Energy Corporation of India

having its Registered Office at 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi-110023, India

hereinafter referred to as

"SECI",

and

[Insert the name of the Sole Bidder/all members of the of Joint Venture/Consortium]

having its Registered Office at _____

(Insert full Address/Lead member address in case of Joint Venture/Consortium)

and

[Insert the name of all members of the Joint Venture/Consortium, as applicable]

having its Registered Office at _____

(Insert full Address/ Lead member address in case of Joint Venture/Consortium)

hereinafter referred to as

"The Bidder/Contractor"

Preamble

SECI intends to award, under laid-down organisational procedures, contract(s) for _____ *[Insert the name of the tender/package]*

Package and NIT Number _____ SECI values full compliance with all *[Insert Specification Number of the package]* relevant laws and regulations, and the principles of economical use of resources, and of fairness and transparency in its relations with

its Bidders/ Contractors.

In order to achieve these goals, SECI and the above-named Bidder/Contractor enter into this agreement called '**Integrity Pact**' which will form an integral part of the bid.

It is hereby agreed by and between the parties as under:

Section I - Commitments of SECI

- (1) SECI commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - a) No employee of SECI, personally or through family members, will in connection with the tender, or the execution of the contract, demand, take a promise for or accept, for him/herself or third person, any material or other benefit which he/she is not legally entitled to.
 - b) SECI will, during the tender process treat all Bidder(s) with equity and fairness. SECI will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - (c) SECI will exclude from evaluation of Bids its such employee(s) who has any personal interest in the Companies/Agencies participating in the Bidding/Tendering process
- (2) If Managing Director obtains information on the conduct of any employee of SECI which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a substantive suspicion in this regard, he will inform its Chief Vigilance Officer and in addition can initiate disciplinary actions under its Rules.

Section II - Commitments of the Bidder/Contractor

- (1) The Bidder/Contractor commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution:
 - a) The Bidder/Contractor will not, directly or through any other person or firm, offer, promise or give to SECI, or to any of SECI's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange an advantage during the tender process or the execution of the contract.
 - b) The Bidder/Contractor shall not enter into any agreement/ arrangement/ understanding/ action in concert, whether or not the same is formal or in writing with other Bidders/Contractors. This applies in particular to agreements pertaining to prices, territorial or geographical allocations of market, specifications, certifications, subsidiary contracts, submission or non-submission of bids, bid rigging or other actions restricting competitiveness or

leading to cartelization in the bidding process or amounting to any other violation under the Competition Laws for the time being in force.

- c) The Bidder/Contractor will not commit any criminal offence under the relevant Anti-corruption Laws of India; further, the Bidder/Contractor will not use for illegitimate purposes or for purposes of restrictive competition or personal gain, or pass on to others, any information provided by SECI as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d) Bidders will not pass any information provided by Principal as part of business relationship to others and not to commit any offence under PC/ IPC Act
 - e) The Bidder/Contractor of Indian Nationality shall furnish the name and address of the foreign principals, if any, involved directly or indirectly in the Bidding.
 - f) The Bidder/Contractor will, when presenting his bid, disclose any and all payments he has made, or committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and/or with the execution of the contract.
 - g) The Bidder/Contractor will not misrepresent facts or furnish false/forged documents/information in order to influence the bidding process or the execution of the contract to the detriment of SECI.
- (2) The Bidder/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section III- Disqualification from tender process and exclusion from future contracts

- (1) If the Bidder, before contract award, has committed a serious transgression through a violation of Section II or in any other form such as to put his reliability or credibility as Bidder into question, SECI may disqualify the Bidder from the tender process or terminate the contract, if already signed, for such reason.
- (2) If the Bidder/Contractor has committed a serious transgression through a violation of Section II such as to put his reliability or credibility into question, SECI may after following due procedures also exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder/Contractor and the amount of the damage. The exclusion will be imposed for a minimum of 12 months and maximum of 36 months.
- (3) If the Bidder/Contractor can prove that he has restored/recouped the damage caused by him and has installed a suitable corruption prevention system, SECI may revoke the exclusion prematurely. However, decision of SECI in this regard shall be final and binding on the bidder/Contractor.

Section IV - Liability for violation of Integrity Pact

- (1) If SECI has disqualified the Bidder from the tender process prior to the award under Section III, SECI may forfeit the applicable Bid Security/Earnest Money Deposit under the Bid.
- (2) If SECI has terminated the contract under Section III, SECI may forfeit the Contract Performance Security of this contract besides resorting to other remedies under the contract.

Section V- Previous Transgression

- (1) The Bidder shall declare in his Bid that no previous transgressions occurred in the last 3 years with any other Public Sector Undertaking or Government Department that could justify his exclusion from the tender process.
- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section VI - Equal treatment to all Bidders / Contractors

- (1) SECI will enter into agreements with identical conditions as this one with all Bidders.
- (2) SECI will disqualify from the tender process any bidder who does not sign this Pact or violate its provisions.

Section VII - Punitive Action against violating Bidders / Contractors

If SECI obtains knowledge of conduct of a Bidder or a Contractor or his subcontractor or of an employee or a representative or an associate of a Bidder or Contractor or his Subcontractor which constitutes corruption, or if SECI has substantive suspicion in this regard, SECI will inform the Chief Vigilance Officer (CVO).

Nothing mentioned hereinabove may deem to restrict the right of SECI, in case of a suspected violation of Section II, Clause (1) (b) by the Bidders/ contractors to initiate necessary action under the Competition Laws for the time being in force.

(* Section VIII - Independent External Monitor/Monitors

- (1) SECI has appointed a panel of Independent External Monitors (IEMs) for this Pact with the approval of Central Vigilance Commission (CVC), Government of India, details of which has been indicated in the tender document.
- (2) The IEM is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement. He has right of access to all project documentation. The IEM may examine any complaint received by him and submit a report to Managing Director, SECI, at the earliest. He may also submit a report directly to the CVO and the CVC, in case of suspicion of serious irregularities attracting the provisions of the PC Act. However, for ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter shall be referred to the full panel of IEMs, who would examine the records,

- conduct the investigations and submit report to Managing Director, SECI, giving joint findings.
- (3) The IEM is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Managing Director, SECI.
 - (4) The Bidder(s)/Contractor(s) accepts that the IEM has the right to access without restriction to all documentation of SECI related to this contract including that provided by the Contractor/Bidder. The Bidder/Contractor will also grant the IEM, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his documentation. The same is applicable to Subcontractors. The IEM is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality.
 - (5) SECI will provide to the IEM information as sought by him which could have an impact on the contractual relations between SECI and the Bidder/Contractor related to this contract.
 - (6) As soon as the IEM notices, or believes to notice, a violation of this agreement, he will so inform the Managing Director, SECI and request the Managing Director, SECI to discontinue or take corrective action, or to take other relevant action. The IEM can in this regard submit non-binding recommendations. Beyond this, the IEM has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action. However, the IEM shall give an opportunity to SECI and the Bidder/Contractor, as deemed fit, to present its case before making its recommendations to SECI.
 - (7) The IEM will submit a written report to the Managing Director, SECI within 8 to 10 weeks from the date of reference or intimation to him by SECI and, should the occasion arise, submit proposals for correcting problematic situations.
 - (8) If the IEM has reported to the Managing Director, SECI, a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Managing Director, SECI has not, within the reasonable time taken visible action to proceed against such offence or reported it to the CVO, the Monitor may also transmit this information directly to the CVC, Government of India.
 - (9) The word 'IEM' would include both singular and plural.
 - (*) *This Section shall be applicable for only those packages wherein the IEMs have been identified in Section – I: Invitation for Bids and/or Clause ITB ... in Section – III: Bid Data Sheets of Conditions of Contract, Section-3 of the RfS.*
 - (10) A bidder/Contractor signing the IP shall not approach the Courts while representing the matters to IEMs and he will await till their decision in the matter.

Section IX - Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor after the closure of the contract and for all other Bidder's six month after the contract has been awarded.

Section X - Other Provisions

- (1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the establishment of SECI.
- (2) Changes and supplements as well as termination notices need to be made in writing.
- (3) If the Contractor is a partnership firm or a consortium or Joint Venture, this agreement must be signed by all partners, consortium members and Joint Venture partners.
- (4) Nothing in this agreement shall affect the rights of the parties available under the General Conditions of Contract (GCC) and Special Conditions of Contract (SCC) which are part of the Bidding Document.
- (5) Views expressed or suggestions/submissions made by the parties and the recommendations of the *CVO/IEM*[#] in respect of the violation of this agreement, shall not be relied on or introduced as evidence in the arbitral or judicial proceedings (arising out of the arbitral proceedings) by the parties in connection with the disputes/differences arising out of the subject contract.

CVO shall be applicable for packages wherein IEM are not identified in the bidding document IEM shall be applicable for packages wherein IEM are identified in the bidding document.
- (6) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(Signature) _____

(For & On behalf of SECI)

(Signature) _____

**(For & On behalf of Bidder/ Partner(s) of
Joint Venture/Consortium/ Contractor)**

(Office Seal)

(Office Seal)

Name: _____

Name: _____

Designation: _____

Designation: _____

Witness 1 : _____

Witness 1 : _____

(Name & Address) _____

(Name & Address) _____

Witness 2 : _____

(Name & Address) _____

Witness 2 : _____

(Name & Address) _____

Format 7.10**FORMAT FOR SUBMISSION OF FINANCIAL BID**

(The Covering Letter should be submitted on the Letter Head of the Bidding Company/ Lead Member of Consortium)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidding Company/ Lead Member of Consortium)*

Tel.#: _____

Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

I/ We, _____ *(Insert Name of the Bidder)* enclose herewith the Financial Proposal for selection of my/ firm for the State/UTs declared in Format 7.1, as Bidder for the above.

I/We have applied for SPWPS to be set up in State/UTs _____ *(insert State/UT nos.)* under this RfS.

I/We agree that this offer shall remain valid for a period upto the date as on 12 months from the due date of submission of the response to RfS and such further period as may be mutually agreed upon.

Dated the _____ day of _____, 20....

Thanking you,
We remain,
Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

Notes:

1. *For each line item (i.e., type of pump for each State/UT), there can be only one price applied for by the Bidder. If the bidder quotes two prices or combination thereof for the line item, then the bid shall be considered as non-responsive.*
2. *If the bidder submits the financial bid in the Electronic Form at ETS portal not in line with the instructions mentioned therein, then the bid shall be considered as non-responsive.*
3. *Price requirement shall be quoted as a fixed amount in Indian Rupees only. Conditional proposal shall be summarily rejected.*
4. *In the event of any discrepancy between the values entered in figures and in words, the values entered in words shall be considered.*
5. *Price should be in Indian Rupee up to two decimal places only.*

**DECLARATION REGARDING BANNING, LIQUIDATION, COURT
RECEIVERSHIP ETC.**

(To be submitted on the Letter Head of the Bidder)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder)*

Tel.#: _____ Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We hereby confirm that we are not on the Banning List by SECI or Public Sector Project Management due to poor performance or Corrupt/ Fraudulent/ Collusive/ Coercive Practices or any other reason or banned by Government department/ Public Sector on due date of submission of bid.

Further, we confirm that neither we nor our allied agency(ies) are on banning list of SECI or the Ministry of New & Renewable Energy.

We also confirm that we are not under any liquidation, court receivership or similar proceedings or bankruptcy.

In case it comes to the notice of SECI that we have given wrong declaration in this regard, the same shall be dealt as Fraudulent Practices and we shall be banned by SECI for a period which shall be decided by SECI on case-to-case basis, subject to minimum period of banning being 06 months from the date of issuance of banning order.

Further, we also confirm that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to SECI by us.

(Name and Signature of the Authorized Signatory)

DECLARATION FOR THE LOCAL CONTENT*(To be submitted on the Letter Head of the Bidder)*

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder)*

Tel.#: _____ Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We declare that we will be using indigenously manufactured solar panels with indigenous solar cells and modules. Further, we are agreeing to accept and follow Guidelines for the implementation of PM-KUSUM scheme issued by MNRE on 22-07-2019 and its subsequent amendment(s).

Further, we hereby undertake that I/We certify that we/our Collaborator/JV Partner are/is are not being under debar list/undergoing debarment period on account of breach of the code of integrity under Rule 175(1)(i)(h) of the General Financial Rules for giving false declarations of local content.

List of imported components used in the manufacturing of solar water pumping system:

S. No.	Item Imported

(Name and Signature of the Authorized Signatory)

**DECLARATION FOR USING SAME MAKE OF EQUIPMENTS AS PER THE TEST
CERTIFICATE***(To be submitted on the Letter Head of the Bidder)*

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder)*

Tel.#: _____ Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We are agreeing to accept that the same make of solar panels, pumps, VFD/inverter/controller for which the test report is to be submitted to the Implementing agency, as per MNRE solar pump testing procedure 2019 and amendments thereof, will be supplied by us.

In case, if some different make of solar panels, pumps, VFD/inverter/controller will be supplied during the implementation or AMC period, we will submit the test report for that particular make component(s). We also agree that such test reports shall be issued by the National Institute of Solar Energy and any other lab accredited by NABL for testing of solar PV water pumping system as per MNRE specifications and testing procedure.

(Name and Signature of the Authorized Signatory)

**DECLARATION FOR SUBMITTING THE TEST CERTIFICATE AS PER MNRE
TECHNICAL SPECIFICATIONS FOR SOLAR WATER PUMPSETS ISSUED IN
2019**

(To be submitted on the Letter Head of the Bidder)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder)*

Tel.#: _____ Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We are agreeing to accept that the test certificates are to be submitted to the Implementing Agency, reports as per MNRE technical specifications and testing procedures issued in 2019 and amendments thereof, will be submitted by us within 30 days of issuance of Letter of Empanelment by Implementing Agency. In failure of which our empanelment will stand cancelled, without any prior intimation. These certificates shall be submitted either in original form or attested copy by the issuing test lab.

(Name and Signature of the Authorized Signatory)

Format 7.15**CERTIFICATE REGARDING COMPLIANCE OF MeitY NOTIFICATION VIDE****FILE NO. 1(10)/2017-CLESdt. 02.07.18***(To be submitted on the Letter Head of the Bidder)*

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder)*

Tel.#: _____ Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

Dear Sir/Madam,

This is to certify that the products/items being offered/ quoted against ref. RfS by M/s..... meet the definition of domestically manufactured/produced Cyber Security Products as per Para 4 of MeitY notification vide File no. 1(10)/2017–CLES dt. 02.07.18 and the bidder shall strictly abide by all provisions of the subject notification.

(Name and Signature of the Authorized Signatory)

FORMAT FOR SUBMISSION OF PRICE BID

(The Covering Letter should be submitted on the Letter Head of the Bidder/ Lead Member of Consortium)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder / Lead Member of Consortium)*

Tel. #:

Fax #:

E-mail address#

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

I/ We, _____ *(Insert Name of the Bidder)* enclose herewith the Price Bid/Financial Proposal for selection of my/our firm, in line with the Price Bid Schedule enclosed herewith.

I/We agree that this offer shall remain valid for a period of 24 months from the date of opening of price bids under this RfS..

Dated the _____ day of _____, 20....

Thanking you,
We remain,
Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

Notes:

1. *Only a single price bid for each line item (i.e., type of pump in each State/UT), for the cumulative Project capacity quoted by the bidders, shall have to be filled online in the Electronic Form provided at the ISN-ETS portal.*
2. *The instructions mentioned in the Financial Bid Electronic Form have to be strictly followed without any deviation, else the bid shall be considered as non-responsive.*
3. *Price bids requirement shall be quoted as a fixed amount in Indian Rupees only. Conditional proposal shall be summarily rejected.*
4. *Tariff should be in Indian Rupee up to two decimal places only.*

PRICE BID SCHEDULE

(To be submitted on the Letter Head of the Bidder/ Lead Member of Consortium) The excel file annexed as Annexure-D of the RfS shall be used for entering the price bid. Signed and scanned copy of the same will be required to be uploaded on the portal)

TECHNICAL SPECIFICATIONS OF SOLAR WATER PUMPING SYSTEM

Attached separately to the RfS

Annexure - B

SPECIAL INSTRUCTIONS TO BIDDERS FOR e-TENDERING

GENERAL

The Special Instructions (for e-Tendering) supplement 'Instructions to Bidders', as given in these RfS Documents. Submission of Online Bids is mandatory for this RfS.

e-Tendering is a new methodology for conducting Public Procurement in a transparent and secured manner. Now, the Government of India has made e-Tendering mandatory. Suppliers/ Vendors will be the biggest beneficiaries of this new system of procurement. For conducting electronic tendering, *Solar Energy Corporation of India Limited (SECI)* has adopted a secured and user friendly e-tender system enabling bidders to Search, View, Download tender document(s) directly from the e-tendering portal of M/s Electronic Tender.com (India) Pvt. Limited <https://www.bharat-electronictender.com> through ISN-ETS. This portal is based on the world's most 'secure' and 'user friendly' software from ElectronicTender®. A portal built using ElectronicTender's software is also referred to as ElectronicTender System® (ETS).

Benefits to Suppliers are outlined on the Home-page of the portal.

INSTRUCTIONS

Tender Bidding Methodology:

Sealed Bid System

Single Stage Two Envelope

Broad Outline of Activities from Bidder's Perspective:

1. Procure a Class III Digital Signing Certificate (DSC).
2. Register on ElectronicTender System® (ETS)
3. Create Marketing Authorities (MAs), Users and assign roles on ETS. It is mandatory to create at least one MA
4. View Notice Inviting Tender (NIT) on ETS
5. For this tender -- Assign Tender Search Code (TSC) to a MA
6. Download Official Copy of Tender Documents from ETS. Note: Official copy of Tender Documents is distinct from downloading 'Free Copy of Tender Documents'. To participate in a tender, it is mandatory to procure official copy of Tender Documents for that tender.
7. Clarification to Tender Documents on ETS
 - a) Query to SECI (Optional)
 - b) View response to queries posted by SECI
8. Bid-Submission on ETS
9. Respond to SECI Post-TOE queries

For participating in this tender online, the following instructions are to be read carefully. These instructions are supplemented with more detailed guidelines on the relevant screens of the ETS.

Digital Certificates

For integrity of data and authenticity/ non-repudiation of electronic records, and to be compliant with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC), also referred to as Digital Signature Certificate (DSC), of Class III, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA) [refer <http://www.cca.gov.in>].

Registration

To use the ElectronicTender® portal <https://www.bharat-electronictender.com>, vendors need to register on the portal. Registration of each organization is to be done by one of its senior persons who will be the main person coordinating for the e-tendering activities. In ETS terminology, this person will be referred to as the Super User (SU) of that organization. For further details, please visit the website/ portal, and click on the ‘Supplier Organization’ link under ‘Registration’ (on the Home Page), and follow further instructions as given on the site. Pay Annual Registration Fee as applicable.

After successful submission of Registration details and payment of Annual Registration Fee, please contact ISN-ETS Helpdesk (as given below), to get your registration accepted/ activated.

Important Note:

1. Interested bidders have to download official copy of the RfS & other documents after login into the e-tendering Portal of ISN-ETS <https://www.bharat-electronictender.com>. If the official copy of the documents is not downloaded from e-tendering Portal of ISN-ETS within the specified period of downloading of RfS and other documents, bidder will not be able to participate in the tender.
2. To minimize teething problems during the use of ETS (including the Registration process), it is recommended that the user should peruse the instructions given under ‘ETS User-Guidance Centre’ located on ETS Home Page, including instructions for timely registration on ETS. The instructions relating to ‘Essential Computer Security Settings for Use of ETS’ and ‘Important Functionality Checks’ should be especially taken into cognizance.

Please note that even after acceptance of your registration by the Service Provider, to respond to a tender you will also require time to complete activities related to your organization, such as creation of users, assigning roles to them, etc.

ISN-ETS/ Helpdesk	
Telephone/ Mobile	<i>Customer Support: +91-124-4229071, 4229072 (From 1000 HRS to 1800 HRS on all Working Days i.e. Monday to Friday except Government Holidays)</i>
Email-ID	support@isn-ets.com [Please mark CC: support@electronictender.com]

Some Bidding Related Information for this Tender (Sealed Bid)

The entire bid-submission would be online on ETS (unless specified for Offline Submissions). Broad outline of submissions are as follows:

RFS for Selection of Vendors under Component-B of PM-KUSUM scheme of MNRE	<u>Rfs No. SECI/C&P/MI/00/0010/2022-23 Dated 31.12.2022</u>	<u>Page 103 of 106</u>
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- Submission of Bid-Parts
 - Envelope I (Technical-Bid)
 - Envelope II (Financial-Bid)
- *Submission of digitally signed copy of Tender Documents/ Addendum*

In addition to the above, the bidders are required to submit certain documents physically offline also as per Clause 19 of the RfS, failing which the technical bids will not be opened.

Note: The Bidder should also upload the scanned copies of all the above mentioned original documents as Bid-Annexures during Online Bid-Submission.

Internet Connectivity

If bidders are unable to access ISN-ETS's e-tender portal or Bid Documents, the bidders may please check whether they are using proxy to connect to internet or their PC is behind any firewall and may contact their system administrator to enable connectivity. Please note that Port SSL/ 443 should be enabled on proxy/firewall for HTTPS connectivity. Dial-up/ Broad and internet connectivity without Proxy settings is another option

SPECIAL NOTE ON SECURITY AND TRANSPARENCY OF BIDS

Security related functionality has been rigorously implemented in ETS in a multidimensional manner. Starting with 'Acceptance of Registration by the Service Provider', provision for security has been made at various stages in Electronic Tender's software. Specifically, for Bid Submission, some security related aspects are outlined below:

As part of the Electronic Encrypted[®] functionality, the contents of both the 'ElectronicForms[®]' and the 'Main-Bid' are securely encrypted using a Pass-Phrase created by the Bidder himself. Unlike a 'password', a Pass-Phrase can be a multi-word sentence with spaces between words (e.g. I love this World). A Pass-Phrase is easier to remember, and more difficult to break. It is mandatory that a separate Pass-Phrase be created for each Bid-Part. This method of bid-encryption does not have the security and data-integrity related vulnerabilities which are inherent in e-tendering systems which use Public-Key of the specified officer of a Buyer organization for bid-encryption. Bid-encryption in ETS is such that the Bids cannot be decrypted before the Public Online Tender Opening Event (TOE), even if there is connivance between the concerned tender-opening officers of the Buyer organization and the personnel of e-tendering service provider.

CAUTION: All bidders must fill ElectronicForms[®] for each bid-part sincerely and carefully, and avoid any discrepancy between information given in the ElectronicForms[®] and the corresponding Main-Bid. For transparency, the information submitted by a bidder in the ElectronicForms[®] is made available to other bidders during the Online Public TOE. If it is found during the Online Public TOE that a bidder has not filled in the complete information in the ElectronicForms[®], the TOE officer may make available for downloading the corresponding Main-Bid of that bidder at the risk of the bidder. **If variation is noted between the information contained in the ElectronicForms[®] and the 'Main-Bid', the contents of the ElectronicForms[®] shall prevail.**

In case of any discrepancy between the values mentioned in figures and in words, the value mentioned in words will prevail.

The bidder shall make sure that the Pass-Phrase to decrypt the relevant Bid-Part is submitted into the ‘Time Locked Electronic Key Box (EKB)’ after the deadline of Bid Submission, and before the commencement of the Online TOE of Technical Bid. The process of submission of this Pass-Phrase in the ‘Time Locked Electronic Key Box’ is done in a secure manner by first encrypting this Pass-Phrase with the designated keys provided by SECI.

Additionally, the bidder shall make sure that the Pass-Phrase to decrypt the relevant Bid-Part is submitted to SECI in a sealed envelope before the start date and time of the Tender Opening Event (TOE).

There is an additional protection with SSL Encryption during transit from the client-end computer of a Supplier organization to the e-Tendering Server/ Portal.

OTHER INSTRUCTIONS

For further instructions, the vendor should visit the home-page of the portal <https://www.bharat-electronictender.com>, and go to the **User-Guidance Center**

The help information provided through ‘ETS User-Guidance Center’ is available in three categories – Users intending to Register/ First-Time Users, Logged-in users of Buyer organizations, and Logged-in users of Supplier organizations. Various links (including links for User Manuals) are provided under each of the three categories.

Important Note: It is strongly recommended that all authorized users of Supplier organizations should thoroughly peruse the information provided under the relevant links, and take appropriate action. This will prevent hiccups, and minimize teething problems during the use of ETS.

SEVEN CRITICAL DO’S AND DON’TS FOR BIDDERS

Specifically, for Supplier organizations, the following '**SEVEN KEY INSTRUCTIONS for BIDDERS**' must be assiduously adhered to:

1. Obtain individual Digital Signing Certificate (DSC or DC) of Class III well in advance of your tender submission deadline on ETS.
2. Register your organization on ETS well in advance of the important deadlines for your first tender on ETS viz ‘Date and Time of Closure of Procurement of Tender Documents’ and ‘Last Date and Time of Receipt of Bids’. Please note that even after acceptance of your registration by the Service Provider, to respond to a tender you will also require time to complete activities related to your organization, such as creation of -- Marketing Authority (MA) [ie a department within the Supplier/ Bidder Organization responsible for responding to tenders], users for one or more such MAs, assigning roles to them, etc. It is mandatory to create at least one MA. This unique feature of creating an MA enhances security and accountability within the Supplier/ Bidder Organization

3. Get your organization's concerned executives trained on ETS well in advance of your first tender submission deadline on ETS.
4. For responding to any particular tender, the tender (i.e. its Tender Search Code or TSC) has to be assigned to an MA. Further, an 'Official Copy of Tender Documents' should be procured/ downloaded before the expiry of Date and Time of Closure of Procurement of Tender Documents. Note: Official copy of Tender Documents is distinct from downloading 'Free Copy of Tender Documents'. Official copy of Tender Documents is the equivalent of procuring physical copy of Tender Documents with official receipt in the paper-based manual tendering system.
5. Submit your bids well in advance of tender submission deadline on ETS (There could be last minute problems due to internet timeout, breakdown, etc.)
6. It is the responsibility of each bidder to remember and securely store the Pass-Phrase for each Bid-Part submitted by that bidder. The bidders are required to submit correct, valid and operative Pass-Phrase to decrypt either Technical Bid Part or Financial Bid Part in a separate sealed envelope before due date and time of submission of bid. In the event, the bids are not opened with the pass-phrase submitted by bidder, SECI may ask for re-submission/ clarification for correct pass-phrase. If bidder fails to submit correct pass-phrase immediately as requested by SECI, the Bid Processing Fee and Document Fee, if applicable, shall be forfeited and bid shall not be opened, and EMD shall be refunded. No request on this account shall be entertained by SECI.
7. ETS will make your bid available for opening during the Online Public Tender Opening Event (TOE) 'ONLY IF' the status pertaining Overall Bid-Submission is 'COMPLETE'. For the purpose of record, the bidder can generate and save a copy of 'Final Submission Receipt'. This receipt can be generated from 'Bid-Submission Overview Page' only if the status pertaining overall Bid-Submission' is 'COMPLETE'

NOTE:

While the first three instructions mentioned above are especially relevant to first-time users of ETS, the fourth, fifth, sixth and seventh instructions are relevant at all times.

This document Annexure-A (Technical Specification) supersedes the Annexure-A (Revised) uploaded along with amendment-01 to RfS on 17.02.2023

SPECIFICATION FOR SOLAR PHOTOVOLTAIC WATER PUMPING SYSTEMS

1. SCOPE

These specification covers design qualifications and performance specifications for Centrifugal Solar Photo Voltaic (SPV) Water Pumping Systems from 1HP (0.75kW) to 25 HP (18.75 kW) suitable for bore-well, open well, water reservoir, water stream, etc., and specifies the minimum standards to be followed under MNRE Schemes.

2. TERMINOLOGY

In addition to the terminology specified in IS 5120 and IEC 62253, the following shall also apply.

2.1 Static Water Depth — It is the depth of water level below the ground level when the pump is not in operation.

2.2 Draw-Down — It is the elevation difference between the depth of static water level and the consistent standing water level in the bore-well during the operation the of pump set.

2.3 Submergence — It is the minimum height of the water level after drawdown above the pump suction casing.

2.4 Manometric Suction Lift — Manometric suction lift is the vacuum gauge/suction manometer reading in the meter of the water column when the pump operates at suction lift.

2.5 Static Suction Lift —Suction lift/head is the vertical distance between sump water level and center of pump inlet.

2.6 Daily Water Output — It is the total water output on a clear sunny day with three times tracking of SPV modules, under the “Average Daily Solar Radiation” condition of 7.15 KWh / m² on the surface of SPV array (i.e., coplanar with the SPV Modules).

2.7 Wire to Water Efficiency — It is the combined system efficiency of SPV Module, Converter/Controller with Inbuilt MPPT mechanism, Motor-Pump set and piping.

2.8 SPV Pump Controller — Pump Controller converts the DC voltage of the SPV array into a suitable DC or AC, single or multi-phase power and may also include equipment for MPPT, remote monitoring, and protection devices.

2.9 Maximum Power Point Tracker (MPPT) — MPPT is an algorithm that is included in the pump controller used for extracting maximum available power from SPV array under a given condition. The voltage at which SPV array can produce maximum power is called 'maximum power point' voltage (or peak power voltage).

3. CONSTRUCTIONAL FEATURES

3.1 General

3.1.1 SPV Water Pumping System set uses the irradiance available through SPV array. The SPV array produces DC power, which can be utilized to drive a DC or an AC motor-pump set using pump controller.

3.2 A SPV Water Pumping system typically consists of:

3.2.1 *Motor Pump Set see 3.4.*

3.2.2 *SPV Pump Controller*

Specifications of Controller/Drive for Solar Water Pumping Systems

S.No	Requirement	Specifications
1.	<i>Controller Power Capacity to drive the Pump</i>	Controller Power Capacity should be at-least equal to Solar Panels Power Capacity (Wp), not Pump Capacity. Example: For 5HP pumps, the pump capacity will be 3750W as per MNRE Specs, the solar panel capacity will be at-least 4800Wp the controller capacity should match the solar panel capacity.
2.	<i>Point Tracking (MMPT)</i>	Should track power only and not Voltage at Maximum power point.

3.	<i>Enclosure</i>	The Controller with RMS must have IP65 protection.
4.	<i>Isolator Switch</i>	Should be between Solar panels and the controller.
5.	<i>RMS (GSM/GPRS connectivity)</i>	Controller shall be integrated with Remote Monitoring System with GSM/GPRS and Geo tagging. GSM/ GPRS Charges are to be included in the Costing till the end the of the Warranty period of the Motor-Pump set.
6.	Controller display/screen	The various parameters should be present on the SPV Pump Controller display/screen such as:- Pump On/Off status, Array Input DC Voltage, DC/AC output Current & voltage, operating frequency, Latest RMS Latitude, Latest RMS Longitude, Pump Capacity (HP), PV Module Capacity (KW), Pump Status, Current Generation (kW), Today Solar Generation (kWh), Cumulative Solar Generation (kWh), Today Runs Hours (Hrs.), Cumulative Pump Run Hours (Hrs.), Cumulative Water Discharged (Litres), Total Water Discharged (Litres), Peak Power (kW) supplied by the controller to Motor-Pump Set.

3.2.3. Provision for remote monitoring unit for the pumps shall be made in the pump controller using GSM/GPRS Gateway with Geo tagging and through an internal/external arrangement having following basic functions:

- a) Controller shall be assigned with a unique serial number and its live status shall be observed remotely on online portal through login credentials;
- b) Live status shall indicate whether controller is ON/OFF
- c) The parameter that is, the water output, water flow rate(calculated based on parameters),in fault condition; array input voltage/current and power shall be logged at an interval of 10min; and
- d) Controller shall have a back up to store the data locally(at least for 1 year)

3.2.3.1 Remote Monitoring System (RMS)

The detailed Specification of RMS is attached at Annexure I.

3.3 Solar Photo Voltaic (SPV) Array

3.3.1 SPV array contains specified number of same capacity, type and specifications modules connected in series or parallel to obtain the required voltage or current output. The SPV water pumping system should be operated with a SPV array of minimum capacity in the range of **900 Wp to 22500Wp**, measured under Standard Test Conditions (STC). A Sufficient number of modules in series and parallel could be used to obtain the required voltage or current output. The

power output of individual SPV modules used in the SPV array, under STC, should be a minimum of **300 Wp**, with adequate provision for tolerances measurement. Use of SPV modules with higher power output is preferred.

3.3.2 Modules supplied with the SPV water pumping systems shall have a certificate as per IS 14286/IEC 61215 specifications or equivalent National or International /Standards. STC performance data supplied with the modules shall not be more than one year old.

3.3.3 Modules must qualify to IS/IEC 61730 Part I and II for safety qualification testing.

3.3.4 The minimum module efficiency should be minimum 19 percent and fill factor shall be more than 75 percent.

3.3.5 Modules must qualify to IS 170210 (Part 1) for the detection of potential-induced degradation - Part 1: Crystalline silicon (Mandatory in case the SPV array Open Circuit voltage is more than 600 V DC)

3.3.6 In case the SPV water pumping systems are intended for use in coastal areas the solar modules must qualify to IEC/ IS 61701 for salt mist corrosion test.

3.3.7 The name plate of SPV module shall conform to IS 14286/IEC 61215.

3.3.8 Module to Module wattage mismatch in the SPV array shall be within ± 3 percent.

3.3.9 Any array capacity above the minimum array wattage requirement as specified in these specifications for various models of SPV Water Pumping Systems is allowed.

3.3.10 The SPV modules must be warranted for output wattage, which should not be less than 90% of the rated wattage at the end of 10 years and 80% of the rated wattage at the end of 25 years.

3.3.11 The RFID tag shall be placed inside the glass laminate of the SPV modules.

3.4 Motor-Pump Set

3.4.1 The SPV water pumping systems may use any of the following types of motor pump sets:

- a) Surface Mono-set.
- b) Submersible motor-pump set.
- c) Any other type of the motor-pump set after approval from Ministry.

3.4.2 Motor

The motors of the motor-pump set may be of the following types: -

- a) AC Induction Motor.
- b) DC Motor, PMSM/ SRM.

3.4.3 The “Motor-Pump Set” should have a capacity in the range of 1 HP (0.75 kW) to 25 HP (18.75kW) and should have the following features:

- a) The closed coupled or mono block DC/ AC centrifugal motor-pump set with appropriate mechanical seal(s) which ensures zero leakage.
- b) The motor of the capacity ranging from 0.75kW to 18.75kW shall be AC/DC. The suction and delivery head will depend on the site-specific condition of the field; and
- c) Submersible pumps could also be used according to the dynamic head of the site at which the pump is to be used.

3.4.4 The pump and all external parts of the motor used in the submersible pump which are in contact with water, should be of stainless steel of grade 304 or higher as per IS 6911 and IS 3444. The motor pump set shall have 60 months guarantee and therefore, it is essential that the construction of the motor and pump shall be made using parts which have a much higher durability and do not need replacement or corrode for at least 60 months of operation after installation. Further for submersible pumps used in coastal areas or bores with higher salinity, stainless steel of grade 316 or a higher grade may be used.

3.4.5 The suction/ delivery pipe shall be of HDPE or uPVC column pipes of appropriate size, electric cables, floating assembly, civil work, and other fittings required to install the Motor-Pump set. In the case of HDPE pipes the minimum pressure rating of 8 kg/sqcm-PE100 grade for pump sets up to 3 HP, 10 kg/sqcm-PE100 grade for 5 HP pump set as per IS 10804 and further higher minimum pressure rating for above 5 HP as appropriate shall be used.

3.5 Module Mounting Structures and Tracking System

3.5.1 The SPV modules should be mounted on metallic structures of adequate strength and appropriate design, which can withstand the load of modules and high wind velocities up to 150 km per hour. The raw material used and the process for manufacturing of module mounting structure including welding of joints should conform to applicable IS 822. The module mounting structure should be hot dip galvanized according to IS 4759. Zinc content in working area of the hot dip galvanizing bath should not be less than 99.5% by mass.

3.5.2 To enhance the performance of SPV water pumping systems arrangement for seasonal tilt angle adjustment and three times manual tracking in a day shall be provided. In order to make structure rigid, the gap between Telescopic pattern supports should be minimal, further, for bearing of center load of whole structure only pins should be used instead of threaded bolts.

3.5.3 The general hardware for structure fitment should be either SS 304 or 8.8 grade as per IS 6911. Modules should be locked with antitheft bolts of SS 304 Grade. Foundation should be as per the site condition, based on the properties of soil. Foundation can be done either with the help of 'J Bolt' (refer to IS 5624 for foundation hardware) or direct piling, it should be decided as per the site and relevant IS i.e., IS 6403 /IS 456 /IS 4091 /IS 875 should be referred for foundation design.

3.5.4 Details of Module Mounting Structure (MMS) for pumps of capacity 1HP and above with SPV modules of the capacity around 350Wp are attached at Annexure-II. These are indicative of minimum standards and the vendors may install MMS with higher standards, which shall be certified by the recognized civil/mechanical/structural engineering department of any IIT/NIT or IISC. The format of the certificate is placed at Annexure-III.

3.5.5 In case of use of SPV Modules of capacity higher than that specified above, the size and weight of each SPV module will also increase. In such cases, the appropriate changes shall be made in the MMS design so that the stress on the individual structural members do not exceed the stress in the corresponding members in the MMS designs given in Annexure-II.

3.6 SPV Pump Controller

3.6.1 Maximum Power Point Tracker (MPPT) shall be included to optimally use the power available from the SPV array and maximize the water discharge.

3.6.2 The SPV Controller with RMS must have **IP65** protection.

3.6.3 Adequate protections shall be provided in the SPV Controller to protect the solar powered motor-pump set against the following:

- a) Dry running;
- b) Open circuit;
- c) Accidental Output short circuit;
- d) Under voltage;
- e) Reverse polarity; and
- f) Surge protection to arrest high current surge

3.6.4 A DC switch as per IS/IEC 60947-3 or DC circuit breakers as per IS/IEC 60947-2 suitable for switching dc power ON and OFF shall be provided in the SPV Pump Controller.

3.6.5 All cables used shall be as per IS 694 or IS 9968(Part 1). Suitable size of cable shall be used in sufficient length for inter-connection from the SPV array to SPV Controller and from the SPV Controller to solar powered motor-pump set. Selection of the cable shall be as per IS 14536.

3.6.6 The various parameters should be present on the SPV Pump Controller display/screen such as:- Pump On/Off status, Array Input DC Voltage, DC/AC output Current & voltage, operating frequency, Latest RMS Latitude, Latest RMS Longitude, Pump Capacity (HP), PV Module Capacity (KW), Pump Status, Current Generation (kW), Today Solar Generation (kWh), Cumulative Solar Generation (kWh), Today Runs Hours (Hrs.), Cumulative Pump Run Hours (Hrs.), Cumulative Water Discharged (Litres), Total Water Discharged (Litres), Peak Power (kW) supplied by the controller to Motor-Pump Set.

3.7 Protections

The system should be provided with all necessary protections like earthing, Lightning, and Surge Protection etc., as described below:

3.7.1 Earthing and Lightning Protection

- 1) The Earthing shall be done in accordance with the IS 3043 including its amendments and updated versions.
- 2) The Earthing system should be designed in such a way that it should be able to restrict the potential of each conductor according to the level of insulation applied and magnitude of the current conducted through human body should be less than the value that can cause ventricular fibrillation of heart.
- 3) Earth connections shall be done in such a way that they are visible for inspection and all the earth electrodes can easily be tested at any point of time.
- 4) It is recommended to keep the value of resistance of earth electrode less than 5 ohms.
- 5) All the materials, fittings etc. used for doing earthing shall conform to the Indian standard, wherever exists.
- 6) The actual value of soil resistivity should be considered while designing the earthing system at the site and for reference, selection criteria of the site, for any type of soil treatment to improve earth electrode resistance, etc. the IS 3043 shall be referred.
- 7) The electrode material should be selected according to the corrosivity of the soil in which it is used, for the relation between resistivity and corrosivity of the soil and method to safeguard the conductor against excessive corrosion, the IS 3043 shall be referred.

- 8) It is recommended for selection of type and installation of the earth electrode, the provisions of the IS 3043 should be considered. However, the pipe or rod-type earth electrode is preferable.
- 9) In case of the two-earth electrode or more, the separation among them should be twice the length of the electrode driven in the ground. Except in special conditions (for e.g.- where the soil is hard to dig out), a number of electrodes in parallel are to be preferred over a single long electrode.
- 10) The provisions given in the IS 3043 should be considered, while selecting or connecting the earthing/protective/grounding conductor from the components to the earth pit.
- 11) Separate earthing conductor shall be provided for the controller, motor-pump set and SPV array etc., for its connection to the earthing pit and it should be continuous in nature for electrical conductivity. However, even for the earthing of light current equipment (for example, high voltage testing equipment), the cross-sectional area of the earthing lead shall not be less than 6 mm².
- 12) For the maintenance of the earth electrode and measurement of the Earth electrode resistance the provisions of IS 3043 shall be referred.
- 13) Motor shall have suitable provision for earthing to facilitate earthing of the motor as per IS 3043 at the time of installation. In case GI pipes are used for the purpose of earthing the motor, an earthing connection may be made to the discharge pipe clamps. However, in case of HDPE/uPVC column pipes, a separate metallic cable from the motor to the control panel shall be provided for earthing purpose, and if a four-core cable is used, then the fourth core that is not connected to the terminals can be used for earthing.
- 14) Lightning protection shall be provided as per IEC 62305 and IEC 63227 standards including its amendments and updated versions.
- 15) An external lightning Rod, of height sufficient to meet the requirement of Lightning Protection System (LPS) designed to comply with the class III or higher (Class-I / Class-II), based on the site requirement including the area-specific lightning activity, shall be installed.
- 16) Arrangement and positioning of the separate air-termination systems (external lightning rod) can be determined using different methods given in the IEC 62305-3. While determining the position following points are to be considered such as: -
 - a) The structure to be protected is fully located within the protected volume provided by the air-termination system.
 - b) There should be a separation distance between the air-termination system and SPV power supply system to prevent dangerous sparking against parts of the SPV power supply system in case of direct lightning. The separation distances determined in accordance with IEC 62305-3 & IEC 63227 shall preferably be maintained.
 - c) The possibility of the SPV modules being shadowed by air-termination systems shall be taken into account and distance from the SPV modules can be calculated using the IEC 63227.

- 17) A separate earth electrode is required for the dispersion of the lightning current into the ground with suitably low value of the earthing resistance i.e., less than 5 ohm. And the minimum length (l_1) of vertical earth electrodes for lightning protection level III or higher shall be determined according to the IEC 62305-3.
- 18) The cross-section of the metal sub-structures used for the connection of the lightning arrestor to the earth electrode should be no less than 16 mm^2 Cu or 25 mm^2 Al or GI of equivalent current carrying capacity should be used, which will also depend upon the class of the Lightning protection system.
- 19) The earth pits given with the SWPS {i.e., Earth pit(s) for the BoS system (other than LA) and Earth Pit for LA} should be made equipotentially bonded to each other.

3.7.2 Surge Protection Device

- 1) For SPDs IEC 63227 and its updated versions or amendments should be followed.
- 2) At the DC Input side of the controller, it should have protection from an External Surge Protection Device of Type-2 or higher (i.e.Type-1) in accordance with the IEC 61643-31.
- 3) The rated voltage of SPDs on the DC side, depends on the type of protective circuit and the magnitude of the maximum operating voltage of the SPV modules.

3.8 Use of indigenous components

It will be mandatory to use indigenously manufactured SPV modules with indigenous mono/multi-crystalline silicon SPV cells. Further, the motor-pump-set, controller and balance of system should also be manufactured indigenously. The vendor has to declare the list of imported components used in the SPV water pumping system.

4 PERFORMANCE REQUIREMENTS

4.1 Under the “Average Daily Solar Radiation” condition of $7.15 \text{ kWh} / \text{sq.m.}$ on the surface of PV array (i.e., coplanar with the SPV modules), the minimum water output from a SPV Water Pumping System at different “Total Dynamic Heads” should be as specified below:

For D.C. Motor Pump Set:

- i) 110 liters of water per watt peak of PV array, from a Total Dynamic Head of 10 meters (Suction head, if applicable, minimum of 7 meters static suction lift corrected for atmospheric pressure and water temperature) and with the shut off head being at least 12 meters.
- ii) 55 liters of water per watt peak of PV array, from a Total Dynamic Head of 20 meters (Suction head, if applicable, minimum of 7-meters static suction lift corrected for

- atmospheric pressure and water temperature) and with the shut off head being at least 25 meters.
- iii) 38 liters of water per watt peak of PV array, from a Total Dynamic Head of 30 meters and the shut off head being at least 45 meters.
 - iv) 23 liters of water per watt peak of PV array, from a Total Dynamic Head of 50 meters and the shut off head being at least 70 meters.
 - v) 15 liters of water per watt peak of PV array, from a Total Dynamic Head of 70 meters and the shut off head being at least 100 meters.
 - vi) 10.5 liters of water per watt peak of PV array, from a Total Dynamic Head of 100 meters and the shut off head being at least 150 meters.
 - vii) 9.5 liters of water per watt peak of PV array, from a Total Dynamic Head of 120 meters and the shut off head being at least 180 meters.
 - viii) 7.5 liters of water per watt peak of PV array, from a Total Dynamic Head of 150 meters and the shut off head being at least 225 meters.
 - ix) 5.5 liters of water per watt peak of PV array, from a Total Dynamic Head of 200 meters and the shut off head being at least 300 meter.
 - x) 4.5 liters of water per watt peak of PV array, from a Total Dynamic Head of 250 meters and the shut off head being at least 375 meters.

The actual duration of pumping of water on a particular day and the quantity of water pumped could vary depending on the solar intensity, location, season, etc.

Indicative performance specifications for the Shallow and Deep well SPV Water Pumping Systems are attached at Annexure IV.

For A.C. Induction Motor Pump Set:

- i) 99 liters of water per watt peak of PV array, from a Total Dynamic Head of 10 meters (Suction head, if applicable, minimum of 7-meters static suction lift corrected for atmospheric pressure and water temperature) and with the shut off head being at least 12 meters.
- ii) 49 liters of water per watt peak of PV array, from a Total Dynamic Head of 20 meters (Suction head, if applicable, minimum of 7-meters static suction lift corrected for atmospheric pressure and water temperature) and with the shut off head being at least 25 meters.
- iii) 35 liters of water per watt peak of PV array, from a Total Dynamic Head of 30 meters and the shut off head being at least 45 meters.

- iv) 21 liters of water per watt peak of PV array, from a Total Dynamic Head of 50 meters and the shut off head being at least 70 meters.
- v) 14 liters of water per watt peak of PV array, from a Total Dynamic Head of 70 meters and the shut off head being at least 100 meters.
- vi) 9 liters of water per watt peak of PV array, from a Total Dynamic Head of 100 meters and the shut off head being at least 150 meters.
- vii) 8.5 liters of water per watt peak of PV array, from a Total Dynamic Head of 120 meters and the shut off head being at least 180 meters.
- viii) 6.7 liters of water per watt peak of PV array, from a Total Dynamic Head of 150 meters and the shut off head being at least 225 meters.
- ix) 5.0 liters of water per watt peak of PV array, from a Total Dynamic Head of 200 meters and the shut off head being at least 300 meters.
- x) 4.0 liters of water per watt peak of PV array, from a Total Dynamic Head of 250 meters and the shut off head being at least 375 meters.

The actual duration of pumping of water on a particular day and the quantity of water pumped could vary depending on the solar intensity, location, season, etc.

Indicative performance specifications for the Shallow and Deep well SPV Water Pumping Systems are attached at Annexure V.

5 TESTS FOR HYDRAULIC AND ELECTRICAL PERFORMANCE OF PUMPSET

5.1 The AC motor-pump set shall be tested independently for hydraulic and electrical performance as per the relevant IS specification including the following test

- a) Constructional requirements/features
- b) General requirements
- c) Design features
- d) Insulation resistance test
- e) High voltage test
- f) Leakage current test

In case of the DC motor-pump set for (a), (b), (c) declaration will be given by the vendor and for (d), (e), (f) the relevant clause of IS 9283:2013 will be followed for testing until BIS notifies the Standard about it. Once the Standard gets released, then it will be effective for DC motor-pump set from its Date of notification.

5.2 Testing of SPV Water Pumping System shall be done as per the procedure specified by the MNRE.

6 GUARANTEE OF PERFORMANCE

6.1 The SPV Water Pumping Systems shall be guaranteed for their performance of the nominal volume rate of flow and the nominal head at the guaranteed duty point as specified in 4.1 under the “Average Daily Solar Radiation” condition of 7.15 kWh/m^2 on the surface of SPV array (i.e., coplanar with the SPV modules. The actual duration of pumping of water on a particular day and the quantity of water pumped could vary depending on the solar intensity, location, season, etc.

6.2 Solar Photo Voltaic Water Pumping Systems shall be guaranteed by the manufacturer against the defects in material and workmanship under normal use and service for a period of at least 60 months from the date of commissioning.

6.3 Sufficient spares for trouble free operation during the guarantee period should be made available as and when required.

7 MARKING AND PARAMETERS TO BE DECLARED BY THE MANUFACTURER

7.1 The motor-pump set and Controller used in SPV Water Pumping Systems shall be securely marked with the following parameters declared by the manufacturer:

7.1.1 Motor-Pump set

- a) Manufacturer's name, logo or trade-mark;
- b) Model, size and SI No of pump-set (To be engraved/laser marked on the motor frame);
- c) Motor Rating (kW / HP);
- d) Total head (m), at the guaranteed duty point;
- e) Capacity (LPD) at guaranteed head;
- f) Operating head range (m);
- g) Maximum Current (A);
- j) Voltage Range (V) and;
- k) Type - AC or DC Motor-Pump set;
- l) Solar Photo Voltaic (SPV) Array Rating in Watts peak (W_p);&
- m) Country of origin.

Note: -In addition, a metal name plate containing the above details shall be fixed on the Module Mounting Structure for the information of user.

7.1.2 Controller

- a) Manufacturer's name, logo or trade-mark;

- b) Model Number;
- c) Serial Number;
- d) Voltage Range(V);
- e) Power Range (kW) for Controller;
- f) Current rating (A);&
- g) Country of origin.

8 OPERATION AND MAINTENANCE MANUAL

8.1 An Operation and Maintenance Manual, in English and the local language, should be provided with the solar PV water pumping system. The Manual should have information about solar energy, photovoltaic, modules, DC/AC motor-pump set, tracking system, mounting structures, electronics and switches. It should also have clear instructions about mounting of PV module, DO's and DONT's and on regular maintenance and Trouble Shooting of the pumping system. Helpline number, Name and address of the Service Centre and contact number of authorized representative to be contacted in case of failure or complaint should also be provided. A guarantee card for the modules and the motor pump set should also be provided to the beneficiary.

9 COMPREHENSIVE OPERATION AND MAINTENANCE

- i. The Contractor should provide 5 years comprehensive maintenance of the Solar Photovoltaic Water pumping system, which shall include corrective maintenance as well as routine service visits during CMC period.
- ii. CMC shall be in line with scheme guidelines and its amendment (if any). Apart from the monitoring, regular periodical maintenance of system has to be done. The report has to be maintained in a prescribed format containing Month, Inspection Date, Action taken against the Defects found in the System and along with signatures of both service Engineer and the farmer/ beneficiary. Maintenance report in digital form to be sent to Scheme implementing agency (SIA) and also uploaded on the portal of SIA whenever such portal or mobile app is made available.
- iii. The deputed personnel shall be in a position to check and test all the equipment regularly, so that preventive actions, if any, could be taken well in advance to save any equipment from damage.

- iv. Normal and preventive maintenance of the Solar Photovoltaic Water pumping systems such as cleaning of module surface, tightening of all electrical connections, changing of tilt angle of module mounting structure, cleaning & greasing of motor pump sets, changing filters etc. are also the duties of the deputed personnel during maintenance visits.
- v. During the operation and maintenance period of the Solar Photovoltaic Water Pumping Systems, if there is any loss or damage of any component due to miss management or miss handling or due to any other reasons pertaining to the deputed personnel by empaneled vendor, what-so-ever, the supplier shall be responsible for immediate replacement or rectification. The damaged component may be repaired or replaced by a new component.
- vi. The maintenance shall include replacement of any component irrespective of whether the defect was a manufacturing defect or due to wear and tear.

LIST OF REFERRED INDIAN STANDARDS

456:2000	Plain and reinforced concrete - Code of practice (Fourth Revision)
811:1987	Specification for cold formed light gauge structural steel sections (Second Revision)
822:1970	Code of procedure for inspection of welds
IS 875: Part 1: 1987	Code of practice for design loads (Other Than Earthquake) for buildings and structures: Part 1 dead loads - Unit weights of building materials and stored materials (Second Revision)
694:2010	Polyvinyl Chloride Insulated Unsheathed--And Sheathed Cables/cords With Rigid And-Flexible Conductor for Rated Voltages-Up To And Including 450/750 V
1079:2017	Hot rolled carbon steel sheet, plate and strip - Specification (Seventh Revision)
1161:2014	Steel tubes for structural purposes - Specification (Fifth Revision)
1239 (Part 1):2004	Steel tubes, tubulars and other wrought steel fittings - Specification: Part 1 steel tubes (Sixth Revision)
2062:2011	Hot rolled medium and high tensile structural steel - Specification (Seventh Revision)
2629:1985	Recommended practice for hot-dip galvanizing of iron and steel (First Revision)
2633:1986	Method for testing uniformity of coating on zinc coated articles (Second Revision)
3043:2018	Code of Practice for Earthing
3444:1999	Corrosion resistant high alloy steel and nickle base castings for general applications-Specification
4091:1979	Code of practice for design and construction of foundations for transmission line towers and poles (First Revision)
4759:1996	Hot - Dip zinc coatings on structural steel and other allied products - Specification (Third Revision)
5120:1977	Technical requirements for rotodynamic special purpose pumps (First revision)
5624:2021	Foundation bolts - Specification (First Revision)
6403:1981	Code of practice for determination of bearing capacity of shallow foundations
6745:1972	Methods for determination of mass of zinc coating on zinc coated iron and steel articles
6911:2017	Stainless steel plate, sheet and strip-Specification
7215:1974	Tolerances for fabrication of steel structures
8034:2018	Submersible pump sets - Specification (third revision)
9079:2018	Monoset pumps for clear, cold water for agricultural and water supply purposes - Specification (third revision)
9283:2013	Motors for submersible pump sets
9968 (Part 1):1988	Specification for elastomer insulated cables: Part 1 for working voltages up to and including 1100 volts (First Revision)

10804(Part 1):2018	Recommended pumping systems for agricultural purposes: Part 1 Surface pumps
10804(Part 2):2018	Recommended pumping systems for agricultural purposes: Part 2 Submersible pump set
14220:2018	Open well submersible pump sets - Specification (first revision)
14536:2018	Selection, installation, operation and maintenance of submersible pumpset - Code of practice (First Revision)
IS/IEC61701: 2011	Salt mist corrosion testing of photovoltaic (PV) modules First Revision
IS 17210 (Part 1):	Photovoltaic (PV) Modules — Test Methods for the Detection of Potential-Induced Degradation Part 1 Crystalline Silicon
IS/IEC 60034-1:2004	Rotating Electrical Machines — Part 1 Rating and Performance
IS/IEC 61683:1999	Photovoltaic System-Power Conditioners — Procedure for Measuring Efficiency
IEC 62253:2011	Photovoltaic Pumping Systems – Design qualification and performance measurements
IS 14286: 2010 /IEC 61215 : 2005	Crystalline Silicon Terrestrial Photovoltaic (Photo Voltaic (PV)) modules - Design Qualification and Type Approval (First Revision)
17429:2020	Solar Photovoltaic water pumping systems-Testing procedure
IS/IEC 61730-1: 2016	Photovoltaic (PV) Module Safety Qualification Part 1 Requirements for Construction
IS/IEC 61730-2: 2019	Photovoltaic (PV) Module Safety Qualification Part 2 Requirements for Testing
IEC 60068-2-6:2007	Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)
IEC 60068-2-30:2005	Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 + 12h cycle)
IEC 62305-1/2/3/4	Lightning Protection
IEC 63227	Lightning and Surge Voltage Protection for photovoltaic (PV) power supply systems
IEC 61643-31	Low-voltage surge protective devices
IS/IEC 60947: PART 1: 2007	Low - Voltage switchgear and control gear: Part 1 general rules (First Revision)

Note:- The latest editions of the indicated standards shall be considered.

Specifications for Remote Monitoring System (RMS)

The Remote Monitoring System shall be capable of providing and handling the following:

- a. Solar System Performance: DC Voltage, DC current, AC output Current, Power, Drive frequency, Energy, etc.
- b. Pump Performance: Running Hours, Water Discharge (Output), etc.
- c. RMS Performance: % of Device Connectivity, % of Data Availability, etc.
- d. Geo Location: Real time latitude and longitude should be captured with an accuracy of less than 10m horizontal.
This is required to ensure that system is not moved from its original location.
- e. Events and Notifications: Faults related to Pump Operation, Solar generation, Controller/Drive faults like overload, dry run, short circuit, etc.
- f. Consumer Management: Name, Agriculture details, Service No. Contact Details, etc.
- g. Asset Management: Ratings, Serial Number, Make, Model Number of Pump, SPV Module and Controller, Geo Location, IMEI number (of communication module) and ICCID (of SIM).
- h. Complaint and Ticket Management: Complaint management system is a part of centralized monitoring software platform.
- i. Consumer Mobile Application: Generation, Running Hours, Water Discharge, Complaint logging, etc.

Communication Architecture of the RMS should be as mentioned below:

a. Communication Connectivity:

- i. **Pump Controller Connectivity:** Communication between RMS and Pump Controller should be on UART/RS485 MODBUS RTU protocol to ensure interoperability irrespective of make and manufacturer.
- ii. **Remote Connectivity:** RMS of SWPS should use GSM/GPRS/2G/3G/4G cellular connectivity.
- iii. **Local Connectivity:** Ethernet/Bluetooth/Wi-Fi connectivity to configure parameters, notifications, communication interval, set points etc. or to retrieve locally stored data
- iv. **Sensor Connectivity:** RMS should have provision for at least two Analog and Digital inputs with 0.1% accuracy to address the requirement of local sensors connectivity if required by SIA/Consumer for applications such as irradiation, flow meter for water discharge, moisture sensor for micro-irrigation, etc.

As mentioned in specifications, Analog and digital sensor inputs will be required for integration of flow meter for water discharge, moisture sensor for micro irrigation, level sensor for overhead tank

water storage etc. Only provision for Analog and digital inputs with 0.1% accuracy of Full-Scale Range is required. Sensors will not be in scope of bidder.

- v. RMS should have provision to give various modes of operations which are as follows:
 - i. Remote Mode: - Pump can be made ON/Off using the Mobile App or in case, farmer do not have a smart phone, farmer shall be able to on-off pump through SMS/missed call.
 - ii. Auto Mode: - Pump can ON/Off automatically using the sensor data which are installed in the field by the beneficiary. (Cost of sensors will be worn by the beneficiary)
 - iii. Timer Mode: - Pump controller shall operate pump as per configured schedule using mobile application i.e.,daily start time and running hours of pump.
 - iv. Manual Mode: - Pump can be made to run into manual mode from field.

To save ground water, provision for remote operation is required so that farmer can switch on and off remotely.

b. Communication Modes:

- i. Push Data on Event/Notification: such as pump on, pump off, protection operated, etc.
- ii. Push Data Periodically: important parameters of solar pump (as mentioned above) should be pushed to central server on a configurable interval.
Default interval should be of 15 minutes. However, if required, it should be possible to configure the periodic interval in multiples of 1 minute starting from 1 minute and up to 15 minutes. Further, in case of any abnormalities or events, RMS should push on event immediately.
- iii. Command on Demand: It should be possible to send commands via GSM or GPRS to RMS either to control pump operations or to update configuration.

c. Communication Protocol: RMS should provide data on MQTT protocol to establish communication with thousands of system.

d. Security:

- i. Communication between RMS and Server should be secured and encrypted using TLS/SSL/X.509 certificate etc.

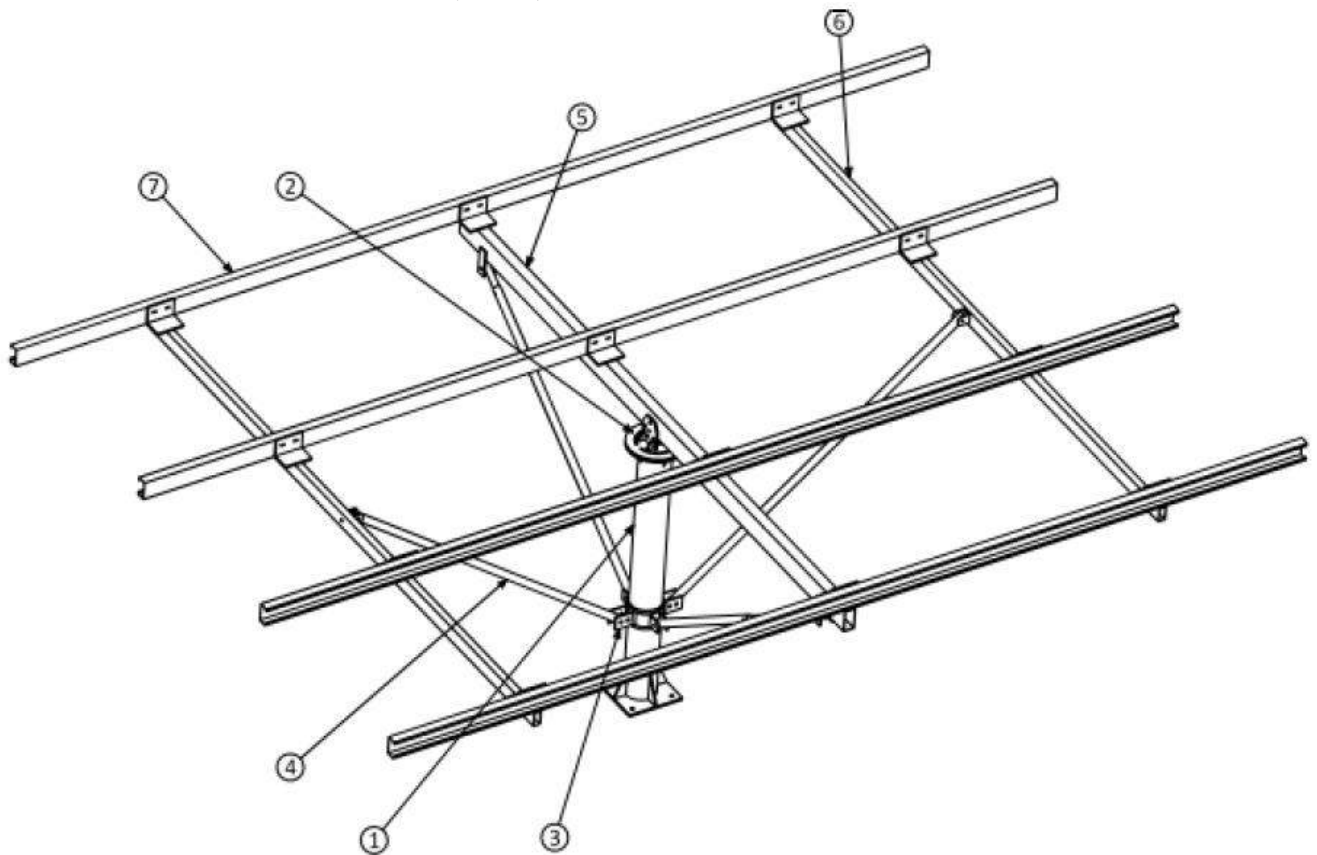
- ii. As a part of IoT protocol, Authentication and Authorization should be implemented using a token/password mechanism
- e. **Message Format:** RMS should provide data in a JSON message format as per requirement of implementing agency.
- f. **Data Storage:** In case of unavailability of cellular network, RMS should store data locally and on availability of network it should push data to the central Server. Local data storage should be possible for one year in case of unavailability of a cellular network. RMUs should have configuration updates over the Air of multiple parameters such as IP, APN, Data logging Interval, Set Points etc. is essential. Software updating should be possible with 2G and even without the presence of SD card. Software updating process and/or failure to update software shouldn't disrupt pumping operations.

RMS should be connected to the Solar Energy Data Management Platform of the implementing Agency.

- g. RMUs should have configuration updates over the Air of multiple parameters such as IP, APN, Data logging Interval, Set Points etc. is essential. Software to be updated through "Programming over the air" on SIA server. Software updating process and/or failure to update software shouldn't disrupt pumping operations.

Manufacturer should consider Programming Over the Air (POTA) instead of Firmware Over the Air (FOTA) to update configurable parameters such as server IP, URL, Port, APN, Periodic Interval etc.

SPECIFICATIONS FOR DUAL AXIS MANUAL TRACKING TYPE MODULE MOUNTING STRUCTURE (MMS) FOR SPV WATER PUMPING SYSTEM



Main Parts of MMS for Solar Water Pumping System		
<i>Sl No.</i>	<i>Part Name</i>	<i>Qty./Set</i>
1	Main Column	1
2	Top Plate	1
3	Clamp with blade	2
4	Supporting pipe	6/8
5	Main tube	1
6	Side tube	2
7	Mounting purlin	4

For hot dip galvanizing of fabricated structure following shall be referred:

- a) Minimum coating required shall be as per IS 4759;
- b) Preece test (CuSO₄ Dip test) as per IS 2633;
- c) Mass of zinc (IS 6745 or IS 4759); and
- d) Adhesion test (IS 2629).

B-1 STANDARD MMS FOR 4, 6, 8 AND 10 SOLAR MODULES HAVE BEEN SPECIFIED. THESE STANDARD MMS MAY BE USED IN COMBINATIONS FOR DIFFERENT CAPACITIES OF SOLAR WATER PUMPING SYSTEMS AS FOLLOWS

- a) Standard MMS of 4 modules for 1 HP;
- b) Standard MMS of 6 modules for 2 HP;
- c) Standard MMS of 10 modules or combination of standard MMS of 4 Modules and standard MMS 6 Modules for 3 HP;
- d) Combination of two standard MMS of 8 modules or combination of standard MMS of 10 modules and standard MMS 6 modules for 5 HP; and
- e) Combination of three standard MMS of 8 modules or combination of two standard MMS of 10 Modules and one standard MMS 6 modules for 7.5 HP and so on.



4 MODULE MMS



6 MODULE MMS



8 MODULE MMS



10 MODULE MMS

B-2 SPECIFICATIONS OF MAIN PARTS USED IN MMS ARE GIVEN BELOW

B-2.1 Centre Shaft

Centre shaft used in structure shall be of:

- a) *For 4, 6 and 8 Modules Structure* —Minimum 139 OD with minimum thickness of 4 mm with base plate minimum 10 mm thickness if used and foundation hardware shall be as per IS 5624.
- b) *For 10 Modules Structure* —Minimum 165 OD with minimum thickness of 4 mm with

base plate minimum 20 mm thickness if used and foundation hardware shall be as per IS 5624.

For system without base plate that is, direct piling is shall be as per the site condition based on the properties of Soil and refer (IS 6403/4091/875/456) for foundation design.

B-2.2 Rafters

The main and secondary rafter used in structure shall be of either SHS or RHS pipe sections.

B-2.3 Purlin

Mounting purlins used in the structure shall be made of cold form steel section as per IS 1079 with minimum thickness of 2mm.

B-2.4 Provision for Seasonal Tilt

In one structure at least four telescopic supports (three may be used in MMS for 4 modules) either round hollow sections or square hollow section to be provided to support the mounting structure.

B-2.5 Provision for Daily Tracking

Provision for daily tracking shall be provided by the way of providing minimum 8 mm thick metal sheet with precision cut grooves.

B-2.6 Module Locking System

Modules shall be locked with antitheft bolts of SS 304 Grade.

B-2.7 General Hardware for Structure Fitment

Either SS 304 or 8.8 grade hardware shall be used for fitment.

B-2.8 Hot Dip Galvanizing

All structure parts shall be hot dip galvanized according to IS 4759.

B-2.9 Tolerance for Fabrication

Tolerance for fabrication of steel structure shall as per IS 7215.

B-2.10 Welding

Welding shall be done as per IS 822 and grade of welding wire shall be (ER70S-6).

B-2.11 Raw Material Test Certificates (MTC)

MTC of all types of raw material used in dual axis manual tracking type MMS as per appropriate Indian Standard shall be submitted along with dispatch documents.

B-2.12 Tests to be performed on dual axis manual tracking type MMS for solar water pumping system.

B-2.12.1 For ascertaining proper welding of structure part following shall be referred:

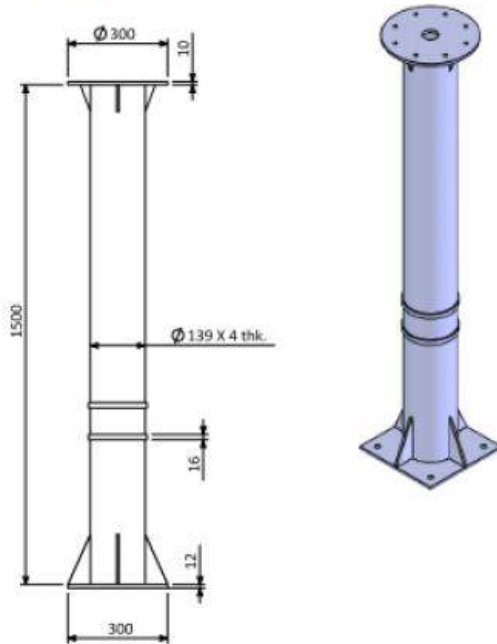
- a) Weld wire grade shall be of grade (ER 70 S-6); and
- b) D.P. test (pin hole/crack) (IS 822).

B-2.12.2 For ascertaining hot dip galvanizing of fabricated structure following shall be referred:

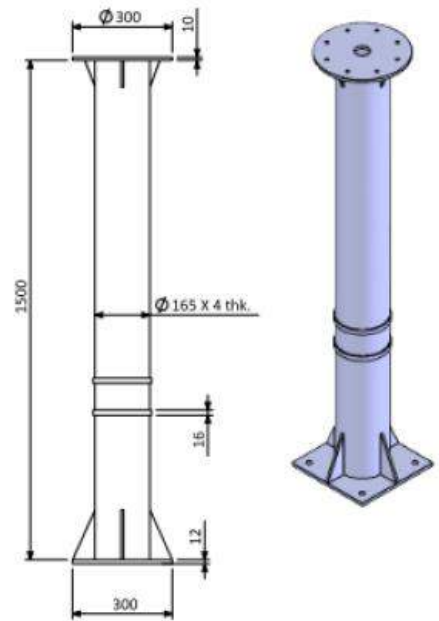
- a) Minimum coating required shall be as per IS 4759;
- b) Testing of galvanized material;
- c) Preece test (CuSO₄ dip test) (IS 2633);
- d) Mass of zinc (IS 6745 or IS 4759); and
- e) Adhesion test (IS 2629).

Part 1 Main Column

Common for 4, 6 and 8 MMS



For 10 MMS

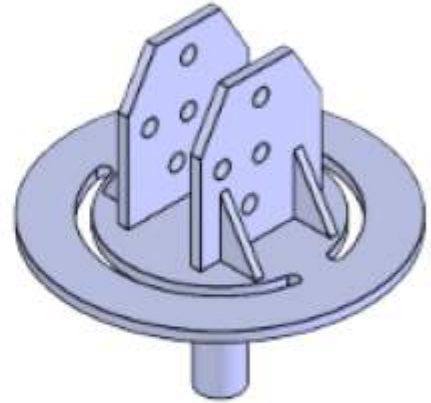
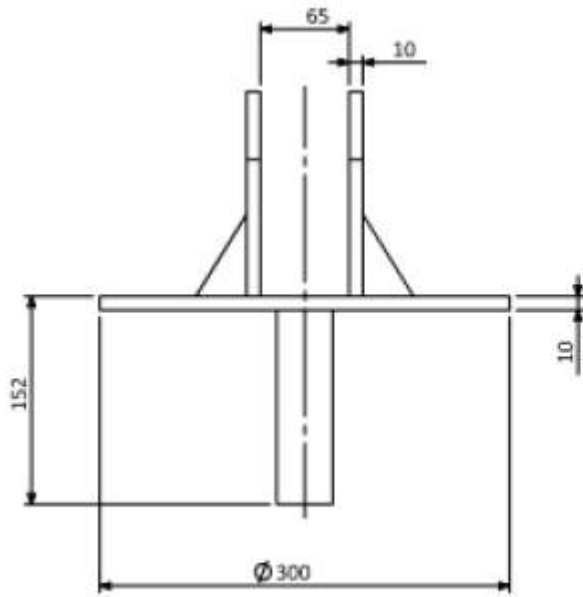


All dimensions are in mm.

Sl No.	Part Name	Cross Section Detail	Length (mm)	Quantity Per Set
1.	MAIN POLE			
	4, 6 and 8 Modules	139 OD	1500	1
	10 Modules	165 OD	1500	1

Part 2 Top Plate

Common for 4, 6, 8 and 10 MMS



All dimensions are in mm.

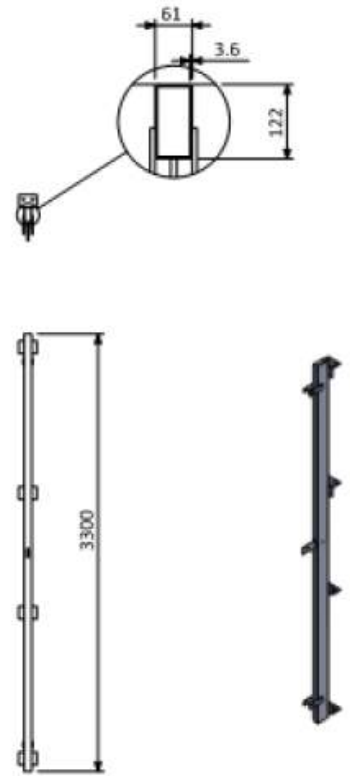
<i>Sl No.</i>	<i>Part Name</i>	<i>Cross Section Detail</i>	<i>Length (mm)</i>	<i>Quantity Per Set</i>
2.	TOP PLATE (Common for all)	300 OD	—	1

Part 3 Main Tube

Common for 4 and 6 MMS



Common for 8 and 10 MMS



All dimensions are in mm.

Sl No.	Part Name	Cross Section Detail	Length (mm)	Quantity Per Set
5.	MAINTUBE			
	4 and 6 Modules	60 × 60 × 3.6	3300	1
	8 and 10 Modules	112 × 61 × 3.6	3300	1

Part 4 Side Tube

Common for 4 and 6 MMS

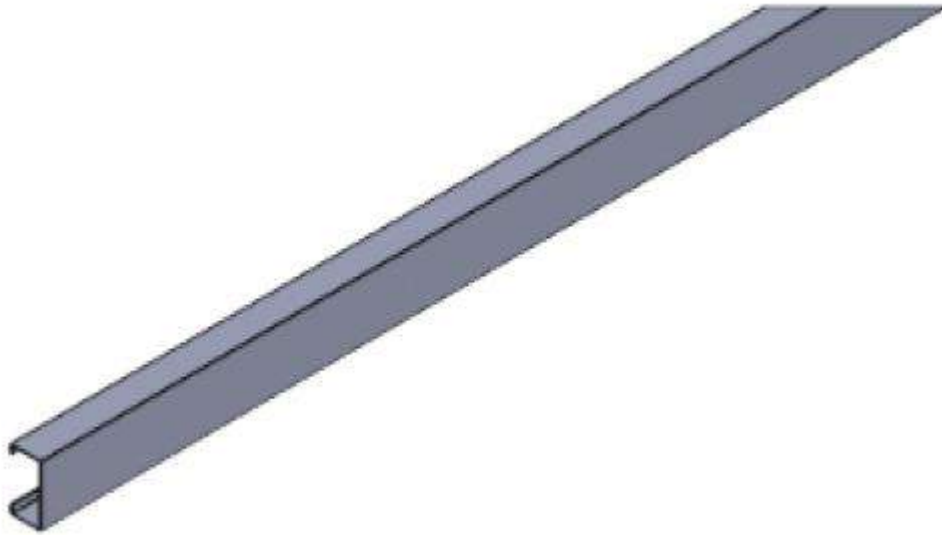
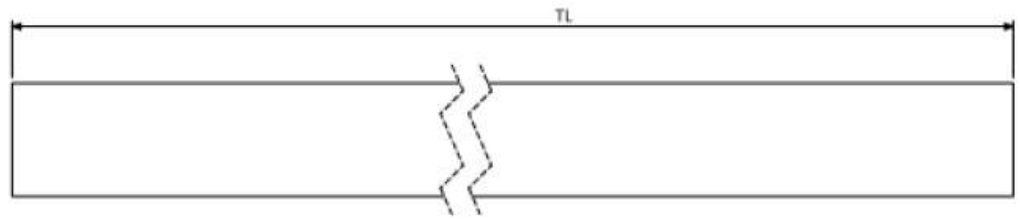
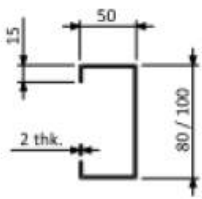


Common for 8 and 10 MMS



All dimensions are in mm.

Sl No.	Part Name	Cross Section Detail	Length (mm)	Quantity Per Set
6.	SIDE TUBE			
	4 and 6 Modules	50 × 50 × 3.6	3300	2
	8 and 10 Modules	80 × 40 × 3.2	3300	2

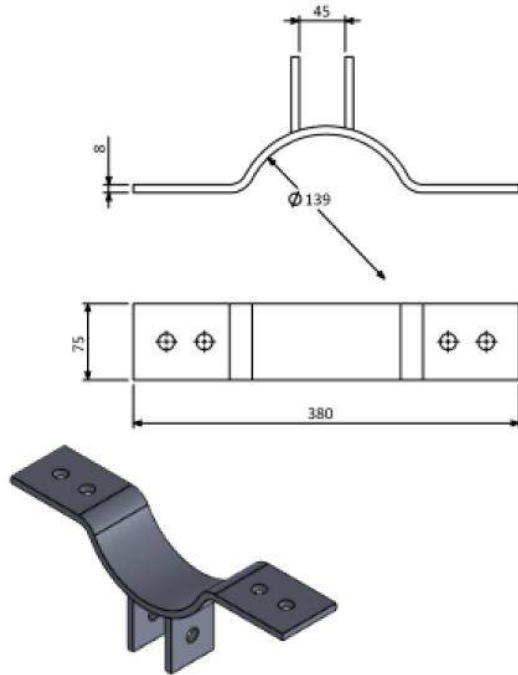
Part 5 Purlin

All dimensions are in mm.

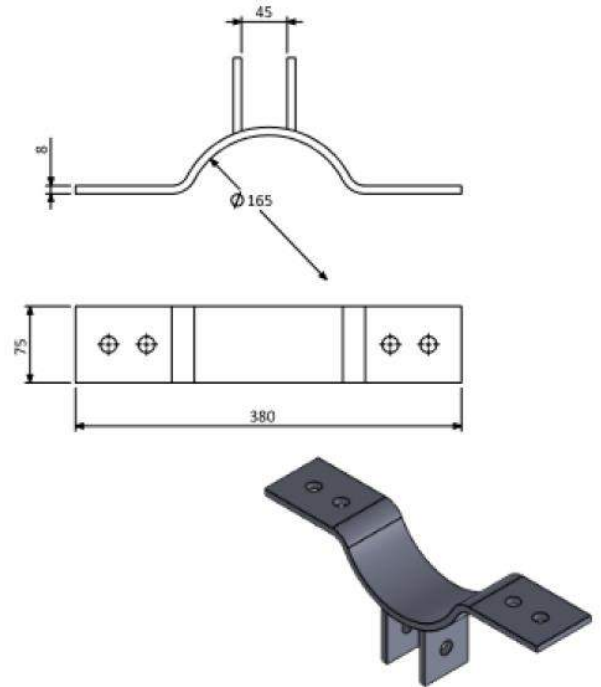
<i>Sl No.</i>	<i>Part Name</i>	<i>Cross Section Detail</i>	<i>Length (mm)</i>	<i>Quantity Per Set</i>
7.	MOUNTING PURLIN			
	4 Modules	80 × 50 × 15 × 2	2050	4
	6 Modules	80 × 50 × 15 × 2	3100	4
	8 Modules	80 × 50 × 15 × 2	4150	4
	10 Modules	100 × 50 × 15 × 2	5200	4

Part 6 Clamp with Blade

Common for 4, 6 and 8 MMS



For 10 MMS

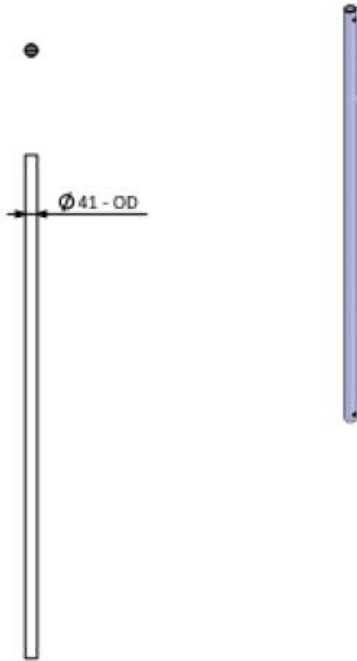


All dimensions are in mm.

Sl No.	Part Name	Cross Section Detail	Length(mm)	Quantity Per Set
3.	CLAMP WITH BLADE			
	4, 6 and 8 Modules (For 139 OD Pole)	75 × 8	380	2
	10 Modules (For 165 OD Pole)	75 × 8	380	2

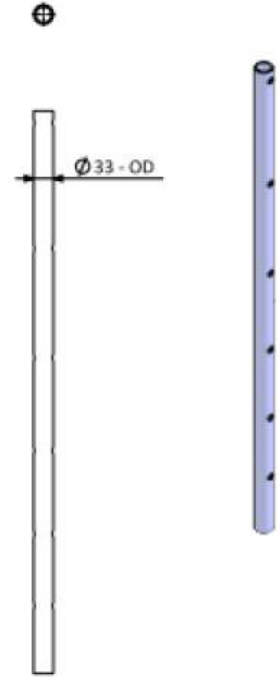
Part 7 Supporting Pipes

4A) Supporting Pipe - 4 Nos./Set
Common for 4, 6, 8 and 10 MMS



All dimensions are in mm.

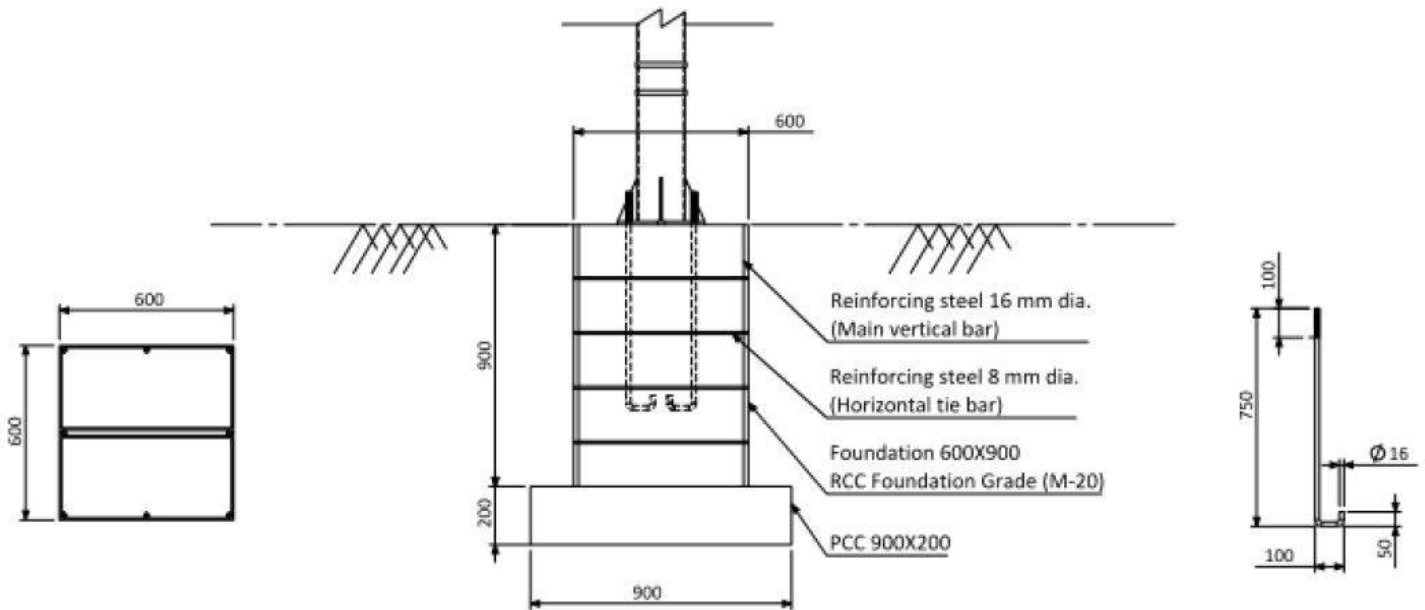
4B) Supporting Pipe - 2 Nos./Set
Common for 4, 6, 8 and 10 MMS



Main-Parts of MMS for SPV Water Pumping System

<i>Sl No.</i>	<i>Part Name</i>	<i>Cross Section Detail</i>	<i>Length (mm)</i>	<i>Quantity Per Set</i>	<i>Material Grade</i>
1.	MAIN COLOUMN				
	4, 6 and 8 Modules	139 OD	1500	1	YST – 240 as per IS 1161/IS 1239 and E250 as per IS 1079/IS 2062
	10 Modules	165 OD	1500	1	
2.	TOP PLATE (Common for all)				
	—	300 OD	—	1	YST – 240 as per IS 1161/IS 1239 and E250 as per IS 1079/IS 2062
3.	MAIN TUBE				
	4 and 6 Modules	60×60×3.6	3300	1	YST – 240 as per IS 1161/IS 1239 and E250 as per IS 1079/IS 2062
	8 and 10 Modules	122×61×3.6	3300	1	
4.	SIDE TUBE				
	4 and 6 Modules	50×50×3.6	3300	2	YST – 240 as per IS 1161/IS 1239 and E250 as per IS 1079/IS 2062
	8 and 10Modules	80×40×3.2	3300	2	
5.	MOUNTING PURLIN				
	4 Modules	80×50×15×2	2050	4	E250 as per IS 1079/IS 2062 and IS 811
	6 Modules	80×50×15×2	3100	4	
	8 Modules	80×50×15×2	4150	4	
	10 Modules	100×50×15×2	5200	4	
6.	CLAMP WITH BLADE				
	4, 6 and 8 Modules (for 139 OD pole)	75×8	380	2	As per IS 1079 and E250 as per IS 2062
	10 Modules(for 165 OD pole)	75×8	380	2	
7.	SUPPORTING PIPES				
	4, 6 and 8 Modules	41 OD and 33 OD	—	6	YST – 240 as per IS 1161/IS 1239 and E250 as per IS 1079/IS 2062
	10 Modules	41 OD and 33 OD	—	8	

Foundation Design for 4 and 6 MMS

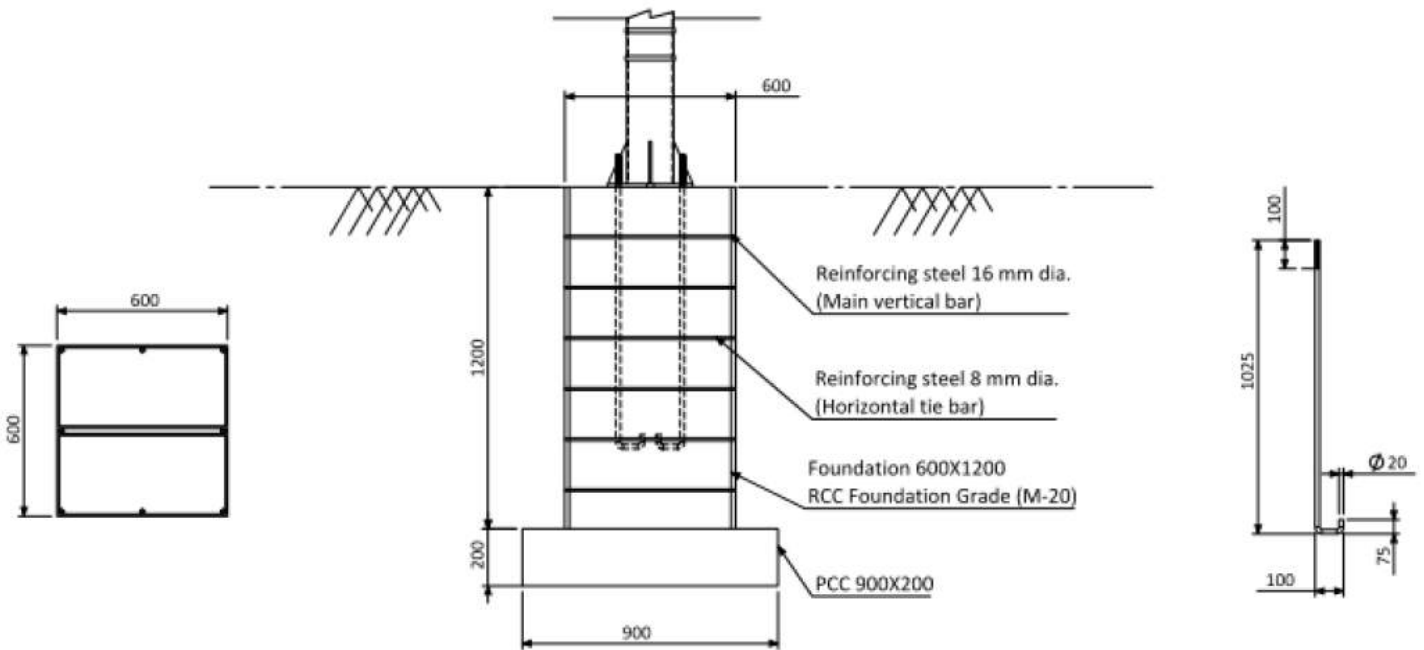


All dimensions are in mm.

BOM For Steel				
<i>TMT Bar</i> (mm)	<i>Length</i> (mm)	<i>Unit Weight</i> (kg)	<i>Quantity</i> (Pcs.)	<i>Total Weight</i> (kg)
16	1000	1.578	8	12.6
8	2400	0.950	4	3.8
8	1250	0.500	4	2

BOM For RCC and PCC				
<i>Block</i>	<i>Width</i> (m)	<i>Length</i> (m)	<i>Height</i> (m)	<i>Volume</i> (m ³)
RCC Column	0.600	0.600	0.900	0.324
PCC	0.900	0.900	0.200	0.162

Foundation Design for 8 MMS

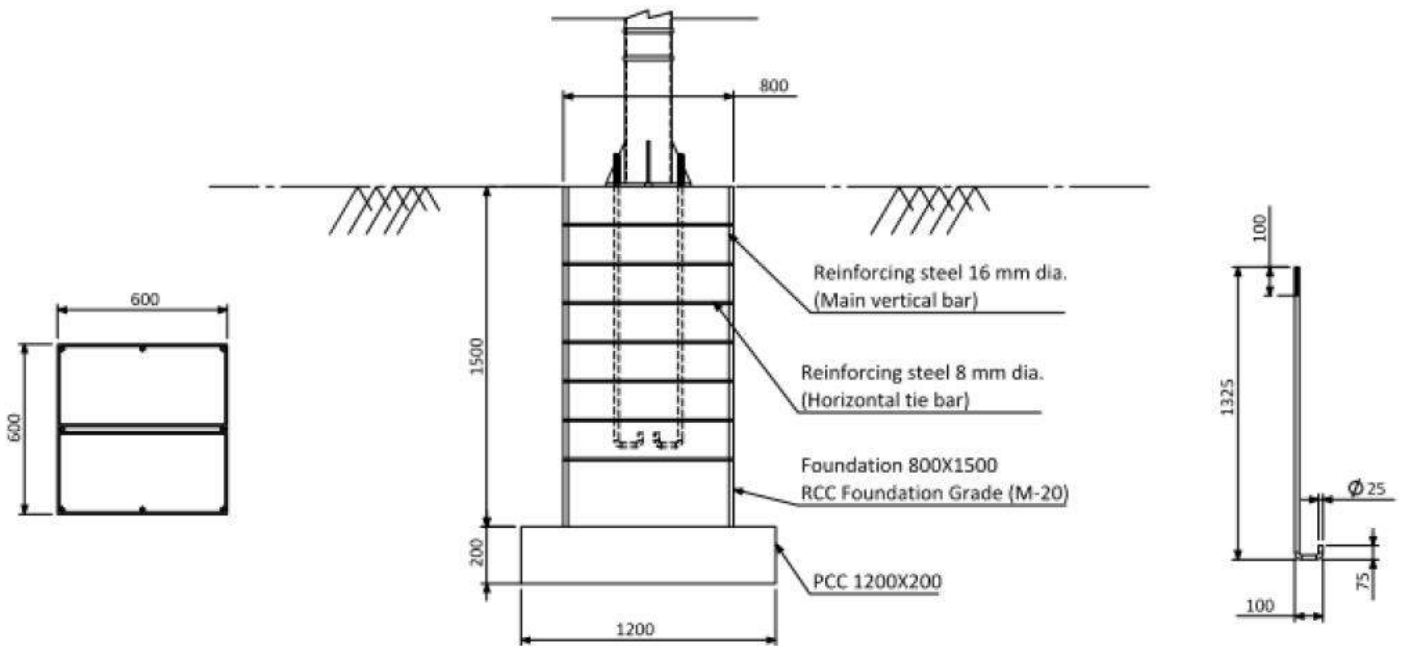


All dimensions are in mm.

BOM For Steel				
<i>TMT Bar</i> (mm)	<i>TMT Bar</i> (mm)	<i>TMT Bar</i> (mm)	<i>TMT Bar</i> (mm)	<i>TMT Bar</i> (mm)
16	1300	2.050	8	16.4
8	2400	0.950	6	5.7
8	1250	0.500	6	3

BOM For RCC and PCC				
<i>Block</i>	<i>Width</i> (m)	<i>Length</i> (m)	<i>Height</i> (m)	<i>Volume</i> (m ³)
RCC Column	0.600	0.600	1.200	0.432
PCC	0.900	0.900	0.200	0.162

Foundation Design for 10 MMS



All dimensions are in mm.

BOM For Steel

<i>TMT Bar</i> (mm)	<i>TMT Bar</i> (mm)	<i>TMT Bar</i> (mm)	<i>TMT Bar</i> (mm)	<i>TMT Bar</i> (mm)
16	1800	2.500	8	20.0
8	3200	1.250	7	8.75
8	1650	0.650	7	4.55

BOM For RCC and PCC

<i>Block</i>	<i>Width</i> (m)	<i>Length</i> (m)	<i>Height</i> (m)	<i>Volume</i> (m ³)
RCC Column	0.800	0.800	1.500	0.960
PCC	1.200	1.200	0.200	0.288

Annexure-III**Format of Certificate by the Civil/Mechanical/Structural Engineering Department for MMS***(To be submitted on the letterhead of the Department/College)*

This is to certify that the MMS structure drawing along with the foundation(copy enclosed) supplied by.....(Vendor Name) is evaluated at our structural Engineering Department facility at.....(College Name) and it is found superior(in terms of the structural integrity/ load bearing capacity/ stress on the individual structural member) to the MMS structure along with foundation specified in the Specification of Solar Water Pumping System notified by the Ministry of New and Renewable Energy (MNRE) vide **F.No-41/3/2018-SPV Division dated 06.03.2023.**

The following are the changes when compared to the MNRE's MMS suggestive design: -

S.No.	According to the MNRE MMS	According to the vendor MMS

These are the following improvements in the MMS design submitted by the vendor over the MNRE's MMS suggestive design: -

- 1.
- 2.

Note:- The lab may attach drawings/calculations wherever needed

Signature of the head (Structural/ Mechanical/ Civil engineering department)

ANNEXURE – IV

Indicative Technical Specifications of Shallow Well (Surface) Solar Pumping Systems with D.C. Motor /PMSM/SRM

Description	Model-1	Model-2	Model-3	Model-4	Model-5	Model-6	Model-7	Model-8	Model-9	Model-10	Model-11	Model-12	Model-13
PV array (Wp)	900	1800	2700	2700	4800	4800	4800	6750	6750	6750	9000	9000	9000
Motor Pump-set capacity (HP)	1	2	3	3	5	5	5	7.5	7.5	7.5	10	10	10
Shut Off Dynamic Head (meters)	12	12	12	25	12	25	45	12	25	45	12	25	45
Water output * (Liters per day)	99000 (from a total head of 10 meters)	198000 (from a total head of 10 meters)	297000 (from a total head of 10 meters)	148500 (from a total head of 20 meters)	528000 (from a total head of 10 meters)	264000 (from a total head of 20 meters)	182400 (from a total head of 30 meters)	742500 (from a total head of 10 meters)	371250 (from a total head of 20 meters)	256500 (from a total head of 30 meters)	990000 (from a total head of 10 meters)	495000 (from a total head of 20 meters)	342000 (from a total head of 30 meters)

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the SPV modules).

Notes:

1. Suction head, if applicable, minimum of 7 meters static suction lift corrected for atmospheric pressure and water temperature.
2. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause 4 (i.e. Performance Requirements) specified earlier.
3. If submersible pumps are used in lieu of surface pumps, the water output must match that of the surface pumps as specified in this table.

ANNEXURE – IV (CONTD.)

Indicative Technical Specifications of Shallow Well (Surface) Pumping Systems with D.C. Motor /PMSM/SRM

Description	Model-14	Model-15	Model-16	Model-17	Model-18	Model-19	Model-20	Model-21	Model-22	Model-23	Model-24	Model-25	Model-26
PV array (Wp)	11250	11250	11250	11250	13500	13500	13500	13500	15750	15750	15750	18000	18000
Motor Pump-set capacity (HP)	12.5	12.5	12.5	12.5	15	15	15	15	17.5	17.5	17.5	20	20
Shut Off Dynamic Head (meters)	12	25	45	70	25	45	70	100	45	70	100	45	70
Water output * (Liters per day)	1237500 (from a total head of 10 meters)	618750 (from a total head of 20 meters)	427500 (from a total head of 30 meters)	258750 (from a total head of 50 meters)	742500 (from a total head of 20 meters)	513000 (from a total head of 30 meters)	310500 (from a total head of 50 meters)	202500 (from a total head of 70 meters)	598500 (from a total head of 30 meters)	362250 (from a total head of 50 meters)	236250 (from a total head of 70 meters)	684000 (from a total head of 30 meters)	414000 (from a total head of 50 meters)

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the SPV modules).

Notes:

1. Suction head, if applicable, minimum of 7 meters static suction lift corrected for atmospheric pressure and water temperature.
2. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause 4 (i.e. Performance Requirements) specified earlier.
3. If submersible pumps are used in lieu of surface pumps, the water output must match that of the surface pumps as specified in this table.

ANNEXURE – IV (CONTD.)

Indicative Technical Specifications of Shallow Well (Surface) Pumping Systems D.C. Motor /PMSM/SRM.

Description	Model-27	Model-28	Model-29	Model-30	Model-31	Model-32	Model-33	Model-34
PV array (Wp)	18000	18000	20250	20250	20250	22500	22500	22500
Motor Pump-set capacity (HP)	20	20	22.5	22.5	22.5	25	25	25
Shut Off Dynamic Head (meters)	100	150	70	100	150	70	100	150
Water output * (Liters per day)	270000 (from a total head of 70 meters)	189000 (from a total head of 100 meters)	465750 (from a total head of 50 meters)	303750 (from a total head of 70 meters)	212625 (from a total head of 100 meters)	517500 (from a total head of 50 meters)	337500 (from a total head of 70 meters)	236250 (from a total head of 100 meters)

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the SPV modules).

Notes:

1. Suction head, if applicable, minimum of 7 meters static suction lift corrected for atmospheric pressure and water temperature.
2. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause 4 (i.e. Performance Requirements) specified earlier.
3. If submersible pumps are used in lieu of surface pumps, the water output must match that of the surface pumps as specified in this table.

ANNEXURE – IV (CONTD.)

Indicative Technical Specifications of Solar Deep well (submersible) Pumping Systems with D.C. Motor /PMSM/SRM.

Description	Model-1	Model-2	Model-3	Model-4	Model-5	Model-6	Model-7	Model-8	Model-9	Model-10	Model-11	Model-12	Model-13	Model-14
PV array (Wp)	1200	1800	3000	3000	3000	4800	4800	4800	6750	6750	6750	9000	9000	9000
Motor Pump-set capacity (HP)	1	2	3	3	3	5	5	5	7.5	7.5	7.5	10	10	10
Shut Off Dynamic Head (meters)	45	45	45	70	100	70	100	150	70	100	150	70	100	150
Water output * (Liters per day)	45600 (from a total head of 30 meters)	68400 (from a total head of 30 meters)	114000 (from a total head of 30 meters)	69000 (from a total head of 50 meters)	45000 (from a total head of 70 meters)	110400 (from a total head of 50 meters)	72000 (from a total head of 70 meters)	50400 (from a total head of 100 meters)	155250 (from a total head of 50 meters)	101250 (from a total head of 70 meters)	70875 (from a total head of 100 meters)	207000 (from a total head of 50 meters)	135000 (from a total head of 70 meters)	94500 (from a total head of 100 meters)

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the SPV modules).

Notes:

1. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause 4 (i.e. Performance Requirements) specified earlier.
2. If surface pumps are used in lieu of submersible pumps, the water output must match that of the submersible pumps as specified in this table.

ANNEXURE – IV (CONTD.)

Indicative Technical Specifications of Solar Deep well (submersible) Pumping Systems with D.C. Motor /PMSM/SRM.

Description	Model-15	Model-16	Model-17	Model-18	Model-19	Model-20	Model-21	Model-22	Model-23	Model-24	Model-25	Model-26	Model-27	Model-28
PV array (Wp)	11250	11250	11250	11250	13500	13500	13500	13500	15750	15750	15750	15750	18000	18000
Motor Pump-set capacity (HP)	12.5	12.5	12.5	12.5	15	15	15	15	17.5	17.5	17.5	17.5	20	20
Shut Off Dynamic Head (meters)	100	150	180	225	100	150	180	225	100	150	180	225	150	180
Water output * (Liters per day)	168750 (from a total head of 70 meters)	118125 (from a total head of 100 meters)	106875 (from a total head of 120 meters)	84375 (from a total head of 150 meters)	202500 (from a total head of 70 meters)	141750 (from a total head of 100 meters)	128250 (from a total head of 120 meters)	101250 (from a total head of 150 meters)	236250 (from a total head of 70 meters)	165375 (from a total head of 100 meters)	149625 (from a total head of 120 meters)	118125 (from a total head of 150 meters)	189000 (from a total head of 100 meters)	171000 (from a total head of 120 meters)

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the SPV modules).

Notes:

1. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause 4 (i.e. Performance Requirements) specified earlier.
2. If surface pumps are used in lieu of submersible pumps, the water output must match that of the submersible pumps as specified in this table.

ANNEXURE – IV (CONTD.)

Indicative Technical Specifications of Solar Deep well (submersible) Pumping Systems D.C. Motor /PMSM/SRM.

Description	Model-29	Model-30	Model-31	Model-32	Model-33	Model-34	Model-35	Model-36	Model-37	Model-38	Model-39
PV array (Wp)	18000	18000	20250	20250	20250	20250	20250	22500	22500	22500	22500
Motor Pump-set capacity (HP)	20	20	22.5	22.5	22.5	22.5	22.5	25	25	25	25
Shut Off Dynamic Head (meters)	225	300	150	180	225	300	375	180	225	300	375
Water output * (Liters per day)	135000 (from a total head of 150 meters)	99000 (from a total head of 200 meters)	212625 (from a total head of 100 meters)	192375 (from a total head of 120 meters)	151875 (from a total head of 150 meters)	111375 (from a total head of 200 meters)	91125 (from a total head of 250 meters)	213750 (from a total head of 120 meters)	168750 (from a total head of 150 meters)	123750 (from a total head of 200 meters)	101250 (from a total head of 250 meters)

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the SPV modules).

Notes:

1. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause 4 (i.e. Performance Requirements) specified earlier.
2. If surface pumps are used in lieu of submersible pumps, the water output must match that of the submersible pumps as specified in this table.

ANNEXURE – V

Indicative Technical Specifications of Shallow Well (Surface) Solar Pumping Systems with A.C. Induction Motor Pump Set

Description	Model-1	Model-2	Model-3	Model-4	Model-5	Model-6	Model-7	Model-8	Model-9	Model-10	Model-11	Model-12	Model-13
PV array (Wp)	900	1800	2700	2700	4800	4800	4800	6750	6750	6750	9000	9000	9000
Motor Pump-set capacity (HP)	1	2	3	3	5	5	5	7.5	7.5	7.5	10	10	10
Shut Off Dynamic Head (meters)	12	12	12	25	12	25	45	12	25	45	12	25	45
Water output (Liters per day) *	89100 (from a total head of 10 meters)	178200 (from a total head of 10 meters)	267300 (from a total head of 10 meters)	132300 (from a total head of 20 meters)	475200 (from a total head of 10 meters)	235200 (from a total head of 20 meters)	168000 (from a total head of 30 meters)	668250 (from a total head of 10 meters)	330750 (from a total head of 20 meters)	236250 (from a total head of 30 meters)	891000 (from a total head of 10 meters)	441000 (from a total head of 20 meters)	315000 (from a total head of 30 meters)

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the SPV modules).

Notes:

1. Suction head, if applicable, minimum 7 meters static suction lift corrected for atmospheric pressure and water temperature.
2. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause 4. (i.e. Performance Requirements) specified earlier.
3. If submersible pumps are used in lieu of surface pumps, the water output must match that of the surface pumps as specified in this table.

ANNEXURE –V (CONTD.)

Indicative Technical Specifications of Shallow Well (Surface) Solar Pumping Systems with A.C. Induction Motor Pump Set

Description	Model-14	Model-15	Model-16	Model-17	Model-18	Model-19	Model-20	Model-21	Model-22	Model-23	Model-24	Model-25	Model-26
PV array (Wp)	11250	11250	11250	11250	13500	13500	13500	13500	15750	15750	15750	18000	18000
Motor Pump-set capacity (HP)	12.5	12.5	12.5	12.5	15	15	15	15	17.5	17.5	17.5	20	20
Shut Off Dynamic Head (meters)	12	25	45	70	25	45	70	100	45	70	100	45	70
Water output * (Liters per day)	11,13,750 (from a total head of 10 meters)	5,51,250 (from a total head of 20 meters)	3,93,750 (from a total head of 30 meters)	2,36,250 (from a total head of 50 meters)	6,61,500 (from a total head of 20 meters)	4,72,500 (from a total head of 30 meters)	2,83,500 (from a total head of 50 meters)	1,89,000 (from a total head of 70 meters)	5,51,250 (from a total head of 30 meters)	3,30,750 (from a total head of 50 meters)	2,20,500 (from a total head of 70 meters)	6,30,000 (from a total head of 30 meters)	3,78,000 (from a total head of 50 meters)

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the SPV modules).

Notes:

1. Suction head, if applicable, minimum 7 meters.
2. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause 4 (i.e. Performance Requirements) specified earlier.
3. If submersible pumps are used in lieu of surface pumps, the water output must match that of the surface pumps as specified in this table.

ANNEXURE – V (CONTD.)

Indicative Technical Specifications of Shallow Well (Surface) Solar Pumping Systems with A.C. Induction Motor Pump Set

Description	Model-27	Model-28	Model-29	Model-30	Model-31	Model-32	Model-33	Model-34
PV array (Wp)	18000	18000	20250	20250	20250	22500	22500	22500
Motor Pump-set capacity (HP)	20	20	22.5	22.5	22.5	25	25	25
Shut Off Dynamic Head (meters)	100	150	70	100	150	70	100	150
Water output * (Liters per day)	2,52,000 (from a total head of 70 meters)	1,62,000 (from a total head of 100 meters)	4,25,250 (from a total head of 50 meters)	2,83,500 (from a total head of 70 meters)	1,82,250 (from a total head of 100 meters)	4,72,500 (from a total head of 50 meters)	3,15,000 (from a total head of 70 meters)	2,02,500 (from a total head of 100 meters)

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the SPV modules).

Notes:

1. Suction head, if applicable, minimum 7 meters.
2. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause 4 (i.e. Performance Requirements) specified earlier.
3. If submersible pumps are used in lieu of surface pumps, the water output must match that of the surface pumps as specified in this table.

ANNEXURE – V (CONTD.)

Indicative Technical Specifications of Solar Deep well (submersible) Pumping Systems with A.C. Induction Motor Pump Set

Description	Model-1	Model-2	Model-3	Model-4	Model-5	Model-6	Model-7	Model-8	Model-9	Model-10	Model-11	Model-12	Model-13	Model-14
PV array (Wp)	1200	1800	3000	3000	3000	4800	4800	4800	6750	6750	6750	9000	9000	9000
Motor Pump-set capacity (HP)	1	2	3	3	3	5	5	5	7.5	7.5	7.5	10	10	10
Shut Off Dynamic Head (meters)	45	45	45	70	100	70	100	150	70	100	150	70	100	150
Water output * (Liters per day)	42000 (from a total head of 30 meters)	63000 (from a total head of 30 meters)	105000 (from a total head of 30 meters)	63000 (from a total head of 50 meters)	42000 (from a total head of 70 meters)	100800 (from a total head of 50 meters)	67200 (from a total head of 70 meters)	43200 (from a total head of 100 meters)	141750 (from a total head of 50 meters)	94500 (from a total head of 70 meters)	60750 (from a total head of 100 meters)	189000 (from a total head of 50 meters)	126000 (from a total head of 70 meters)	81000 (from a total head of 100 meters)

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the SPV modules).

Notes:

1. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause 4 (i.e. Performance Requirements) specified earlier.
2. If surface pumps are used in lieu of submersible pumps, the water output must match that of the submersible pumps as specified in this table.

ANNEXURE – V (CONTD.)

Indicative Technical Specifications of Solar Deep well (submersible) Pumping Systems with A.C. Induction Motor Pump Set

Description	Model-15	Model-16	Model-17	Model-18	Model-19	Model-20	Model-21	Model-22	Model-23	Model-24	Model-25	Model-26	Model-27	Model-28
PV array (Wp)	11250	11250	11250	11250	13500	13500	13500	13500	15750	15750	15750	15750	18000	18000
Motor Pump-set capacity (HP)	12.5	12.5	12.5	12.5	15	15	15	15	17.5	17.5	17.5	17.5	20	20
Shut Off Dynamic Head (meters)	100	150	180	225	100	150	180	225	100	150	180	225	150	180
Water output * (Liters per day)	157500 (from a total head of 70 meters)	101250 (from a total head of 100 meters)	95625 (from a total head of 120 meters)	75375 (from a total head of 150 meters)	189000 (from a total head of 70 meters)	121500 (from a total head of 100 meters)	114750 (from a total head of 120 meters)	90450 (from a total head of 150 meters)	220500 (from a total head of 70 meters)	141750 (from a total head of 100 meters)	133875 (from a total head of 120 meters)	105525 (from a total head of 150 meters)	162000 (from a total head of 100 meters)	153000 (from a total head of 120 meters)

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the SPV modules).

Notes:

1. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause 4 (i.e. Performance Requirements) specified earlier.
3. If surface pumps are used in lieu of submersible pumps, the water output must match that of the submersible pumps as specified in this table.

ANNEXURE – V (CONTD.)

Indicative Technical Specifications of Solar Deep well (submersible) Pumping Systems with A.C. Induction Motor Pump Set

Description	Model-29	Model-30	Model-31	Model-32	Model-33	Model-34	Model-35	Model-36	Model-37	Model-38	Model-39
PV array (Wp)	18000	18000	20250	20250	20250	20250	20250	22500	22500	22500	22500
Motor Pump-set capacity (HP)	20	20	22.5	22.5	22.5	22.5	22.5	25	25	25	25
Shut Off Dynamic Head (meters)	225	300	150	180	225	300	375	180	225	300	375
Water output * (Liters per day)	120600 (from a total head of 150 meters)	90000 (from a total head of 200 meters)	182250 (from a total head of 100 meters)	172125 (from a total head of 120 meters)	135675 (from a total head of 150 meters)	101250 (from a total head of 200 meters)	81000 (from a total head of 250 meters)	191250 (from a total head of 120 meters)	150750 (from a total head of 150 meters)	112500 (from a total head of 200 meters)	90000 (from a total head of 250 meters)

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the SPV modules).

Notes:

1. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause 4 (i.e. Performance Requirements) specified earlier.
2. If surface pumps are used in lieu of submersible pumps, the water output must match that of the submersible pumps as specified in this table.

Guidelines on Testing Procedure for Solar Photovoltaic Water Pumping System

1 SCOPE

These Guidelines lays down basis for the testing set up and testing procedures for Solar Photovoltaic (SPV) water pumping system. The SPV water pumping system covered are centrifugal pumps of all types from 1HP (0.75 kW) to 25 HP (18.75 kW).

2 REFERENCE STANDARDS

The Indian and IEC Standards listed at Annex A contain provisions which, through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All Standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated in Annex A. The latest editions of the indicated standards should be considered.

3 DEFINITIONS OF SYSTEMS AND PARAMETERS

3.1 Systems

3.1.1 *Stand-Alone Solar PV Water Pumping System*

A Solar PV Water Pumping System in stand-alone operation is neither connected to the grid nor to battery bank and is comprised mainly of the following components and equipment:

SPV modules, cabling, controller, motor pump-set, and hydraulic piping. Combination of all these components shall be unique. Any change in combination will be treated as different model of pumping system.

3.1.2 *Motor-Pump Set*

The Motor-pump set consists of the pump (centrifugal pump) and the driving motor.

3.1.3 *Controller*

The controller converts the DC power (DC voltage & Current) of the PV array into a high or low DC voltage power, or converts this DC power into single -phase or multi-phase alternating-current power (voltage or alternating current) suitable for driving the motor of Motor-pump set.

NOTE: - The Controller may also include equipment for MPPT, monitoring, metering and for protection purposes.

3.2 Parameters

Following parameter shall be referred during testing of SPV pumping system:

Table 1 – Parameters		
Parameter	Symbol	Unit
(1)	(2)	(3)
Array voltage (d.c.)	V_a	V
Array current (d.c.)	I_a	A
Array open circuit voltage (d.c.)	V_{oc}	V
Array short circuit current (d.c.)	I_{sc}	A
Array maximum power point voltage(d.c.)	V_{mpp}	V
Array maximum power point current (d.c.)	I_{mpp}	A
Pressure as measured	p	kg/cm ²
Flow rate	Q	lps /lpm /m ³ /h
Motor voltage d.c or a.c	V_m	V
Motor current d.c or a.c	I_m	A
Motor voltage (multi-phase a.c)	V_{ms}	V
Motor current (multi-phase a.c)	I_{ms}	A
Power factor	$\cos\phi$	-
AC frequency (or d.c switching frequency)	F	Hz
Motor speed	N	Min ⁻¹
Radiation	E_e	W/m ²
Temperature	T	°C

4 TEST SETUP

4.1 Test Set-Up

Illustration(s) of test set-ups are shown in Figure 1 & Figure 2, and a block diagram of required test set-up is shown in Figure 3. All test set-ups shall conform to applicable model test set-ups referred above and the water level in the sump well, locations of the throttle valve, flow meter and pressure gauge/sensor connections as indicated in the test set-up(s) shall conform to Figure 1, Figure 2 and Figure 3 accordingly.

4.2 Precautions for Test Setup:

Before initiating testing of the SPV pump the following precautions must be followed:

- a) In case of a direct coupled pump-set, proper alignment of input pipe, output pipe and the sensors shall be ensured;
- b) Air tightness in suction line shall be ensured and the general layout of the system pipe work shall be designed to avoid airlocks;
- c) The offset pipe of suction line shall either be horizontal or inclined upward towards the pump and shall never be inclined downward towards the pump to avoid air trapping;
- d) For the delivery head, a pressure gauge/sensor shall be connected to the delivery line with tapping as shown in Figures 1 or 2 or 3. The tapping shall be flush with the inside of the pipe and shall have its axis at right angles to the direction of flow. The pipe set up between the pump outlet and the pressure sensor shall be the same diameter as the manufacturer's outlet fitting. Sensor/gauge may be connected to the tapping point through a flexible hose;
- e) Preferably, a Digital Pressure sensor/gauges of suitable range need to be used for the measurement of head. Care shall be taken to eliminate any leaks in the connecting pipes and to avoid the trapping of air in the connecting pipe or hose;
- f) It is assumed that over the normal operating range of the pump, the pressure drop due to frictional losses between the pump outlet and the pressure sensor will be negligible and the kinetic energy component of the water at the pump outlet will be small compared to the increase in potential energy due to the increased pressure across the pump;
- g) For instantaneous performance testing, pressure can be sustained by means of a simple gate valve in which backpressure is sustained by restricting the flow. An automatic control valve(s) may be used to sustain a constant upstream pressure. Pressure may also be sustained by means of a pre-pressurized air chamber operating with a pressure maintaining valve at the outlet. A real water column may also be used;
- h) A good quality digital flow meter with electrical output linearly proportional to flow rate shall be connected at the other end of the delivery pipe. The distance between the auto control valve and flow meter shall be more than $5d$ (d =pipe diameter) meters to ensure the laminar flow of water; and
- i) After flow meter the end of the discharge pipe should be beneath the water surface to prevent splashing. This could cause a mixed water / air bubbles fluid entering the pump inlet and affecting its proper operation. If so then a vertical baffle or a similar arrangement shall be inserted in the tank between the pump intake and the return pipe such that water does not make any splash and avoid any bubbles when spread to the bottom of tank to reach the input pump. In this way any small bubbles will be excluded, as they will remain near the surface. Alternatively, a large pipe can be placed around the pump with its top breaking the surface and an arch cut in its base to allow water entry.

4.3 Priming Arrangement

A non-return valve/ foot valve shall be used in suction line, further it may also require suction pipe need to be filled with water for priming purpose in case of surface pumps.

4.4 PV Module Array Structures:

For testing the SPV pump using the actual solar array, outdoor PV array structures with different module mounting capacities (4,6,8,10, etc.) shall be used. The modules are mounted on the structures with a tracking facility to optimize irradiance, power output and accordingly, the total quantity of water pumped in a day.

4.5 Sun Simulator PV Module Tester:

To estimate the wattage of the SPV modules under STC, a high precession (at least class AAA as per IEC 60904-9) sun simulator module tester is required in the pump testing lab.

Alternatively, all SPV modules should have STC testing certificate from an NABL accredited test laboratory and the date of testing shall not be later than a year. In the STC testing, if the module is found degraded, the degraded data should be used.

4.6 Simulator (Electrical) Testing

Ideally, the SPV pump should be tested as per the site conditions where it is designed to operate. The details of outdoor testing are discussed in the next sessions. However, for testing under simulated conditions, a programmable Solar PV (SPV) array simulator capable of simulating a given solar PV array configuration (i.e., the number of modules, the type and the series / parallel combination), site radiation and temperature conditions shall be required for laboratory. Measurement equipment with acceptable accuracy and precision shall be used for the detection and data logging of the parameters listed in Table 2.

Table 2 - Core Parameters to be Measured and Recorded			
Parameter	Symbol	Unit	Measurement Uncertainty
(1)	(2)	(3)	(4)
SPV Array voltage	V_a	V	≤1 percent
SPV Array current	I_a	A	≤1 percent
Pressure/head as measured	p	Kg/cm ²	≤2 percent
Flow rate	Q	lps	≤2 percent
Solar irradiance	E_e	W/m ²	≤2 percent

4.7 Test Setup

For the performance testing of SPV pumps a sump well with sensors for sensing, monitoring and recording of pump parameters will be required. The details of the resources required are given below:

- a) Water tank/sump of required dimensions;
- b) SPV modules, Controller, Motor-pump set, cable as per required depth and Other Accessories (Test Sample);

- c) Pressure transducer with data logging system;
- d) Flow Meter with data logging system;
- e) Suction pipe(s) (if applicable);
- f) Discharge pipe(s);
- g) Pyranometers and Temperature sensors with data logging system;
- h) Auto control valves;
- i) SPV array Simulator(s) for simulation of module arrays for testing;
- j) SPV array for realistic testing;
- k) Structure for mounting modules for realistic condition testing; and
- l) AAA class Sun simulator for testing of modules performance at STC

Refer to the block diagram in Figure 3.

4.8 Constant Head Requirement

Dynamic head variation during test shall be within limit as specified in column 2 of table 3 and the allowable variation in arithmetic average (from the start of flow point to the end of flow point refer to figure 5) of the dynamic head shall be within value specified in column 4 of table 3. Any data with head variation during the test beyond the limit specified in column 3 of table 3 shall be treated as garbage data and shall not be considered in calculations of daily water output.

Table 3 - Allowable variation in arithmetic average of dynamic head			
<i>Clause 4.8</i>			
SI. No	Required Dynamic head in (meters)	Allowable variation in dynamic head during test	Allowable variation in arithmetic average of dynamic head
(1)	(2)	(3)	(4)
i.	10	± 15 % = ± 1.5 meter	± 0.5 meter
ii.	20	± 10 % = ± 2 meter	± 0.5 meter
iii.	30	± 10 % = ± 3 meter	± 0.7 meter
iv.	50	± 8 % = ± 4 meter	± 0.8 meter
v.	70	± 7 % = ± 4.9 meter	± 0.8 meter
vi.	100	± 7 % = ± 7 meter	± 1 meter
vii.	120	± 7 % = ± 8.4 meter	± 1 meter
viii.	150	± 7 % = ± 10.5 meter	± 1 meter
ix.	200	± 7 % = ± 14 meter	± 1 meter
x.	250	± 7 % = ± 17.5 meter	± 1 meter

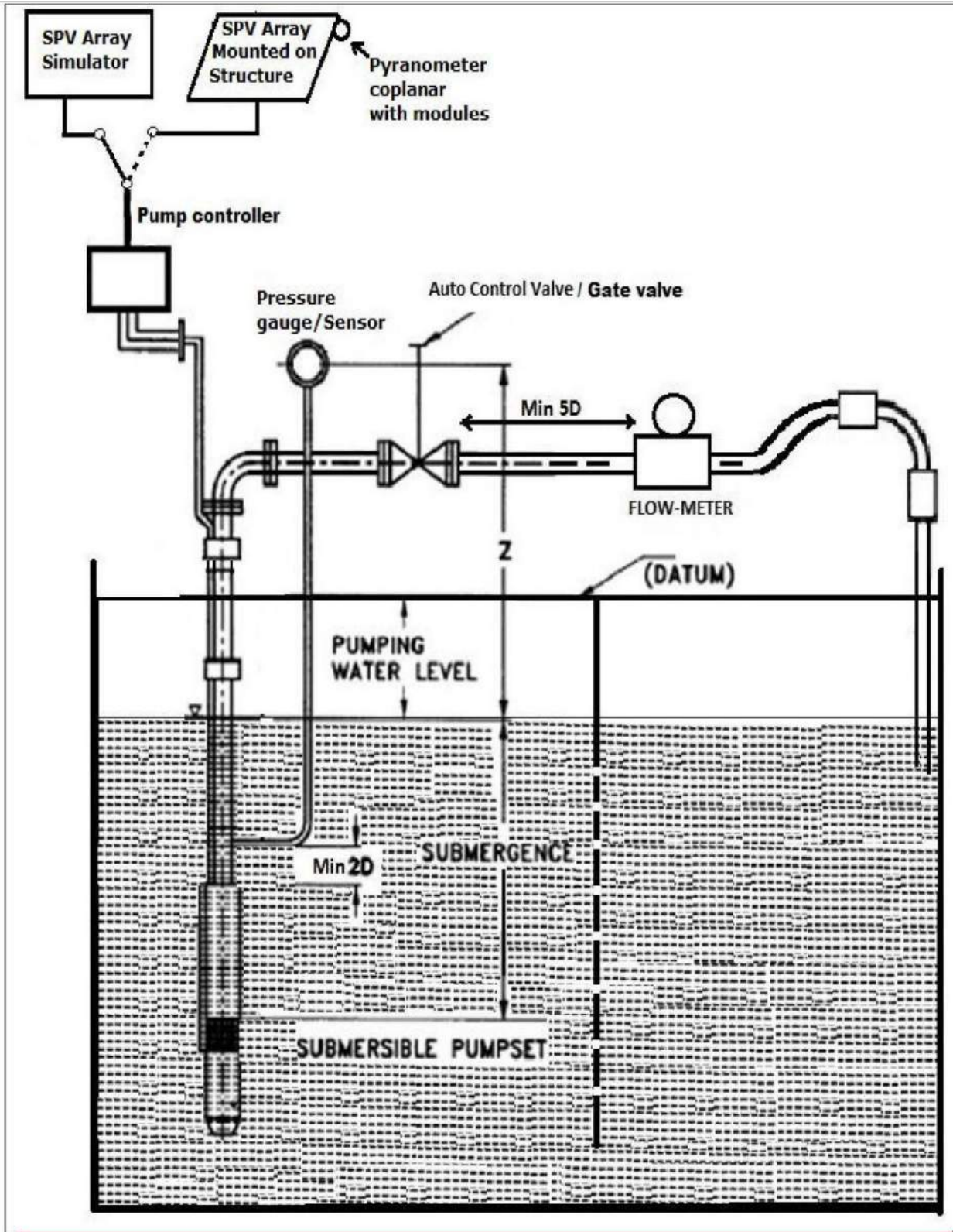


FIGURE 1– TYPICAL TEST SET-UP FOR SUBMERSIBLE SPV WATER PUMP-SET

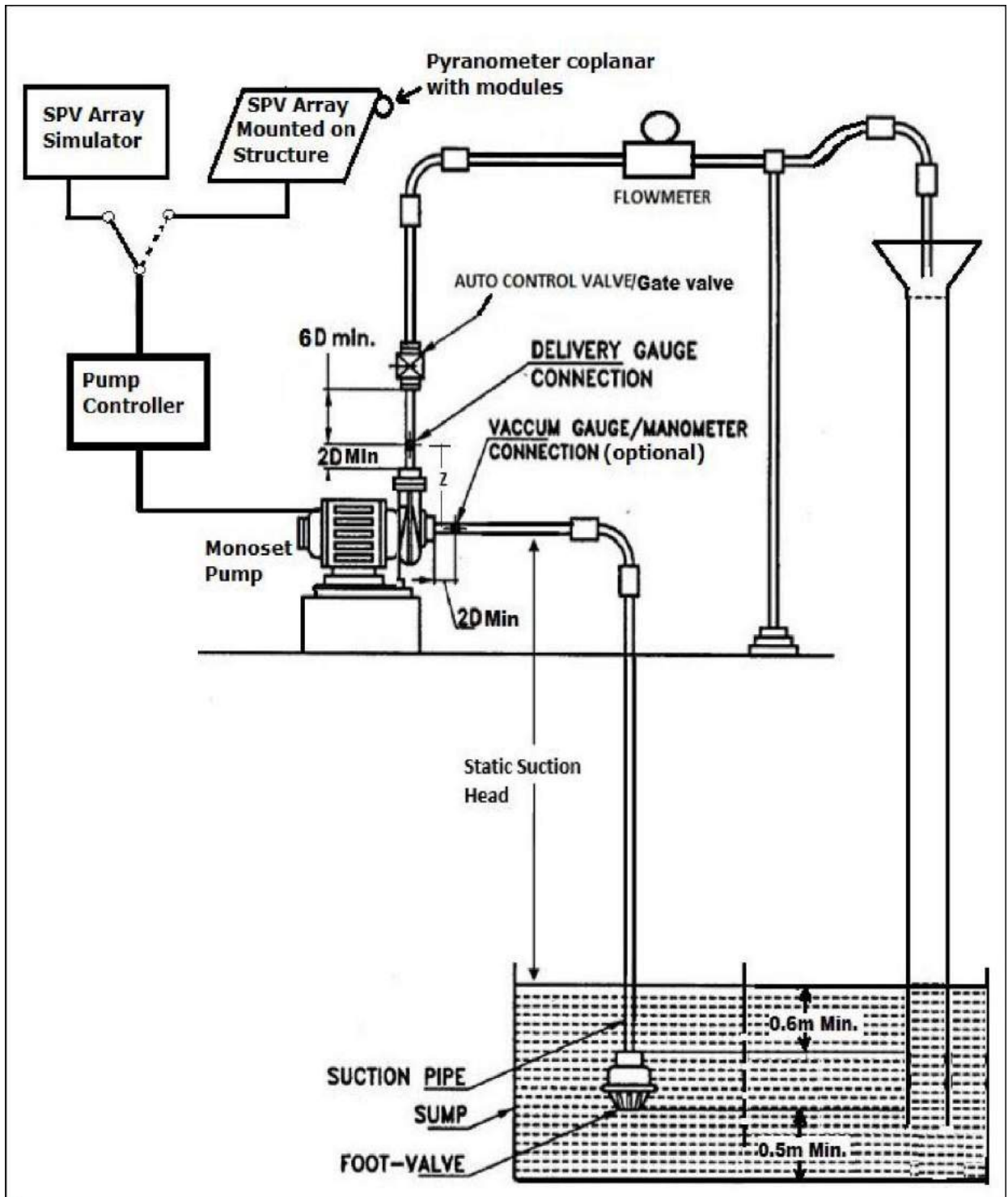


FIGURE 2 – TYPICAL TEST SET-UP FOR SPV SURFACE/MONO-BLOCK WATER PUMP SET

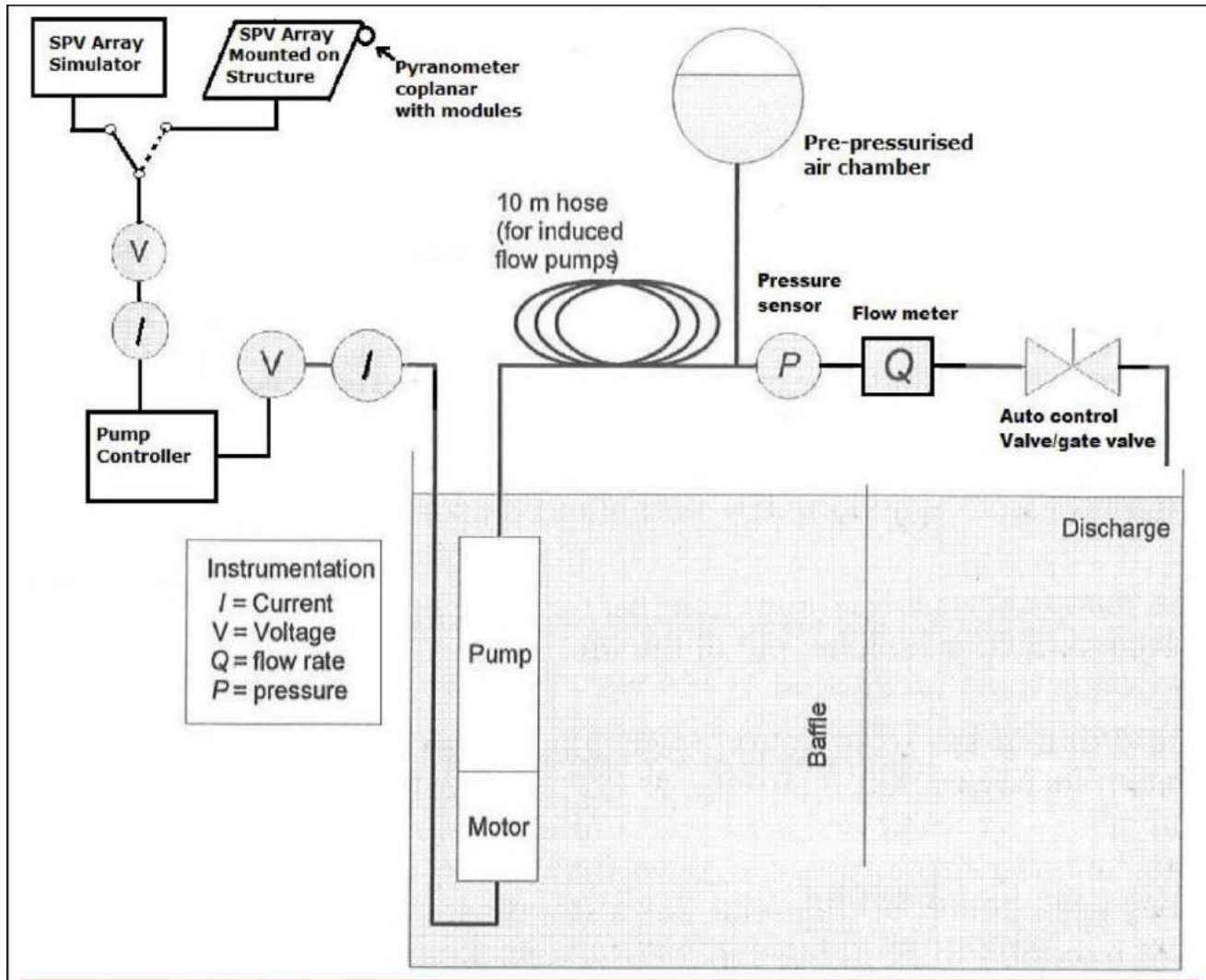


FIGURE 3 – BLOCK DIAGRAM OF TEST SETUP FOR SUBMERSIBLE PUMP-SET

5. TEST PROCEDURE FOR PERFORMANCE EVALUATION OF SPV PUMPING SYSTEM:

There are three major profiles to be completed for comprehensive certification and qualification of a sample SPV water pump as per this standard. Two steps correspond to two simulation profiles, Hot and Cold. The third step corresponds to actual outdoor conditions testing using natural sun radiation. The SPV water pump sample shall attain or exceed the qualification benchmarks set by MNRE for the specified model & design, in all three profiles. Before executing the three profiles testing, it is necessary to conduct the following protections test on the sample:

1. **Dry running:** System shall shut down within one minute/manufacture specification in dry running condition (when the water level goes below pump inlet).
2. **Open circuit:** System shall not operate if any phase become open circuited, the controller shall be tripped within one minute/manufacture specified time.
3. **Short circuit:** System should not operate if any two or all three-phase short circuited.

4. **Reverse polarity:** System shall not malfunction if polarity of input power is reverse.
5. **Under Voltage:** System shall not operate if terminal voltage goes below the limit specified by the manufacturer.
6. **Surge Protection:** A surge protection device (SPD) shall be installed on both the inputs and outputs side.

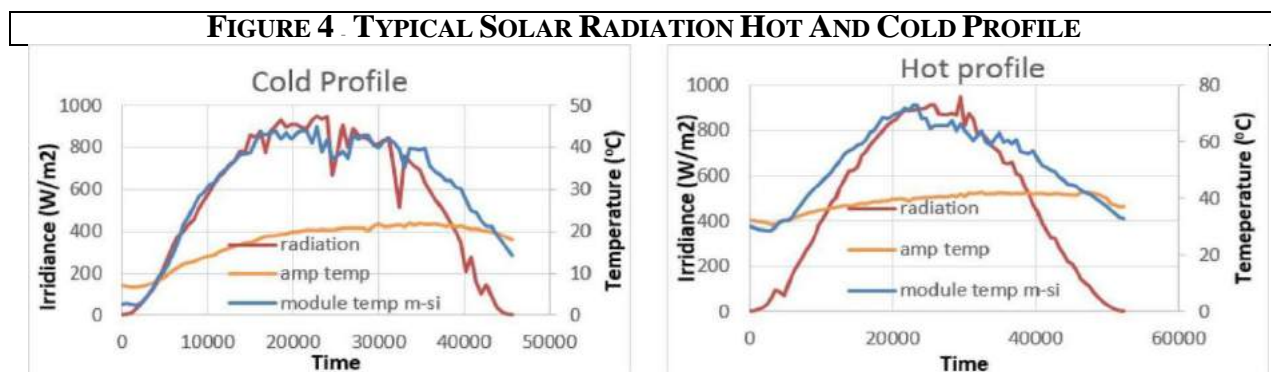
The performance testing of the SPV Pumping System for the three procedures are discussed in the following sections:

5.1 Simulator Methods:

Simulation methods are the easiest and fastest way of estimating SPV pump performance. However, in these methods actual PV array is not used, instead a PV array simulator is used. Here, a Programmable SPV array simulator capable of generating power output equal to actual SPV array under the given radiation and temperature conditions for a given SPV array configuration (i.e., the number of modules, the type and the series / parallel combination) shall be used. Although any radiation & temperature can be created, for the purpose of testing, two conditions one Hot summer day conditions (hot profile) and the other Winter Day conditions (cold profile) shall be used.

5.2 Hot & Cold Profiles:

The typical Hot & Cold day profiles are shown in Figure 4. These profiles of full-day Solar irradiance and temperature shall be loaded in PV array simulator, sequentially one after the other. The simulator output is connected to the motor & pump through the pump controller and the profiles are run-on a real-time basis. The performance parameters as given in table 2 are collected every minute for the entire duration of run time (per day). The total water output and output in liters /watt STC/ day can be estimated at desired constant head / dynamic head for complete duration of profiles. The temperature coefficient of power shall be derived from the IEC 61215/IS 14286 standard test report for the module supplied with the pump of the same model.



Note: Per second data for hot and cold profile may be downloaded from MNRE website using the following link: - <https://mnre.gov.in/solar/standard-specs-cost>

5.3 Outdoor Condition using sun radiation:

To operate the motor-pump set using the actual PV array, an array as per the Motor-pump set HP capacity is to be designed. The STC wattage of all the SPV modules is measured first, as per IEC 60904-1/ IS 12762-1 or clause number 11.6 of IEC 61215/ clause number 10.6 of IS-14286. The modules will then be installed on the structures, both in series and parallel combinations, as required, are connected and a designed PV module array is created. The array output is connected to the Motor & Pump through the pump controller.

Per day water output test has to be performed at desired constant dynamic head for complete day from dawn to dusk (sunrise to sunset). Irradiance shall be measured at coplanar to modules. Tracking may be done manually or automatically. Total flow shall be corrected at reference Average Daily Solar Radiation of 7.15 kWh/m² on the surface of SPV array (i.e., coplanar with the SPV Modules). Results of the SPV pumping system obtained under outdoor conditions shall meet the performance requirement of the system.

NOTES: -

1. Handle SPV modules carefully during installation.
2. SPV modules to be free from dirt (sand, bird droppings etc..) during the test.
3. Install SPV modules in shadow free access-controlled area
4. Tracking shall be minimum three time in a day for maximum performance
5. Pyranometer shall be mounted co-planer with SPV modules.

Recording, measurement & logging of flow for the period of hot profile, cold Profile and Realistic condition needs to be done.

5.4 Remote Monitoring System Verification

Provision for remote monitoring of the installed pumps shall be made in the controllers through an integral arrangement and it shall be capable of providing live status/parameters through online portal.

6 MEASUREMENTS AND APPARATUS

6.1 Solar Radiation Measurement

Solar radiation at co-planar with the Module surface shall be measured using a pyranometer. Response time of the pyranometer should not be more than 15 seconds. The interval between two readings should not be more than one minute for the calculation of average daily solar radiation.

6.2 Measurement of Head

6.2.1 Delivery Head

Digital pressure gauge/sensor shall be used, also a data logging system shall be used for calculation of average head through day. Interval between the two readings shall not be more than one minute for the calculation of average head. Accuracy for pressure sensor shall be within ± 0.5 percent.

6.2.2 Suction Lift

Suction lift shall be kept constant by mean of vertical distance between sump water level to centre of Pump impeller. Correction in suction lift shall be applied as per atmospheric pressure at the testing place and water temperature.

Distance measuring scale or laser-based sensors may also be used for suction lift measurement.

6.3 Measurement of Rate of Flow

A good quality Magnetic flow-meter of minimum 0.5% accuracy class shall be used for flow measurement, data logging system shall be used for calculating cumulative water volume throughout the day. The maximum flow rate of flowmeters should be at least 1.5 times the maximum flow rate of pumps. Instrument can be selected as per 3.2 of IS 11346. Interval between two readings shall not be more than one minute for the calculation of cumulative flow. Accuracy of flowmeters shall be within ± 0.5 percent.

7 CALIBRATIONS OF APPARATUS

All measuring instruments have to be calibrated periodically as per requirement.

8 STEP-WISE TEST PROCEDURE

8.1 Per Day Water Flow Test of Submersible Pumps

- a) Install the Pump-set as per Figure 1;
- b) Connect Pump-set with controller as per manufacturer instruction;
- c) Use Solar PV Array Simulator Or actual output from SPV array, for testing the pump-set at the given profile;
- d) Connect controller with SPV array Simulator or with actual SPV array output as per requirement of profile;
- e) Input STC performance data of each module in the array, into simulator and invoke the desired profile and run the same;
- f) For a realistic condition test, make an array by mounting all SPV modules on structure(s) by connecting modules in series or parallel as per requirement;
- g) Start the controller after connecting it with the array or array simulator;

- h) Use a head control valve or pre-pressurize tank to keep constant desired dynamic head;
- i) Tabulate the readings in Table 2 and the recording interval shall be less than or equal to 1 minute.

8.2 Per Day Water Flow Test of Surface Pumps

- a) The pump-set should be installed as demonstrated in Figure 2
- b) Maintain height to get desirable static suction lift as per requirement
- c) Install foot valve or non-return valve as per manufacturer instructions; and
- d) Follow steps (b) to (i) of para No. 8.1

9 OBSERVATIONS

The following observations of the complete day profile shall be recorded in a test record sheet. The following observations shall be used to derive pump characteristics:

- a) Instantaneous Solar irradiation (W/m²), pyranometer reading;
- b) Delivery gauge/sensor readings;
- c) Suction gauge/sensor readings / Distance between water level to impeller eye, (if applicable);
- d) Gauge distance correction factor, Z;
- e) Calculate cumulative daily solar radiation on surface co-planar with solar modules (kWh/m²);
- f) Calculate total water discharge in a day at the desirable constant head (Litre per Day);and
- g) Water output per day per watts peak (Litre/Wp).

10 COMPUTATION OF TEST READINGS

10.1 Computation of Total Head for Surface (Mono-set) Pump

$$\text{Total Head } H = \text{HSSL} + H_d + Z + [(V_d^2 - V_s^2) / 2g]$$

HSSL = Total Static suction Lift in meters of water column (measured by calibrated measuring tape or any distance measuring sensors)

H_d = Delivery gauge/sensor reading in meters of water column

Z = Gauge distance correction factor for delivery gauge centre and inlet pipe centre in meters (see figure 3). If the delivery gauge centre is below the inlet pipe centre, Z is subtracted from the delivery gauge reading and if the delivery gauge centre is above inlet pipe centre, Z is added to the delivery gauge reading; the gauge distance correction factor shall never be applied to the suction vacuum gauge or mercury manometer reading irrespective of their positions:

V_d = Velocity at delivery gauge/sensor connection, m/s;

V_s = Velocity at suction gauge/sensor connection, m/s; and
 g = Acceleration due to gravity in m/s².

The Total Static Suction Lift in surface pump (H_{SSL})

H_{SSL} = Height in meter from water level to impeller + Altitude correction in meter + water temperature correction in meter.

10.1.1 Correction for Altitude

Barometric pressure shall be recorded at test place. The difference between atmospheric pressure at the test place and 10.33 mWC (that is atmospheric pressure at MSL) shall be deducted from Static suction lift.

10.1.2 Correction for Water temperature

Static suction lift specified in the below Table shall be increased or reduced as given below when the water temperature is below or above 33°C.

Table 4 - Correction for water temperature

Hourly Average of Water Temperature °C	Vapour pressure mWC	Correction in Static suction lift above and below 33°C water temperature mWC
10	0.13	+ 0.39
15	0.18	+ 0.34
20	0.24	+ 0.28
25	0.33	+ 0.19
30	0.43	+ 0.09
33	0.52	0.00
35	0.58	- 0.06
40	0.76	- 0.24
45	1.00	- 0.48
50	1.28	- 0.76

Suction lift shall be adjusted minimum 3 time in a day as per average water temperature and barometric pressure, by adjusting water level of tank.

Following formula can also be used on behalf of table

$$4 y = -0.0007 x^2 + 0.0130 x + 0.3079$$

Where

y = Correction in Static suction lift

x = Average water temperature.

10.2 Computation of Total Head for Submersible Pump-sets

Total head $H = H_d + Z + [(V_d^2) / 2g]$ Where:

H_d = Delivery gauge/sensor reading in meters of water column;

Z = Gauge distance correction factor for delivery gauge. Distance between gauge/sensor center to tank water level (refer figure 1).

V_d = Velocity at delivery gauge/sensor connection in m/s;

g = Acceleration due to gravity in m/s^2 .

10.3 Total Water Per-Day

Total water output per day shall be calculated by Integration (Sum) of flow rate with respect to time. Integration shall start from the time when pump set achieve desired constant head in morning time (start point refer figure 5) and end at the time when pump set unable to achieve desired constant head in evening time (End point refer figure 5).

In case if Average Daily Solar Radiation found less than requirement then test shall be performed on next sunny day.

10.4 Water Output Per Day Per Watt Peak

Water output per day per watts peak (liter/W_p) = Water output (Liters) per day at specified head / Array STC power in watts-peak

10.5 Cumulative Daily Solar Radiation

Cumulative Solar Radiation (kWh/m²) in a day= Average of instantaneous irradiance reading from Dawn to Dusk (kW/m²) period of time in hours.

This can be obtained through time weight summation of pyranometer readings.

Dawn = Time of sunrise when irradiance become positive from zero value.

Dusk = Time of sunset when irradiance become zero from positive value.

10.6 Mismatch in maximum power at STC among modules of array

The mismatch shall be calculated as under:

$$\% \text{Power mismatch in array} = \frac{(P_{\text{Max}} - P_{\text{Min}})}{(P_{\text{Max}} + P_{\text{Min}})} \times 100$$

P_{Max} = Maximum power among modules in array, and

P_{Min} = Minimum power among modules in array

10.7 Efficiency of Array

The efficiency of Array = Power output from array / (total area of modules in m² X Sun radiation in watts/m²)

10.8 Fill Factor of Array

Fill factor of Array = This has to be measured using a PV array tester. This depends on the overall series resistances and shunt resistances of modules in the array.

10.9 Output Voltage of Array

Output Voltage of Array = Sum of voltages of modules in series.

In parallel connected module strings, the lowest voltage generating strings will set the voltage.

10.10 Output Current of Array

Output Current of an Array = Sum of currents of the parallel strings in the array.

The output current of a string is controlled by the lowest current generating module.

10.11 Output Power of Array

Output Power of Array = Sum of power of all modules- mismatch loss.

This can be measured by PV array tester.

11 EXAMPLES:

Total per day flow

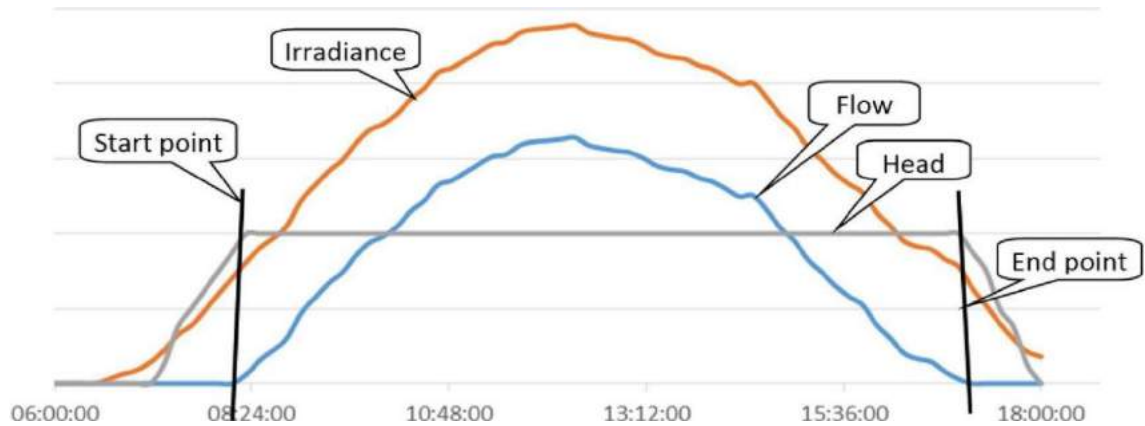


FIGURE 5- TYPICAL GRAPH FOR UNDERSTANDING CALCULATION

If pump achieved constant head at 8:15:30 AM (Start point in figure 5) and in evening Pump unable to keep constant desired head at 17:45:30 PM (End point in figure 5).

Flow rate in lps is recorded from 08:15:30 AM to 17:45:30 PM (start point to end point)
If the average calculated is 3.55 lps, then the total flow will be

$$\begin{aligned} \text{Total duration of flow} &= \text{End Time} - \text{Start time} \\ &= 17:45:30 - 8:15:30 \\ &= 9 \text{ h: } 30 \text{ m: } 0 \text{ s} \end{aligned}$$

Total duration from start to end in seconds:

$$= (9 \times 3600) + (30 \times 60) + (0 \times 1) = 34200 \text{ seconds}$$

Total discharge per day in liters = Average flow in lps x Total no of seconds

$$= 3.55 \times 34200 = 121410 \text{ liters}$$

For a realistic test, correct total flow at reference Average Daily Solar Radiation as specified in MNRE specifications.

12 TEST REPORTS

In order to have uniformity, the test reports issued by the Labs shall use a common format developed by NISE. The test report shall be issued only in the name of applicant and shall clearly indicate that whether the Solar PV water pumping system qualify as per MNRE specifications or not along with the details. A soft copy of test report shall also be provided to the applicant and shall be made available on web-portal of test lab, which may be accessed by the implementing agencies for verifying the authenticity of the report.

13 USE OF OTHER BRAND OF SOLAR MODULES

In case a test lab has tested and issued approval certificate for a particular model of SPV pumping system using a particular brand and a particular Wp of SPV Modules, SPV Modules of other brand may also be used for the purpose for the same model of SPV pumping system without going for re-testing of complete SPV pumping system with other brand (or the higher Wp of same brand) of SPV Module, provided the test lab certifies that the SPV Module of other brand (or originally tested brand) is at least of same wattage capacity and its parameters and characteristics are not inferior to the brand of SPV Module with which the model of SPV pumping system was tested and certified by the testing lab. In addition, the total wattage capacity of the Solar Array with the proposed model of SPV Modules shall be equal or higher than the wattage capacity specified by the MNRE for that model of SPV pumping system. The proposed model of SPV module shall also meet the following conditions:

- Solar Array Maximum voltage Vmpp with new brand module shall be within $\pm 2\%$ of earlier module.
- Modules Efficiency and Fill Factor shall qualify the minimum requirement of MNRE specifications
- Array and module Mismatch shall meet the MNRE specifications.
- SPV module shall follow the quality control order issued by MNRE from time to time.

14 LABS AUTHORISED FOR SOLAR PUMP TESTING

- Any lab accredited by NABL for testing of solar PV water pumping system as per MNRE specifications and testing procedure, and The National Institute of Solar Energy are authorized to issue approval certificate on successful testing of a solar PV water pumping system.
- Soft copy of test report shall be made available to implementing agencies on request basis.
- Logged data for Head, flow & radiation shall be preserved by laboratory at-least for 1 year.

LIST OF REFERRED STANDARD	
IS No.	Title
17018-1 : 2018	Solar Photovoltaic Water Pumping System Part 1 Centrifugal Pumps — Specification
14286 : 2010	Crystalline Silicon Terrestrial Photovoltaic (PV) Modules — Design Qualification and Type Approval
3043 : 1987	Code of Practice for Earthing
5120 : 1977	Technical requirements for rotodynamic special purpose pumps (first revision)
11346 : 2003	Tests for Agricultural and Water Supply Pumps — Code of Acceptance
6603 : 2001	Stainless Steel Bars and Flats
6911 : 2017	Stainless steel plate, sheet and strip
7538 : 1996	Three-phase squirrel cage induction motors for centrifugal pumps for agricultural applications
8034 : 2018	Submersible pump sets - Specification (second revision)
9079 : 2018	Electric Monoset pumps for clear, cold water for agricultural and water supply purposes - Specification (second revision)
9283 : 2013	Motors for submersible pump sets
11346 : 2002	Code of acceptance tests for agricultural and water supply pumps (first revision)
14220 : 2018	Open well submersible pump sets — Specification
14582 : 1998	Single-phase small AC electric motors for centrifugal pumps for agricultural applications
ISO 9905 : 1994	Technical specifications for centrifugal pumps — Class I
IEC 60068-2-6 : 2007	Environmental testing – Part 2-6 Tests – Test Fc: Vibration (sinusoidal)
IEC 60068-2-30 : 2005	Environmental testing – Part 2-30 Tests – Test Db: Damp heat, cyclic (12 + 12h cycle)
IEC 60146-1-1 : 2009	Semiconductor converters - General requirements and line commutated converters Part 1-1 Specification of basic requirements
IEC 60364-4-41 : 2005	Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock
IEC 60364-7-712 : 2017	Low voltage electrical installations - Part 7-712: Requirements for special installations or locations - Solar photovoltaic (PV) power supply systems
IEC 60529 : 1989	Degrees of protection provided by enclosures (IP Code)
IEC 60947-1 : 2007	Low-voltage switchgear and control gear - Part 1: General rules
IEC 61000-6-2 : 2016	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments
IEC 61000-6-3:2006	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments
IS/IEC 61683 :1999	Photovoltaic Systems — Power Conditioners — Procedure for Measuring Efficiency

IS/IEC 61730-1 : 2004	Photovoltaic (Photo Voltaic (PV)) Module Safety Qualification Part 1 Requirements for Construction
IS/IEC 61730-2 : 2004	Photovoltaic (Photo Voltaic (PV)) Module Safety Qualification Part 2 Requirements for Testing
IEC 61800- 3:2017	Adjustable speed electrical power drive systems - Part 3: EMC requirements and specific test methods
IEC 62109- 1:2010	Safety of power converters for use in photovoltaic power systems - Part 1: General requirements
IEC 62305- 3:2010	Protection against lightning - Part 3: Physical damage to structures and life hazard
IEC 62458:2010 IEC 60904/IS 12762-1	Sound system equipment – Electro-acoustical transducers - Measurement of large signal parameters Procedures for the measurement of current-voltage characteristics (<i>I</i> - <i>V</i> curves) of photovoltaic (PV) devices in natural or simulated sunlight.

Note: - The latest editions of the indicated standards should be considered.

**Technical Specification and Testing Procedure for
Universal Solar Pump Controller (USPC)**

1. Preamble:

The Controller for Solar PV pumping system is the heart and brain of the system. The Solar PV pumping system deployed at huge cost to the farmer and the exchequer for the Government is currently utilised only for half of the days in a year (around 150 days per year) on an average. In order to optimally utilize the solar photovoltaic system that generates the electricity throughout the year during sunshine hours, the controller supplied for installation of solar pumping system should be able to perform several other tasks for agricultural and other needs of a farmer. This will increase the productivity of agriculture sector and income of farmer. With the use of USPC the solar system could be used effectively throughout the year.

2. Technical Specification for Stand Alone Application

The USPC with SPV modules and structure can be used for agrarian applications such as water pumping, apple grading and polishing system, wheat (grain) flour grinding machine / aata chakki, cutter/chaff, deep-fridger / cold storage, blower fan for cleaning of grains, heating loads and any other standard voltage (400/415V) three phase motor/equipment of capacity not more than the capacity of Solar PV pumping system. The USPC operation schematic diagram is shown in Fig. 1. Further, the applications are not limited upto the few shown in the figure.

- I. Following table gives specifications of electrical supply from USPC for motors other than the solar pumps. For operating the pump the USPC must follow the MNRE specifications for SPV pumping systems.

Sr No.	Description	Desired requirement
1	Motor Supply Phases	Three phase R-Y-B
2	Rated motor frequency	48-50Hz
3	Frequency operation	0 to 52Hz
4	Rated motor voltage	415V \pm 5%
5	Desired motor operation	Constant V by F or constant motor flux control

II. Proposed electrical properties of USPC when operating motors other than motor-pump set:

Sr No.	Description	Desired requirement
1	Characteristic of voltages	Pure sinusoidal or Filtered AC output voltage at motor terminal. No PWM pulses allowed at the motor terminal, as it generates pronounced voltage spikes. The USPC output is intended to use for the traditional induction motors based applications which are design for sinusoidal grid supply.
2	THD of motor terminal voltages	Below 3%
3	THD of motor current (in case of balance/linear motor)	Below 5%
4	Balance supply	Three phases should be balanced and no negative sequence components to be allowed
5	Voltage spikes	Recurring or non-recurring voltage spikes more than 620V (peak of 440V AC supply) is not allowed
6	Alarms and Protections	Output voltage low, Output frequency low/high, Low irradiance/PV power, Current overload, Peak Torque

III. Controller should be able to run SPV pumping system as per MNRE specifications as well as any other type of motor of suitable rating, subject to the load characteristics of the equipment in which the motor is used is any of the following:

- a) Constant torque loads
- b) Constant power loads
- c) Quadratic loads
- d) Impact loads
- e) Hydraulic loads

Subject to the maximum torque being not more than 150% of the rated torque of the motor.

IV. To ensure energy efficiency of solar PV system and to maintain reliability of PV installation against aging effect, module mismatch with time, partial shading, etc., the desired USPC properties and configuration should be as follows:

- (a) Static MPPT efficiency of USPC should be equal or more than 98% during operation of 10 to 100% of rated STC PV power, and average MPPT tracking efficiency in the dynamic condition should be greater than 97 % with hot and cold profiles when feeding the water pumping, hydraulic or heating loads, so as to maintain MPPT irrespective of variation in solar energy or irradiance.

- (b) USPC efficiency should be as follows for the operation at 80% rated STC power of the PV array:

Sr No.	SPV pumping system capacity	Controller power efficiency should be more than or equal to
1	3 HP	93.00%
2	5 HP	93.00%
3	7.5 HP	94.00%
4	10 HP	94.50%
5	15 HP	94.50%

- (c) Considering voltage variation over the year due to variation in temperature, irradiance and effect due to ageing, environmental damages to PV panels with time, USPC should have MPPT channels as an integral part of system (or externally connected part) with wide range of input PV voltage for MPPT tracking of the PV panels. Input voltage range variation should be tested as per manufacturer declaration (min, nominal or 90% of the maximum) or if no declaration is made than at least it should be tested as per the table given below:-

Sr No.	Motor Pump set capacity	Input voltage range		
		Minimum	Nominal	Maximum
1	3 HP	$(0.85*V_{nominal})$	Nominal	$(1.15*V_{nominal})$
2	5 HP	$(0.85*V_{nominal})$		$(1.15*V_{nominal})$
3	7.5 HP	$(0.85*V_{nominal})$		$(1.15*V_{nominal})$
4	10 HP	$(0.85*V_{nominal})$		$(1.15*V_{nominal})$
5	15 HP	$(0.85*V_{nominal})$		$(1.15*V_{nominal})$

- V. There should be Mode selection located on control panel of the USPC along with display and user should be able to select either to run motor-pump set of any other application. The software/firmware required to operate these applications must get automatically loaded when an appropriate position of the switch is engaged.
- VI. USPC must have at least four numbers of three phase output cables to feed power to the applications. The output power cable for specific application should get selected automatically upon selection of applications via keypad or via mobile or via remote control connectivity. The manual selector switch should not be used at the output to manage different loads. This is to ensure the hassle-free operation of applications by farmer with adequate safety.

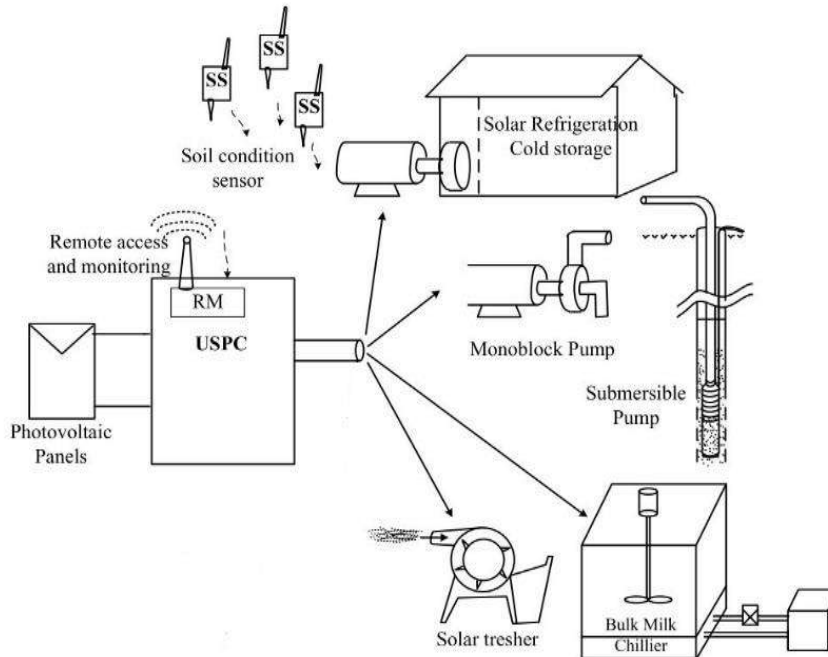


Fig. 1. USPC operation schematic diagram.

VII. USPC based Solar system must be equipped with Remote monitoring and remote fault identification:

- (a) Remote monitoring features should be integral part of solar pump controller and should provide time wise remote monitoring of PV voltage, PV Power, Water output, head, when used in solar pump mode. When operated in farm equipment mode, it should show, PV voltage, PV power, motor voltage, motor current and motor frequency.
- (b) Cumulative energy generation from PV panels for a month, year and 5 years should be provided.
- (c) Remote monitor should show current status of system like On, Off and fault.
- (d) Software associated with remote monitoring should also provide location of SPV pumping system.
- (e) Controller should have support of sufficient Internal memory/ SD card / memory card to support remote monitoring in case of network failure.

USPC must have IP65 protection.

Testing Procedure for Universal Solar Pump Controller (USPC)

USPC must be tested in two principle modes:

1. As an offgrid solar pump controller: the testing should be as per MNRE specifications and Test procedure.
2. As a controller to operate motorized farm equipment: The testing should be as described below.

To test the USPC in the second mode the test centres must have standard actual mode suitable for 4 loading modes. The input to the USPC must be from a solar PV simulator using the hot and cold profiles issued by MNRE. Following tests may be performed on USPC driving the agrarian load like Atta Chakki, Chaff Cutter and Deep Freezer under test. The USPC must be able to operate these motors of the attached agrarian load, so that they deliver the rated torque and are able to also operate till 150% of the rated torque for 30 seconds.

S. No	Test Performed	Expected result	Test Observation	Lab Remarks
1	Application description on screen and selection of applications	LCD screen provided on controller need to shows various applications which can be selected by keypad using up-down and enter key		
2	Mode operation of applications (Automatic: through keypad or remote / Manual: control switches)	Universal Solar Agriculture controller should come with multiple outputs which can be permanently connected to the application by selecting appropriate options for example following applications should automatically started by USPC by appropriate mean such as keypad or remote for selection. (i) Water Pumping (ii) Chaff Cutter (iii) Deep fridge/ Cold Storage		

3	Application Specific output (Application specific software)	USPC should have inbuilt individual application specific software to run the agrarian applications other than pumps and output of the controller should be suitable for above mentioned applications		
4	Input PV voltage range Minimum – Voc at STC Nominal – Voc at STC Maximum – Voc at STC			
5	USPC Efficiency measurement in Hot and cold profile should be measured as per BS EN 50530/IEC 62891	Efficiency of the UPSC at minimum..... VOC		
		Load %	Charge controller eff (%)	Power tracking Efficiency (%)
		10		
		25		
		50		
		75		
		100		
		Efficiency of the UPSC at Nominal VOC		
		10		
		25		
		50		
		75		
		100		
		Efficiency of the UPSC at 90 % of Max VOC		
		10		
		25		
		50		
		75		
		100		
		Dynamic MPPT Efficiency		
		Hot Profile		
		Cold Profile		
6	Ripple and distortion at output on full load	Should below 5 % after 25 % loading condition		

7	Measurement of Output voltage waveform	Three phase output with up to 440 V rms pure Sine Wave to be measured at least 4 times between 300W/m ² irradiance and maximum irradiance as per the irradiance profile.	CF value should be provided by lab for voltage and current	
8	Operation at different output from array with all four load types (Array wattage as per MNRE model:	Above.....Watt DC output Should not stop functioning at any load condition. Observation should be recorded.	Power value should be recorded by the lab with all agrarian	Motor current should be recorded (for torque behavior) It must be almost constant
	Example 4800 Wp array) At 40% Power At 50% Power At 75% Power At 100% Power		supported by USPC	irrespective of available DC power from array (motor running condition). This is for Impact loading condition (such as Chaff cutter) current variation need to be
9	Operation at different output from array with all four load types (Array wattage as MNRE model: Example 4800 Wp array) At 10 % Power At 25 % Power At 30 % Power	USPC need to run all the agrarian load in variable frequency at the lower irradiance value The load may be increased beyond 150% of rated torque to determine at what level the motor is stalling and stopping and it must trigger 'torque overload' alert. If it goes beyond 150% of the motor rated torque the USPC must trip indicating an 'overload tripping'.	Motor current should be recorded (for torque behavior) as it is a function of V/F ratio controlled by USPC	
10	Total circuit protection observation	<ul style="list-style-type: none"> • Soft Startup, • low radiation protection, • overload protection, • Open circuit protection • Reverse polarity protection 		

Expected output of individual applications must be specify as per their power rating and SPV capacity, such as:

1. kg/hour grinding of atta chakki, and granularity.
2. Volumetric Iceing of cold storage in x hours.
3. Output in terms of kg/hours for a specific capacity grass-cutter.
4. Output must be quantified in terms of rate of volume or weight as above for any other applications.

All the test labs authorised to conduct testing for off-grid solar pumping system as per MNRE specifications may also conduct testing of USPC as per procedure prescribed above and issue testing certificates.

Indicative Quantities for Third Centralized Tender for Standalone Solar Pumps under PM-KUSUM

S. No.	State/UT	Quantity (Nos.)
1	Andaman & Nicobar	100
2	Andhra Pradesh	1000
3	Arunachal Pradesh	200
4	Assam	5000
5	Bihar	5000
6	Chhattisgarh	25000
7	Delhi	1000
8	Goa	200
9	Gujarat	7000
10	Haryana	160000
11	Himachal Pradesh	700
12	Jammu & Kashmir	4500
13	Jharkhand	8000
14	Karnataka	10000
15	Kerala	100
16	Ladakh	1600
17	Lakshadweep	100
18	Madhya Pradesh	50000
19	Maharashtra	180000
20	Manipur	150
21	Meghalaya	200
22	Mizoram	1700
23	Nagaland	100
24	Odisha	4500
25	Puducherry	100
26	Punjab	50000
27	Rajasthan	110000
28	Sikkim	100
29	Tamil Nadu	4000
30	Telangana	400
31	Tripura	3000
32	Uttarakhand	1500
33	Uttar Pradesh	30000
34	West Bengal	1000
	Total	666250

Annexure-E
State Wise Requirement of EMD and PBG from the Bidder(s)/Selected Vendors

Sl. No.	State/UT	Quantity State-Wise (Nos.)	Technical QR		Bank Guarantees	
			For Solar Pumps/Controller (number of solar pumps installed or supplied/Controller installed or supplied) @6% of total, subject to minimum of 25 pumps/controllers and maximum of 1000 Pumps/controllers	For Solar PV Modules (Experience in kWp) @4800Wp per Pump for 5 HP Pump	State wise EMD requirements in lakh INR (i.e @2% of contract value)	State wise PBG requirements in lakh INR (i.e @3% of contract value)
1	Andman & Nicobar	100	25	120	1.335	2.003
2	Andhar pradesh	1000	60	288	3.204	4.806
3	Arunachal Pradesh	200	25	120	1.335	2.003
4	Assam	5000	300	1440	16.020	24.030
5	Bihar	5000	300	1440	16.020	24.030
6	Chhatisgarh	25000	1000	4800	53.400	80.100
7	Delhi	1000	60	288	3.204	4.806
8	Goa	200	25	120	1.335	2.003
9	Gujarat	7000	420	2016	22.428	33.642
10	Haryana	160000	1000	4800	53.400	80.100
11	Himachal Pradesh	700	42	201.6	2.243	3.364
12	Jammu & Kashmir	4500	270	1296	14.418	21.627
13	Jharkhand	8000	480	2304	25.632	38.448
14	Karnataka	10000	600	2880	32.040	48.060
15	Kerala	100	25	120	1.335	2.003
16	Ladakh	1600	96	460.8	5.126	7.690
17	Lakshadweep	100	25	120	1.335	2.003
18	Madhya Pradesh	50000	1000	4800	53.400	80.100
19	Maharashtra	180000	1000	4800	53.400	80.100
20	Manipur	150	25	120	1.335	2.003
21	Meghalaya	200	25	120	1.335	2.003
22	Mizoram	1700	102	489.6	5.447	8.170
23	Nagaland	100	25	120	1.335	2.003
24	Odisha	4500	270	1296	14.418	21.627
25	Puducherry	100	25	120	1.335	2.003
26	Punjab	50000	1000	4800	53.400	80.100
27	Rajasthan	110000	1000	4800	53.400	80.100
28	Sikkim	100	25	120	1.335	2.003
29	Tamil Nadu	4000	240	1152	12.816	19.224
30	Telangana	400	25	120	1.335	2.003
31	Tripura	3000	180	864	9.612	14.418

32	Uttarakhand	1500	90	432	4.806	7.209
33	Uttar Pradesh	30000	1000	4800	53.400	80.100
34	West Bengal	1000	60	288	3.204	4.806
	Total	666250				



RMS Communication and Security Architecture- PM KUSUM National Portal

Disclaimer

- This report has been prepared on the basis set out in KPMG's contract for 'Service Provider for Supporting Structural Reforms in the Indian Power Sector' with the Secretary of State for International Development at the Department for International Development ("the Client").
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4. Communication Modes.....	5
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6. MQTT Message Structure	6

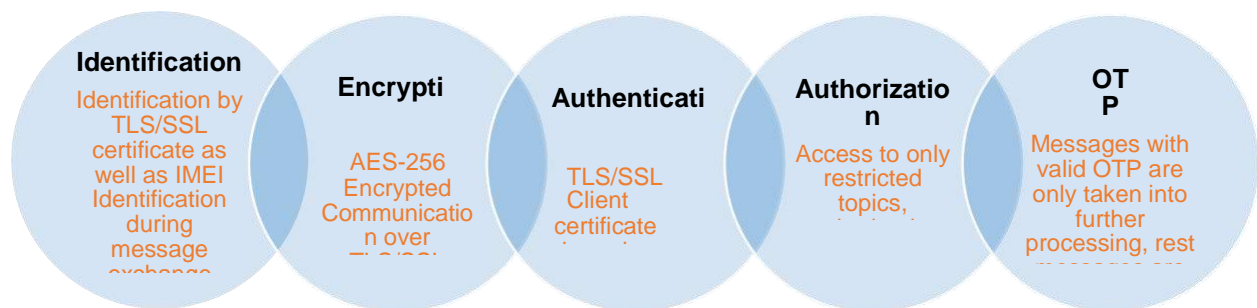
RMS Communication & Security Architecture

1. Security Architecture (with reference to EESL Tender Annexure 8 – clause 4.d)
2. RMS Registration (with reference to EESL Tender Annexure 8 – clause 4.d)
3. MQTT Topic Structure (with reference to EESL Tender Annexure 8 – clause 4.b,4.c)
4. MQTT Message Structure (with reference to EESL Tender Annexure 8 – clause 4.e,4.f)
5. Annexure: JSON Formats with parameter keywords, sample values and description
 - a. Annexure: Pump Controller
 - b. Annexure: Energy Meter
 - c. Annexure: Inverter
 - d. Annexure: String Combiner Box (SJB)
 - e. Annexure: Heartbeat
 - f. Annexure: DAQ

1. Security Architecture

This section highlights the communication security architecture between RMS/DCU and State SWPS IoT Platform. With this security, architecture, third parties are unable to intercept or “sniff” the encrypted data. This stops ISPs, employers, local network administrators and cybercriminals from being able to perform “packet sniffing” to access what the traffic contains. It also protects against man in the middle (MitM) attacks. This implements Private TLS/SSL VPN to ensure highest level of security.

In additional to this, use of OTP in every message exchange shall help restrict spammers and Bots. Such OTP based mechanism will provide transaction level security which is required for remote operations.



2. RMS Registration

This section details how individual RMS/DCU shall be registered and communicate securely with State SWPS IoT Platform.

- Every supplier/vendor must Register all unique IMEI (International Mobile Equipment Identity) of RMS/DCU with State SWPS
- State SWPS will generate individual client certificate for RMS/DCU against unique IMEI registered and share with supplier/vendor through secured web API interface.
- Every supplier/vendor shall be able to access web API with unique credentials shared with them.
- Web API shall return individual client certificate, Device Broker url and “info” topic.
- After installation of client certificate relevant to IMEI of RMS/DCU, RMS/DCU will connect to Device Broker and get authenticated using client certificate and further shall be able to receive additional configuration details such as FTP credential, Message Topic structure etc. after subscribing to default topic.
- After client certificate expiry, RMS will connect to FTP using available credentials and download the renewed certificate

3. MQTT Topic Structure

This section defines the different topic structure for communication between RMS/DCU and State SWPS through Device Broker.

RMS/DCU will publish and subscribe to their respective topics only, authorization of topic shall be done against unique credentials.

Application Version	Solution	IMEI	Message Type	Publish/Subscribe
IIOT-1	Standalonesolarpump	{IMEI}	Info	Subscribe
	Gridconnectedsolarpump		OTP	Subscribe
	SolarMW		Heartbeat	Publish
	Ongriidrooftop		Data	Publish
	Offgridrooftop		Ondemand	Subscribe
			Config	Subscribe

Sample Topic structure for Stand-alone Solar Pump shall be: **IIOT-1/Standalonesolarpump/{IMEI}/info**

Multiple sub-topics will be formed for communication between RMS/DCU and sate SWPS IoT Platform

- **Info:** Default Topic To exchange RMS/DCU configuration details
- **OTP:** To exchange OTP at every interval of 15/30/60 minutes
- **Heartbeat:** To update RMS/DCU health indicators at frequent configurable intervals.
- **Data:** To exchange data related to RMS/DCU Monitoring parameters in “**push mode**”
 - Push data Periodically
 - Push data on Event/Notification
 - History Missing Data Push Mode: History data will be identified against “**index**”

- **Ondemand:** To exchange data between RMS/DCU and Server in “**Command on Demand**” Mode
 - Each “On Demand” message will have two transactions: Commands, Response.
 - On demand command and response will be tracked against a common “**MSGID**”.
 - On demand message can be used to read and write with two command types
 - Command: “**Read**” - In json received from server replace each key with value from RMS/DCU and send the updated json back to server.
 - Command: “**Write**” - After executing the command based on key-value pair received in json, send the updated json back to server on successful execution.
 - Note: handshaking parameters such as msgid, etc. has to send back to server as is, without modification
- **Config:** To update configurable parameters of Device, which is similar to Ondemand but will be used only for configurable parameters of Device, this implements “**Configuration over the air**”
 - Command: “**Read**” - In json received from server replace each key with value from RMS/DCU and send the updated json back to server.
 - Command: “**Write**” - After executing the command based on key-value pair received in json, send the updated json back to server on successful execution.
 - Note: handshaking parameters such as msgid, etc. has to send back to server as is, without modification

4. Communication Modes

- **Push on Periodic Interval:** In this mode deployed RMS shall transmit data of Multiple devices and sensors on different configurable time intervals such as Inverter or pump controller data at every 5 minutes, Energy Meter data at every 15 minutes, String Combiner Box data at every 10 minutes
- **Push on Event:** RMS shall detect various configurable alarm or event conditions such as Pump On / Off Status, Inverter On/Off Status, Low Water Flow Rate, Fault or Trip status etc. and It shall transmit data immediately to the server
- **On Demand Read:** In this mode, User will send command to RMS to get data as and when required and RMS will send the required data to server immediately
- **On Demand Write:** In case of Remote Operations, Farmer / Consumer shall send On Demand Write Command to the RMS and RMS will send back the acknowledgement with change in parameters after operation is completed
- **Configuration read/write:** Using this mode, user will be able to read and change configurable parameters remotely such as updating periodic interval, alarm limits, server parameters etc.

5. Communication Protocols

- **Field Device Communication:** RMS to Field Devices communication such as Inverter, Pump Controller, Drive, String Combiner box, MFT/MFM, Data Acquisition System shall be established using **MODBUS RTU protocol** supported by all leading manufacturers globally

- **Energy Meter Communication:** RMS to Energy Meter communication such as Bidirectional (Revenue) Meter, Solar Generation (Audit) Meter shall be established using **DLMS/Modbus protocol** supported by all leading meter manufacturers in India
- **RMS to Server Communication - Industrial IoT MQTT Protocol:** RMS to Server Communication shall be established using MQTT protocol which is well accepted IoT protocol across the globe and supported by all leading IT as well as OT companies for Smart Grid, Smart RE and Smart City Applications

6. MQTT Message Structure

This section details message structure exchanged between RMS/DCU and state SWPS IoT Platform through Device Broker

keyword	Description	Sample Value
IMEI	Unique Identification of RMS/DCU – required to ensure registered source of data	863287049443888
VD	Virtual device/group – required for grouping parameters based on update interval/subsystems such as inverter/pump controller/meter/string combiner box etc.	2
MSGID	Message Transaction Id - required for “Ondemand”/”Config” message type, request/response/acknowledgement/feedback	123456789
COMMAND	Read/Write - Applicable only in case of “Ondemand”/”Config” message Type	Read
TIMESTAMP	RTC timestamp of RMS/DCU against all parameters of vd/group (YYYY-MM-DD HH:mm:SS)	2019-08-20 20:15:08
STINTERVAL	Periodic interval at which RMS shall store and transmit data to server. (in minutes)	15
DATE	local storage date – required as a reference to fetch data from local storage (YYYY-MM-DD)	2020-06-15
INDEX	Local storage Index – required as a reference to fetch data from local storage	5
MAXINDEX	Local storage maximum index of local storage date – required to calculate missing index	96
LOAD	Local storage retrieval command & status	0
POTP	Previous One Time Password	12345678
COTP	Current One Time Password, State SWPS Broker will update OTP at interval of 30/60 minutes	12345678
Parameter-1 Parameter-2 Parameter-3 Parameter-1 Parameter-n	Equipment wise Keywords for multiple Parameters.	

Communication Format Annexure

Annexure - 1 (Revision – B) Pump Controller

Message Name	: Periodic Push Pump Controller (1)
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message

Not Applicable

Response Message

Message	Description	Unit												
{														
"VD":1	Virtual Device Index/Group	-												
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group	-												
"MAXINDEX":96	maximum index of local storage date	-												
"INDEX":7,	reference of local storage	-												
"LOAD":0,	Local storage retrieval command & status	-												
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)	-												
"MSGID":",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback	-												
"DATE":200518,	local storage date	YYM MDD												
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU	-												
"ASN_11":"34123450",	Pump Controller Serial No. <table border="1"> <tr> <td>RMS</td> <td>0</td> </tr> <tr> <td>DAQ</td> <td>1-9</td> </tr> <tr> <td>Pump Controller</td> <td>11-19</td> </tr> <tr> <td>Meter</td> <td>21-29</td> </tr> <tr> <td>Inverter</td> <td>31-39</td> </tr> <tr> <td>String Combiner Box</td> <td>41-49</td> </tr> </table>	RMS	0	DAQ	1-9	Pump Controller	11-19	Meter	21-29	Inverter	31-39	String Combiner Box	41-49	-
RMS	0													
DAQ	1-9													
Pump Controller	11-19													
Meter	21-29													
Inverter	31-39													
String Combiner Box	41-49													
"POTP":"341234",	Previous One Time Password	-												
"COTP":"341234",	Current One Time Password	-												
"PMAXFREQ1":"50.00",	Maximum Frequency	Hz												
"PFREQLSP1":"50.00",	Lower Limit Frequency	Hz												
"PFREQHSP1":"50.00",	Upper Limit Frequency	Hz												

"PCNTRMODE1": "1",		Solar Pump Controller Control Mode Status	-
0	Variable Frequency Control Mode		
1	CVT Mode for Solar		
2	MPPT mode for Solar		
"PRUNST1": "2",		Solar Pump Controller Run Status	-
0	Stop		
1	Running		
2	Sleep		
3	Low Speed Protection		
4	Dry Run Protection		
5	Over Current Protection		
6	Minimum Power Protection		
"PREFFREQ1": "50.00",		Solar Pump Controller Reference Frequency	Hz
"POPFREQ1": "50.00",		Solar Pump Controller Output Frequency	Hz
"POPI1": "20.00",		Output Current	A
"POPV1": "230.00",		Output Voltage	V
"POPKW1": "45.00",		Output Active Power	KW
"PDC1V1": "550.00",		DC Input Voltage	DC V
"PDC1I1": "50.00",		DC Current	DC I
"PDCVOC1": "650.00",		DC Open Circuit Voltage	DC V
"PDKWH1": "35.00",		Today Generated Energy	KWH
"PTOTKWH1": "120.00",		Cumulative Generated Energy	KWH
"POPFLW1": "2",		Flow Speed	LPM
"POPDWD1": "120",		Daily Water Discharge	Litres
"POPTOTWD1": "220",		Total Water Discharge	Litres
"PMAXDCV1": "750.00",		Max DC Voltage	DC V
"PMAXDCI1": "40.00",		Max DC Current	DC I
"PMAXKW1": "650.00",		Max Output Active Power	DC KW
"PMAXFLW1": "650",		Max Flow Speed	LPM
"PDHR1": "8.00",		Pump Day Run Hours	Hrs
"PTOTHR1": "8.00",		Pump Cumulative Run Hours	Hrs
}			

Reaction	
Not Applicable	

Communication Format Annexure

Annexure - 2 Energy Meter

Message Name	: Periodic Push Meter (1)
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message

Not Applicable

Response Message

Message	Description												
{													
"VD":2	Virtual Device Index/Group												
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group												
"MAXINDEX":96	maximum index of local storage date												
"INDEX":7,	reference of local storage												
"LOAD":0,	Local storage retrieval command & status												
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)												
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback												
"DATE":200518,	local storage date												
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU												
"ASN_21":12345678,	Asset Serial Number <table border="1"> <tr> <td>RMS</td> <td>0</td> </tr> <tr> <td>DAQ</td> <td>1-9</td> </tr> <tr> <td>Pump Controller</td> <td>11-19</td> </tr> <tr> <td>Meter</td> <td>21-29</td> </tr> <tr> <td>Inverter</td> <td>31-39</td> </tr> <tr> <td>String Combiner Box</td> <td>41-49</td> </tr> </table>	RMS	0	DAQ	1-9	Pump Controller	11-19	Meter	21-29	Inverter	31-39	String Combiner Box	41-49
RMS	0												
DAQ	1-9												
Pump Controller	11-19												
Meter	21-29												
Inverter	31-39												
String Combiner Box	41-49												
"MTDET1":30012302,	Meter Detail												
"POTP":"34123450",	Previous One Time Password												
"COTP":"34123450",	Current One Time Password												
"MTBLDATE1":18,	Billing Date for meter 1												
"DATE1":180606,	Present date for meter1												
"TIME1":105400,	Present time for meter1												
"IR1":20.58,	R Phase Current in Amps												
"IY1":20.65,	Y Phase Current in Amps												
"IB1":20.12,	B Phase Current in Amps												
"VRN1":240.12,	R Phase to Neutral Voltage in Volts												

"VYN1":242.13,	Y Phase to Neutral Voltage in Volts
"VBN1":243.55,	B Phase to Neutral Voltage in Volts
"VRY1":420.18,	Phase to Phase Voltage(R-Y) in Volts
"VYB1":419.38,	Phase to Phase Voltage(Y-B) in Volts
"VBR1": 421.5,	Phase to Phase Voltage(B-R) in Volts
"PFR1":0.98,	R Phase Power Factor
"PFY1":0.97,	Y Phase Power Factor
"PFB1":0.96,	B Phase Power Factor
"FRQ1":50.05,	Grid Frequency
"POWR1":42.578,	R Phase Active Power in KW
"POWY1":42.156,	Y Phase Active Power in KW
"POWB1":42.354,	B Phase Active Power in KW
"POW1":42.185,	Total Active Power in KW
"RPOWR1":22.123,	R Phase Reactive Power in KVAR
"RPOWY1":20.110,	Y Phase Reactive Power in KVAR
"RPOWB1":22.310,	B Phase Reactive Power in KVAR
"RPOW1":65.610,	Total Reactive Power in KVAR
"APOWR1":55.610,	R Phase Apparent Power in KVA
"APOWY1":52.910,	Y Phase Apparent Power in KVA
"APOWB1":53.911,	B Phase Apparent Power in KVA
"APOW1":14.198,	Total Apparent Power in KVA
"KWHNET1":98561.4,	Cumulative Net Energy in KWH
"KWHIMP1":98561.4,	Cumulative Import Energy in KWH
"KWHEXP1":98561.2,	Cumulative Export Energy in KWH
"KVAHNET1":99100.3,	Cumulative Net Energy in KVAH
"KVAHIMP1":99105.1,	Cumulative Import Energy in KWH
"KVAHEXP1":98999.1,	Cumulative Export Energy in KWH
"MDKWIMP1":100.3,	Rising Demand (Import) in KW
"MDKWEXP1":98.6,	Rising Demand (Export) in KW
"POFF1":1020,	Grid Power Failure in Minutes
"TC1":100,	Total Tamper Counts
"PF1":0.99,	Average PF
"LBKWHNET1":98561,	Last Billing Cycle Net Energy in KWH
"LBKWHIMP1":98561,	Last Billing Cycle Import Energy in KWH
"LBKWHEXP1":98561,	Last Billing Cycle Export Energy in KWH
"PMDKVAIMP1":22.50,	Present MD KVA Import
"PMDKVAEXP1":0.00,	Present MD KVA Import
"LBMDKWIMP1":7.07,	Last Billing MD KW Import
"LBMDKWEXP1":0.00,	Last Billing MD KW Export
"LBMDKVAIMP1":7.07,	Last Billing MD KVA Import
"LBMDKVAEXP1":0.00,	Last Billing MD KVA Export
"MDRSTC1":4	MD Reset Count
}	

Reaction	
Not Applicable	

Communication Format Annexure

Annexure – 3 Inverter

Message Name	: Inverter Periodic Push (INVERTER-1)
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message

Not Applicable

Response Message

Message	Description												
{													
"VD":5	Virtual Device Index/Group												
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group												
"MAXINDEX":96	maximum index of local storage date												
"INDEX":7,	reference of local storage												
"LOAD":0,	Local storage retrieval command & status												
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)												
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback												
"DATE":200518,	local storage date												
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU												
"ASN_31":"34123450",	Inverter Serial No. <table border="1"> <tr> <td>RMS</td> <td>0</td> </tr> <tr> <td>DAQ</td> <td>1-9</td> </tr> <tr> <td>Pump Controller</td> <td>11-19</td> </tr> <tr> <td>Meter</td> <td>21-29</td> </tr> <tr> <td>Inverter</td> <td>31-39</td> </tr> <tr> <td>String Combiner Box</td> <td>41-49</td> </tr> </table>	RMS	0	DAQ	1-9	Pump Controller	11-19	Meter	21-29	Inverter	31-39	String Combiner Box	41-49
RMS	0												
DAQ	1-9												
Pump Controller	11-19												
Meter	21-29												
Inverter	31-39												
String Combiner Box	41-49												
"POTP":"34123450",	Previous One Time Password												
"COTP":"34123450",	Current One Time Password												
"IST1":1,	Inverter Status												
"IFREQ1":40,	Frequency												
"IPF1":0.8,	Power Factor												
"IDC1V1":500,	DC-1 Voltage												
"IDC1I1":200,	DC-1 Current												
"IDC1KW1":200,	DC-1 Power												
"IDC2V1":243.55,	DC-2 Voltage												

"IDC2I1":420.18,	DC-2 Current
"IDC2KW1":200,	DC-2 Power
"IDC3V1":419.38,	DC-3 Voltage
"IDC3I1":421.8,	DC-3 Current
"IDC3KW1":200,	DC-3 Power
"IDC4V1":0.98,	DC-4 Voltage
"IDC4I1":0.97,	DC-4 Current
"IDC4KW1":200,	DC-4 Power
"IRPHV1":0.96,	R phase voltage
"IRPHI1":50.05,	R phase current
"IRPHKW1":50.05,	R phase Active Power
"IYPHV1":42.578,	Y phase voltage
"IYPHI1":42.156,	Y phase current
"IYPHKW1":50.05,	Y phase Active Power
"IBPHV1":42.354,	B phase voltage
"IBPHI1":42.185,	B phase current
"IBPHKW1":50.05,	B phase Active Power
"IKW1":22.123,	Active Power
"ITKWH1":20.110,	Today Generated Energy
"ITON1":22.310,	Today On Time of Inverter
"ILKWH1":65.610,	Life time Generated Energy
"ILON1":55.610,	Life time running hours
"ITEMP1":52.910,	Inverter Temperature
"IFT1":53.911,	Fault-1
"IFT2":14.198,	Fault-2
"IFT3":98561.4,	Fault-3
"IFT4":98561.4,	Fault-4
"IFT5":98561.2,	Fault-5
"IKVA1":99100.3,	Apparent power
"IKVAR1":99105.1	Reactive power
}	

Reaction	
Not Applicable	

Communication Format Annexure

Annexure - 4 String Combiner Box

Message Name	: Periodic Push String Combiner Box
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message

Not Applicable

Response Message

Message	Description												
{													
"VD":9	Virtual Device Index/Group												
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group												
"MAXINDEX":96	maximum index of local storage date												
"INDEX":7,	reference of local storage												
"LOAD":0,	Local storage retrieval command & status												
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)												
"MSGID":"","	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback												
"DATE":200518,	local storage date												
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU												
"ASN_41":"34123450",	SJB Serial no <table border="1"> <tr> <td>RMS</td> <td>0</td> </tr> <tr> <td>DAQ</td> <td>1-9</td> </tr> <tr> <td>Pump Controller</td> <td>11-19</td> </tr> <tr> <td>Meter</td> <td>21-29</td> </tr> <tr> <td>Inverter</td> <td>31-39</td> </tr> <tr> <td>String Combiner Box</td> <td>41-49</td> </tr> </table>	RMS	0	DAQ	1-9	Pump Controller	11-19	Meter	21-29	Inverter	31-39	String Combiner Box	41-49
RMS	0												
DAQ	1-9												
Pump Controller	11-19												
Meter	21-29												
Inverter	31-39												
String Combiner Box	41-49												
"POTP":"34123450",	Previous One Time Password												
"COTP":"34123450",	Current One Time Password												
"SI11":"3.00",	SJB1, Channel1 Current												
"SI21":"5.00",	SJB1, Channel2 Current												
"SI31":"5.00",	SJB1, Channel3 Current												
"SI41":"5.00",	SJB1, Channel4 Current												
"SI51":"5.00",	SJB1, Channel5 Current												

"SI61": "5.00",	SJB1, Channel6 Current
"SI71": "5.00",	SJB1, Channel7 Current
"SI81": "5.00",	SJB1, Channel8 Current
"SI91": "5.00",	SJB1, Channel9 Current
"SI101": "5.00",	SJB1, Channel10 Current
"SI111": "5.00",	SJB1, Channel11 Current
"SI121": "5.00",	SJB1, Channel12 Current
"SI131": "5.00",	SJB1, Channel13 Current
"SI141": "5.00",	SJB1, Channel14 Current
"SI151": "5.00",	SJB1, Channel15 Current
"SI161": "5.00",	SJB1, Channel16 Current
"SI171": "5.00",	SJB1, Channel17 Current
"SI181": "5.00",	SJB1, Channel18 Current
"SI191": "5.00",	SJB1, Channel19 Current
"SI201": "5.00",	SJB1, Channel20 Current
"SI211": "5.00",	SJB1, Channel21 Current
"SI221": "5.00",	SJB1, Channel22 Current
"SI231": "5.00",	SJB1, Channel23 Current
"SI241": "5.00",	SJB1, Channel24 Current
"SDCV1": "635.00",	SJB1, DC Voltage
"SDCTOTI1": "40.00",	SJB1, Total DC Current
"SDCTOTKW1": "28.00",	SJB1, Total DC Power
"SDI11": "1.00",	SJB1, Digital Input1
"SDI21": "1.00",	SJB1, Digital Input2
"ST11": "1.00",	SJB1, Temperature1
"ST21": "1.00",	SJB1, Temperature2
"ST31": "1.00"	SJB1, Temperature3
}	

Reaction	
Not Applicable	

Communication Format Annexure

Annexure – 5 RMS

Message Name	: RMS
Message Format	: JSON
Message Type	: Heartbeat
Message Command Flow	: Not Applicable
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message

Not Applicable

Response Message

Message	Description
{	
"VD":0	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU
"POTP":"341234",	Previous One Time Password
"COTP":"341234",	Current One Time Password
"GSM":1,	Device connected to GSM network
"SIM":1,	SIM detected (1 - detected)
"NET":1,	Device in Network (1 - in network)
"GPRS":"1",	GPRS connected (1 - connected)
"RSSI":22,	Signal Strength
"SD":"1",	SD card detected (1 - detected)
"ONLINE":1,	Device Online (1- Online)
"GPS":1,	GPS Module Status (1-ON,0-OFF)
"GPSLOC":1,	GPS Location Locked
"RF":1,	RF Module Status (1-ON,0-OFF)
"RTCDATE":180918,	RTC Date
"RTCTIME":175800,	RTC Time
"TEMP":45.5,	Device Temperature

"LAT":19.06,	Latitude from gps
"LONG":72.8777,	Longitude from gps
"SIMSLOT":1,	Sim Slot (Current Sim Slot: 1 or 2)
"SIMCHNGCNT":10,	Total Sim Slot Change Count
"FLASH":1,	Device Flash Status 1: Detected 0: Error
"BATTST":0,	Battery Input Status: 1 if on battery power else 0
"VBATT":5.0,	Battery Voltage
"PST":1	Power Supply (1-Mains, 2-Battery)
}	

Reaction	
Not Applicable	

Annexure – 6 DAQ System

Message Name	: Periodic Push DAQ System
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message

Not Applicable

Response Message

Message	Description
{	
"VD":12	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU
"POTP":"34123450",	Previous One Time Password
"COTP":"34123450",	Current One Time Password
"AI11":45.5,	Analog Input – 1
"AI21":45.5,	Analog Input – 2
"AI31":45.5,	Analog Input – 3
"AI41":45.5,	Analog Input – 4
"DI11":1,	Digital Input – 1
"DI21":0,	Digital Input – 2
"DI31":1,	Digital Input – 3
"DI41":0,	Digital Input – 4
"DO11":1,	Digital Output – 1
"DO21":1,	Digital Output – 2
"DO31":1,	Digital Output – 3
"DO41":1	Digital Output – 4
}	

Reaction

Not Applicable

Annexure – 7

Message Name : On Demand Read/Write Parameter/Keyword
 Message Format : JSON
 Message Type : Config
 Message Command Flow : Cloud Server-> RMS
 Message Response Flow : RMS -> Cloud Server
 Message Medium : GPRS

Command Message	
Message	Description
{	
"timestamp": "2018-09-18 17:58:00",	
"type": "config",	
"cmd": "write",	To write config
"msgid": "130",	Server Auto Generated
"APN1": "www"	APN Value for sim1
"USR1": "string"	sim1 user name
"PASS1": "string"	sim1 password
"APN2": "Internet"	APN Value for sim2
"USR2": "string"	Sim2 user name
"PASS2": "string"	Sim2 password
"RESTART": 1	To restart DCU, 1 : Execute command
"UPDATEINTERVAL": 15	Enter update interval in mins.
"HEARTINTERVAL": 5	Heartbeat Update Interval in mins
"URTCDATE": 200622	DCU RTC Date (YYMMDD) Update
"URTCTIME": 220312	DCU RTC Time (HH:MM:SS) Update - 24 hour format
"UPDATERTC": 1	Update RTC, 1: Execute command, 0 : Successful execution
"GSMSYNC": 1	RTC auto GSM synchronization, 1: to execute command
"DO1": 1	Pump Remote ON/OFF Operation (1-ON, 0-OFF)
"AI1ZERO": 1	Engineering Zero Value (4 mA dc) for AI1 E.G. 0(LPM)

"AI1SPAN":100	Engineering Span Value (20 mA dc) for AI1 E.G. 5000(LPM)
"AI2ZERO":1	Engineering Zero Value (4 mA dc) for AI2
"AI2SPAN":100	Engineering Span Value (20 mA dc) for AI2
"AI3ZERO":1	Engineering Zero Value (4 mA dc) for AI3
"AI3SPAN":100	Engineering Span Value (20 mA dc) for AI3
"AI4ZERO":1	Engineering Zero Value (4 mA dc) for AI4
"AI4SPAN":100	Engineering Span Value (20 mA dc) for AI4
"URL": "rms1.kusumiiot.co"	URL of Broker Server
"PORT":8883	Port of Broker Server
"CID": "d:860906045525646\$standalonesolarpump\$27"	Unique Client id of device
"USERNAME": "860906045525646\$standalonesolarpump\$27"	Username for device authentication
"PASSWORD": "9e0baa73"	Password for device authentication
"FTPPURL": "rms1.kusumiiot.co"	URL for FTP
"FTPUSER": "866191037709301"	Username for FTP
"FTPPASS": "908552f"	Password for FTP
"FTPPORT":22	Port for FTP
"FTPDOWN":1	Download Certificates from ftp 1: To execute command, 0: Command is successfully executed
}	

Response Message	
Message	Description
{	
"timestamp": "2018-09-18 17:58:00",	

"type": "config",	
"cmd": "write",	To write config
"msgid": "130",	Server Auto Generated
"APN1": "www"	APN Value for sim1
"USR1": "string"	sim1 username
"PASS1": "string"	sim1 password
"APN2": "Internet"	APN Value for sim2
"USR2": "string"	Sim2 username
"PASS2": "string"	Sim2 password
"RESTART": 1	To restart DCU, 1: Execute command
"UPDATEINTERVAL": 15	Enter update interval in mins.
"HEARTINTERVAL": 5	Heartbeat Update Interval in mins
"URTCDATE": 200622	DCU RTC Date (YYMMDD) Update
"URTCTIME": 220312	DCU RTC Time (HH:MM: SS) Update - 24 hour format
"UPDATERTC": 1	Update RTC, 1: Execute command, 0 : Successful execution
"GSMSYNC": 1	RTC auto GSM synchronization, 1: to execute command
"DO1": 1	Pump Remote ON/OFF Operation (1-ON, 0-OFF)
"AI1ZERO": 1	Engineering Zero Value (4 mA dc) for AI1 E.G. 0(LPM)
"AI1SPAN": 100	Engineering Span Value (20 mA dc) for AI1 E.G. 5000(LPM)
"AI2ZERO": 1	Engineering Zero Value (4 mA dc) for AI2
"AI2SPAN": 100	Engineering Span Value (20 mA dc) for AI2
"AI3ZERO": 1	Engineering Zero Value (4 mA dc) for AI3

"AI3SPAN":100	Engineering Span Value (20 mA dc) for AI3
"AI4ZERO":1	Engineering Zero Value (4 mA dc) for AI4
"AI4SPAN":100	Engineering Span Value (20 mA dc) for AI4
"URL": "rms1.kusumiiot.co"	URL of Broker Server
"PORT":8883	Port of Broker Server
"CID": "d:860906045525646\$standalonesolarpump\$27"	Unique Client id of device
"USERNAME": "860906045525646\$standalonesolarpump\$27"	Username for device authentication
"PASSWORD": "9e0baa73"	Password for device authentication
"FTPUURL": "rms1.kusumiiot.co"	URL for FTP
"FTPUSER": "866191037709301"	Username for FTP
"FTPPASS": "908552f"	Password for FTP
"FTPPORT":22	Port for FTP
"FTPDOWN":1	Download Certificates from ftp 1: To execute command, 0: Command is successfully executed
}	

Command Message	
Command – B. In case, if some key in command are invalid	
Message	Description
{	
"timestamp": "2018-09-18 17:58:00",	
"type": "config",	
"cmd": "write",	to write config
"msgid": "130",	server auto generated
"APNN1": 2	send value "2"
"USR1": "xyz"	send value "xyz"
}	

Response Message	
Message	Description
{	
"timestamp": "2018-09-18 17:58:00",	
"type": "config",	
"cmd": "write",	to write config
"msgid": "130",	server auto generated
"APNN1": 0	invalid Key, value will be returned '0'
"USR1": "xyz"	actual value received
}	

Reaction	
Not Applicable	

Communication Format Annexure

Annexure - 8 USPC

Message Name	: Periodic Push USPC
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message

Not Applicable

Response Message

Message	Description	Unit												
{														
"VD":1	Virtual Device Index/Group	-												
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group	-												
"MAXINDEX":96	maximum index of local storage date	-												
"INDEX":7,	reference of local storage	-												
"LOAD":0,	Local storage retrieval command & status	-												
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)	-												
"MSGID":",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedba Ck	-												
"DATE":200518,	local storage date	YYM MDD												
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU	-												
"ASN_11":"34123450",	Pump Controller Serial No. <table border="1"> <tr> <td>RMS</td> <td>0</td> </tr> <tr> <td>DAQ</td> <td>1-9</td> </tr> <tr> <td>Pump Controller / USPC</td> <td>11-19</td> </tr> <tr> <td>Meter</td> <td>21-29</td> </tr> <tr> <td>Inverter</td> <td>31-39</td> </tr> <tr> <td>String Combiner Box</td> <td>41-49</td> </tr> </table>	RMS	0	DAQ	1-9	Pump Controller / USPC	11-19	Meter	21-29	Inverter	31-39	String Combiner Box	41-49	-
RMS	0													
DAQ	1-9													
Pump Controller / USPC	11-19													
Meter	21-29													
Inverter	31-39													
String Combiner Box	41-49													
"POTP":"341234",	Previous One Time Password	-												
"COTP":"341234",	Current One Time Password	-												
"PMAXFREQ1":"50.00",	Maximum Frequency	Hz												
"PFREQLSP1":"50.00",	Lower Limit Frequency	Hz												
"PFREQHSP1":"50.00",	Upper Limit Frequency	Hz												

"PCNTRMODE1": "1",		Solar Pump Controller Control Mode Status	-
0	Variable Frequency Control Mode		
1	CVT Mode for Solar		
2	MPPT mode for Solar		
"PRUNST1": "2",		Solar Pump Controller Run Status	-
0	Stop		
1	Running		
2	Sleep		
3	Low Speed Protection		
4	Dry Run Protection		
5	Over Current Protection		
6	Minimum Power Protection		
"PREFFREQ1": "50.00",		Solar Pump Controller Reference Frequency	Hz
"POPFREQ1": "50.00",		Solar Pump Controller Output Frequency	Hz
"POPI1": "20.00",		Output Current	A
"POPV1": "230.00",		Output Voltage	V
"POPKW1": "45.00",		Output Active Power	KW
"PDC1V1": "550.00",		DC Input Voltage	DC V
"PDC1I1": "50.00",		DC Current	DC I
"PDCVOC1": "650.00",		DC Open Circuit Voltage	DC V
"PDKWH1": "35.00",		Today Generated Energy	KWH
"PTOTKWH1": "120.00",		Cumulative Generated Energy	KWH
"POPFLW1": "2",		Flow Speed	LPM
"POPDWD1": "120",		Daily Water Discharge	Litres
"POPTOTWD1": "220",		Total Water Discharge	Litres
"PMAXDCV1": "750.00",		Max DC Voltage	DC V
"PMAXDCI1": "40.00",		Max DC Current	DC I
"PMAXKW1": "650.00",		Max Output Active Power	DC KW
"PMAXFLW1": "650",		Max Flow Speed	LPM
"PDHR1": "8.00",		Pump Day Run Hours	Hrs
"PTOTHR1": "8.00",		Pump Cumulative Run Hours	Hrs
"UDKWH1": "35.00",		Channel 1 Today Generated Energy of USPC	KWH
"UTOTKWH1": "120.00",		Channel 1 Cumulative Generated Energy of USPC	KWH
"UDHR1": "4.78",		Channel 1 USPC Day Run Hours	Hrs
"UTOTHR1": "13.94",		Channel 1 USPC Cumulative Run Hours	Hrs
"UOPI1": "20.00",		Channel 1 Output Current	A
"UOPV1": "230.00",		Channel 1 Output Voltage	V
"UOPKW1": "45.00",		Channel 1 Output Active Power	KW
"URUNST1": 1		Channel 1 Run Status : 1 – ON, 0 – OFF	
"UFLTST1": 1		Chanel 1 Fault Status 1 – Fault, 0 – No Fault	
"UDKWH2": "35.00",		Channel 2 Today Generated Energy of USPC	KWH
"UTOTKWH2": "120.00",		Channel 2 Cumulative Generated Energy of USPC	KWH

"UDHR2": "4.78",	Channel 2 USPC Day Run Hours	Hrs
"UTOTHR2": "13.94",	Channel 2 USPC Cumulative Run Hours	Hrs
"UOPI2": "20.00",	Channel 2 Output Current	A
"UOPV2": "230.00",	Channel 2 Output Voltage	V
"UOPKW2": "45.00",	Channel 2 Output Active Power	KW
"URUNST2": 1	Channel 2 Run Status : 1 – ON, 0 – OFF	
"UFLTST2": 1	Channel 2 Fault Status 1 – Fault, 0 – No Fault	
"UDKWH3": "35.00",	Channel 3 Today Generated Energy of USPC	KWH
"UTOTKWH3": "120.00",	Channel 3 Cumulative Generated Energy of USPC	KWH
"UDHR3": "4.78",	Channel 3 USPC Day Run Hours	Hrs
"UTOTHR3": "13.94",	Channel 3 USPC Cumulative Run Hours	Hrs
"UOPI3": "20.00",	Channel 3 Output Current	A
"UOPV3": "230.00",	Channel 3 Output Voltage	V
"UOPKW3": "45.00",	Channel 3 Output Active Power	KW
"URUNST3": 1	Channel 3 Run Status : 1 – ON, 0 – OFF	
"UFLTST3": 1	Channel 3 Fault Status 1 – Fault, 0 – No Fault	
"UDKWH4": "35.00",	Channel 4 Today Generated Energy of USPC	KWH
"UTOTKWH4": "120.00",	Channel 4 Cumulative Generated Energy of USPC	KWH
"UDHR4": "4.78",	Channel 4 USPC Day Run Hours	Hrs
"UTOTHR4": "13.94",	Channel 4 USPC Cumulative Run Hours	Hrs
"UOPI4": "20.00",	Channel 4 Output Current	A
"UOPV4": "230.00",	Channel 4 Output Voltage	V
"UOPKW4": "45.00",	Channel 4 Output Active Power	KW
"URUNST4": 1	Channel 4 Run Status : 1 – ON, 0 – OFF	
"UFLTST4": 1	Channel 4 Fault Status 1 – Fault, 0 – No Fault	
"UDKWH5": "35.00",	Channel 5 Today Generated Energy of USPC	KWH
"UTOTKWH5": "120.00",	Channel 5 Cumulative Generated Energy of USPC	KWH
"UDHR5": "4.78",	Channel 5 USPC Day Run Hours	Hrs
"UTOTHR5": "13.94",	Channel 5 USPC Cumulative Run Hours	Hrs
"UOPI5": "20.00",	Channel 5 Output Current	A
"UOPV5": "230.00",	Channel 5 Output Voltage	V
"UOPKW5": "45.00",	Channel 5 Output Active Power	KW
"URUNST5": 1	Channel 5 Run Status : 1 – ON, 0 – OFF	
"UFLTST5": 1	Channel 5 Fault Status 1 – Fault, 0 – No Fault	

Reaction	
Not Applicable	

SECI/C&P/MI/0010/2022-23/Clarification-01

Dated: 17.02.2023

RfS Document for Selection of Vendors for a work contract to Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of Off Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-15 HP capacities in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component-B of PM-KUSUM scheme of MNRE : Clarifications to the queries on the RfS (RfS No. SECI/C&P/MI/00/0010/2022-23)

S. No.	Documents	Clause No.	Existing Clause	Proposed Modifications	Rationale/Remarks	SECI's response
1	SECI000093-4049247	A1 (Page-17 of 66)	1.Standard MMS of 4 Modules for 1 HP. 2. Standard MMS of 6 Modules for 2 HP. 3. Standard MMS of 10 Modules or Combination of standard MMS of 4 Modules and standard MMS 6 Modules for 3 HP. 4.Combination of two standard MMS of 8 Modules or combination of standard MMS of 10 Modules and standard MMS 6 Modules for 5 HP. 5. Combination of three standard MMS of 8 Modules or combination of two standard MMS of 10 Modules and one standard MMS 6 Modules for 7.5 HP.	Tender recommendations on MMS combinations are based on Poly modules however Mono modules shall also be considered. Standard MMS combinations for pumps with Mono PERC modules should be as follows : 1HP - 4MMS. 2HP- 4MMS. 3HP-10MMS or 4MMS+6MMS. 5HP- 10MMS or 6MMS+4MMS, 7.5HP-10MMS+4MMS or 8MMS+6MMS. 10 HP- 10MMS +8MMS or 9MMSx2		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
2	SECI000093-4049247	A2.1.a (Page-17 of 66)	Centre shaft used in structure shall be of : a) For 4, 6 and 8 Modules structure - minimum 139 OD with minimum thickness of 4 mm with base plate minimum 10 mm thickness if used and foundation hardware shall be as per IS 5624.	Diameter lesser than 139mm OD for base poles shall also be permitted for structures which are approved through IIT / IISc / NIT.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
3	SECI000093-4049247	A2.1.b (Page-17 of 66)	For 10 Modules structure - minimum 165 OD with minimum thickness of 4 mm with base plate minimum 20 mm thickness if used and foundation hardware shall be as per IS 5624.	Diameter lesser than 165mm OD for base poles shall also be permitted for structures which are approved through IIT / IISc / NIT.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
4	SECI000093-4049247	A2.3 (Page-17 of 66)	Purlin Mounting Purlins used in the structure shall be made of Cold form steel section as per IS 1079 with minimum thickness of 2 mm.	IS 1079 is hot rolled structural material. Whereas for Cold Formed Steel the standard should be IS 811. Correction is required in the tender.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
5	SECI000093-4049247	A2.12 (Page-17 of 66)	Square washer to be used for all the nut-bolts arrangement.	Round washer shall also be allowed since this is also a standard product.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
6	SECI000093-4049247	3.2.2 (Page-2 of 66)	Specifications of Controller/Drive for Solar Water Pumping Systems- Point 4:- Isolator Switch should be between Solar panels and Controller.	Instead of isolator switch, MCB provision shall be also allowed.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
7	SECI000093-4049247	3.7.1.13 (Page-7 of 66)	Motor shall have suitable provision for earthing to facilitate earthing of the motor as per IS 3043 at the time of installation. In case GI pipes are used for the purpose of earthing the motor, earthing connection may be made to the discharge pipe clamps. However, in case of HDPE/PVC pipes, a separate metallic cable from the motor to the control panel shall be provided and earthing given as if four-core cable is used, the fourth core not connected to the terminals can be used for earthing.	Since the motor , controller and modules are interconnected. The earth pit for these 2 equipment should be same. Please mention clearly that modules have to be earthed separately.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
8	SECI000093-4049247	3.7.2.1 (Page-8 of 66)	At the DC Input side of the controller, it should have protection from an External Surge Protection Device of Type-2 or higher (i.e. Type-1) in accordance with the IEC 61643-31.	Type 2 Surge Protection Devices are meant for applications where there is grid surge voltage. In the current application there is no possibility of grid voltage surge. The risk of voltage surge in a stand alone pump is from a lightning strike only Hence Type 1 SPD is recommended. Most of the controllers will have an MOV on the PCB on the DC side in such cases need for SPD may be eliminated.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
9	SECI000093-4049247	3.4.4 (Page- 4/66)	The pump and all external parts of motor used in submersible pump which are in contact with water, should be of stainless steel of grade 304 or higher as required. Further for submersible pumps used in coastal areas or bores with higher salinity, preferably, stainless steel of grade 316 or higher grade may be used.	Please specify the minimum salinity (in ppm) to be considered for bifurcation between SS304 and SS316. Ideally, this should be considered in terms of free chloride content (in ppm) in the saline water.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
10	SECI000093-4049247	3.7.1-11 (Page-7/66)	Separate earthing conductor shall be provided for controller, pump, motor and SPV array etc. for its connection to the earthing pit and it should be continuous in nature for electrical conductivity. However, in no case, even for the earthing of light current equipment (for example, high voltage testing equipment), should the cross-sectional area of the earthing lead be less than 6 mm ² .	This clause mentions use of minimum 6mm ² earthing cable however there is no clarity if the conductor is copper or Aluminium.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023

11	SECI000093-4049247	3.7.1-19 (Page-8/66)	The earth pits given with the SWPS (i.e. Earth pit(s) for the BoS system (other than LA) and Earth Pit for LA) should be made equipotential bonded to each other.	Please confirm if there should be separate earth pits for each earthing connection. If separate earth pits are required then please categorize as follows: 1) Earth Pit 1 - For Motor , Controller, structure and Module Earthing. 2) Earth Pit 2 - For LA. Earth Pit 1 and Earth Pit 2 shall be bonded.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
12	SECI000093-4049247	3.7.1-19 (Page-8/66)	The earth pits given with the SWPS (i.e. Earth pit(s) for the BoS system (other than LA) and Earth Pit for LA) should be made equipotential bonded to each other.	Please clarify if module to module earthing jumper and separate earthing is necessary. Else vendor will consider structural earthing as common to structure and modules with no jumpers.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
13	SECI000093-4049247	3.7.1-17 (Page-7/66)	A separate earth electrode is required for the dispersion of the lightning current into the ground with suitably low value of the earthing resistance i.e. less than 5 ohm. And the minimum length (11) of vertical earth electrodes for lightning protection level III or higher shall be determined according to the IEC 62305-3.	Please modify the word "Earth Electrode" to Earth Pit. Else it will be misunderstood as earthing conductor connection.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
14	SECI000093-4049247	Annexure 4-I (Note) (Page- 37/66)	MNRE will provide the support for the development of the Mobile App for the PM-KUSUM scheme.	Kind of support is not clarified (Technical / financial), clarification required. Please clarify if the mobile has to fetch data directly from MNRE server or fetching data from OEM server is acceptable.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
15	SECI000093-4049247	1.A.V. ii (Page 38/66)	Auto Mode: - Pump can ON/Off automatically using the sensor data which are installed in the field by the beneficiary. (Cost of sensors will be worn by the beneficiary)	Please specify which type of sensors are to be considered (eg : Moisture , Humidity , Temperature etc.). What are the threshold limits of the various parameters like moisture , temperature , humidity etc to be considered.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
16	SECI000093-4049247	1.A.V. iii (Page 38/66)	Timer Mode: - Pump controller shall operate pump as per configured schedule using mobile application i.e. daily start time and running hours of pump.	If it is expected that the App should communicate to the MNRE server then configuration of ON time and OFF time on the app may not be feasible since the MNRE communication architecture does not support ON Interval and OFF interval setting. Please check.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
17	SECI000093-4049247	3.7.1-19 (Page-8/66)	The earth pits given with the SWPS (i.e. Earth pit(s) for the BoS system (other than LA) and Earth Pit for LA) should be made equipotential bonded to each other.	Clarifications on weather if the LA is GI or Copper Bonded (if copper bonded then tender should specify 80 microns minimum).		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
18	SECI000093-4049247	3.7.1-8 (Page-6/66)	It is recommended for selection of type and installation of the earth electrode the provisions of the IS 3043 should be considered.	Please clarify if earthing electrode should be copper bonded or GI (If copper bonded then tender should specify 80 microns minimum).		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
19	SECI000093-4049247	3.6.5 (Page- 6/66)	All cables used shall be as per IS 694 or IS 9968(Part 1).	Clarity is required if Aluminium Cables can be used for AC side wiring.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
20	SECI000093-4049247	3.6.5 (Page- 6/66)	Suitable size of cable shall be used in sufficient length for inter-connection between the SPV array to SPV Controller and the SPV Controller to solar powered pump set. Selection of the cable shall be as per IS 14536.	Inclusion of % cable voltage losses limited to 3% maximum of the controller output rated voltage and compulsion on submission of calculations is suggested.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
21	SECI000093-4049247	3.6.5 (Page- 6/66)	All cables used shall be as per IS 694 or IS 9968(Part 1).	It should be mandatory to have IS 694 marking on the AC cables and CM/L number so as to avoid low quality cables. This will also become a point of inspection during dispatch clearances.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
22	SECI000093-4049247	3.4.6 (Page- 4/66)	The suction/ delivery pipe shall be of HDPE or uPVC column pipes of appropriate size, electric cables, floating assembly, civil work and other fittings required to install the Motor Pump set.	It should be mandatory to have IS 4984 marking on the pipes with CM/L number so as to avoid low quality pipes. This will also become a point of inspection during dispatch clearances.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
23	SECI000093-4049247	3.4.6 (Page- 4/66)	The suction/ delivery pipe shall be of HDPE or uPVC column pipes of appropriate size, electric cables, floating assembly, civil work and other fittings required to install the Motor Pump set.	It is suggested to use green flexible spiral ribbed pipe for surface pump suction.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
24	SECI000093-4049247	3.6.5 (Page- 6/66)	All cables used shall be as per IS 694 or IS 9968(Part 1).	Clarity is required if flexible double corrugated wall pipes should be used for module to module wiring.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
25	SECI000093-4049247	3.3.2 (Page-3/66)	Modules supplied with the SPV water pumping systems shall have certificate as per IS 14286/IEC 61215 specifications or equivalent National or International/ Standards. Lab certified STC performance data supplied with the modules shall not be more than one year old.	> Submitting STC report for each module supplied to the customer is not practical. However there is an internal flash test report which will be provided with each module which is supplied to the customer. This report is automatically generated during manufacturing of the modules. > Instead the statement should be modified to "The STCs referred in the NABL pump test report should not be more than 1 year old at the time of testing "		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023

26	SECI000093-4049247	6.1 (Page-11/66)	The SPV Water Pumping Systems shall be guaranteed for their performance of the nominal volume rate of flow and the nominal head at the guaranteed duty point under the "Average Daily Solar Radiation" condition of 7.15 KWh/m ² on the surface of SPV array (i.e. coplanar with the Photo Voltaic (PV) Modules). The actual duration of pumping of water on a particular day and the quantity of water pumped could vary depending on the solar intensity, location, season, etc.	Clarity is required on minimum cumulative water discharge or other parameters to be shown in the remote MNRE terminal to qualify the pump for payment after commissioning of the pump.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
27	SECI000093-4049247	1 (Page-41/66)	Guidelines on Testing Procedure for Solar Photovoltaic Water Pumping System	Clarity is required on testing of the pumps. Is test certificate for Highest Head for a particular HP of pump validates the Lower heads of the same HP. Please clarify.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
28	SECI000093-4049247	10.1 & 10.2 (Page 53 & Page 54)	10.1 Computation of Total Head for Surface (Mono-set) Pumps Total Head 10.2 Computation of Total Head for Submersible Pump-sets	Clarification on maximum pipe length to be considered beyond pump discharge point. It is recommended to provide the following : 1) For Submersible : Pump Head in meters + 5m 2) For Surface pump Suction : 7m 3) For Surface pump discharge : No Pipe. As seen from the past experience the customers tend to request for additional pipe as per the location of the field from the pump. Some times customer has also requested from pipe as long as 1km. This is not economically feasible as well as the pressure drop in such cases are very high.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
29	SECI000093-4049247	Annexure4: 1-a-iv (Page- 37/66)	Sensor Connectivity: RMS should have provision for at least two Analog and Digital inputs with 0.1% accuracy to address the requirement of local sensors connectivity if required by SIA/Consumer for applications such as irradiation, flow meter for water discharge, moisture sensor for micro-irrigation, etc.	Please clarify if this tender intends to cover sprinkler related applications. Since these applications require higher balance head to operate the sprinklers. For sprinkler related applications there is a requirement of at least 20m balance head to operate a group of sprinkler connections. Eg if a 100m head pump is operated at 100m depth the balance pressure would be zero hence cannot be used for sprinkler applications. In this case pump should be installed at 80m and balance 20m pressure would be used to operate the sprinklers. Please mention that a balance of 20m shall be considered for sprinkler related applications.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
30	SECI000093-4049247	3.6.5 (Page- 6/66)	Suitable size of cable shall be used in sufficient length for inter-connection between the SPV array to SPV Controller and the SPV Controller to solar powered pump set. Selection of the cable shall be as per IS 14536.	Clarifications on maximum cable length from the borewell to be considered. Recommendation Head + 10m for Submersible pumps and 10m for surface pumps.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
31	SECI000093-4049247	3.6.5 (Page- 6/66)	All cables used shall be as per IS 694 or IS 9968(Part 1).	Recommendation on Joint less Connection from Motor to Controller to prevent Electrical safety hazard and performance issues due to joint failures. Controller should compulsorily have a RYB connector mounted on the body and twisted joint is not recommended.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
32	SECI000093-7633709	39 (iv) Page 32/107	Inspection of installed systems and online submission of completion reports to MNRE along with availability of the accurate data of the parameters of the SPWPS on the central portal of the MNRE.	It is suggested to publish a Commissioning Inspection Checklist as a part of the tender points for ease of payment.		Please refer Quality Control Manual issued by the MNRE
33	SECI000093-7633709	47-Page- No-46	In order to allow States/SIA sufficient time to implement SPWPS based on the prices discovered under this tender, all prices discovered under this tender will remain valid for 24 months from the date of opening the price bids, which will be announced by MNRE/SECI. Within this 24-month period, empanelled vendors have no right of refusal to complete the allocated work.	Price validity should be 12 months from the bid submission date.		The clause remains unchanged
34	SECI000093-7633709	Clause 3.4- Page No-12	Selected Vendor should keep necessary spare parts (minimum 2% of allotted quantity of each component of the complete system at the service center) at each district and should ensure proper maintenance of SPWPS to 5 years from date of installation of each SPWPS. Vendor	2% spares with service centre in district should be considered if the Installed Qty in that district is more than 2000 Pumps. Else we can club qty in neighbouring district and open a common service centre for 3 to 4 district making 2000 pump qty.		The clause remains unchanged
35	SECI000093-7633709	clause 29.1, Page No-29	Force Majeure Event shall include without limitation the following acts or events: (i) natural phenomena, such as storms, hurricanes, floods, lightning, volcanic eruptions and earthquakes; (ii) explosions or fires arising from lighting or other causes unrelated to the acts or omissions of the Party seeking to be excused from performance; (iii) acts of war or public disorders, civil disturbances, riots, insurrection, sabotage, epidemic, terrorist acts, or rebellion.	Please include quarantine and pandemic in the definition		The clause remains unchanged

36	SECTION 2.	3.1 page no. 9	During the time of PDI of each component, test reports of equipments, warranty certificates, calibration certificates and any other certificates as specified in the guidelines and specification issued by MNRE should be provided by the bidder.		Request you to kindly provide clarification, do the bidders have to submit test reports along with tender? OR bidder has to upload test reports after the issue of LOA?	The suitable amendments are being issued on the clause referred.
37	Operation & Maintenance (O&M), Training, Awareness and Sensitization	3.4 b page no. 11	Any complaint registered registered/service calls received should be attended at the earliest and the system should be repaired/restored/replaced within 3 days from date of complaint received/informed to the vendor	Any complaint registered registered/service calls received should be attended at the earliest and the system should be repaired/restored/replaced within 15 days from the date of complaint received/informed to the vendor	Considering practical difficulties in the field (remote places, network issues, insurance procedures etc.) request you to kindly provide 15 days.	The clause remains unchanged
38	Documents to be Submitted Offline (in Original)	21.1 (II).b.v page no. 24	Cumulative Capacity of the projects applied for: No. of Projects Bid for:		Request you to kindly explain.	The suitable amendments are being issued on the clause referred.
39	Financial Bid (Second Envelope)	21.2.iii page no. 25	The price shall remain firm and fixed and shall be binding on the Selected Vendor irrespective of actual cost of execution of the Project. No escalation on the price will be granted for any reason whatsoever. The Selected Vendor shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever.	Price escalation: Seeing the market fluctuations the prices should be reviewed after every one year.	Considering the high price variation in raw material especially after Covid, we request you to kindly insert Price escalation clause (+,-) in the tender documents, bidders can survive in due to high variations in raw material prices and govt. policies.	The clause remains unchanged
40	Minimum Average Annual Turnover	42.4 page no. 40	In case of the Bidder being a Bidding Consortium, any Member may seek qualification on the basis of financial capability of its Affiliate. In this case, a Bidder can use the credential of only a single affiliate to meet all the financial eligibility criteria.	In case of the Bidder being a Bidding Consortium, both the members cumulatively meet all the financial eligibility criteria. Lead member must have more than 50% credential		The relevant clauses at Clause 41.2 (vi) of the RfS and definition of Lead member in Section VI of RfS are self explanatory.
41	General Eligibility Criteria	40.2 page no. 33	Bidding Consortium with one of the Companies as the Lead Member		a. How many companies/Members allowed in Consortium b. can Company and LLP form Consortium c. Qualification Eligibility requires to fulfill jointly or in the portion of equity capital as mentioned in Consortium Agreement.	a. The suitable amendments are being issued on the clause referred.. b. Allowed. In case such Consortium is declared as Selected Vendor such consortium with LLP. c. The relevant clause at Clause 42.1 (vi) of the RfS of RfS is self explanatory.
42	Financial Eligibility Criteria	42.4 and 51.2 page no. 40.	The Bidder may seek qualification on the basis of financial capability of its Affiliate(s) for the purpose of meeting the qualification requirements as per Clauses 40.1, 40.2 and 40.3 above.		Whether Affiliate(s) includes the Company having Common Director but Bidding Company does not owe any Share Capital in other Company.	Allowed under this RfS.
43	Financial Eligibility Criteria	42.8 page no. 41	In case the response to RfS is submitted by a Consortium, then the financial eligibility requirement to be met by each Member of the Consortium shall be computed in proportion to the equity commitment made by each member in the Project Company		Same criteria applicable for a. Technical Eligibility Criteria b. Minimum Average Annual Turnover c. Liquidity	a. The Technical Eligibility Criteria to be considered for the above purpose will be the cumulative Technical Eligibility of the Bidding Company or Consortium. b. & c. The relevant clause at Clause 42.1 (vi) of the RfS is self explanatory.
44	Recommendation and Issuance of LoAs	48 page no. 45	In case of a Consortium being selected as the Selected Vendor, the LoA shall be issued to the Lead Member of the Consortium.		Kindly issue the experience certificate in the name of member of Consortium as well	RfS doesn't envisage issuing of experience certificate.
45	L-1 Matching and Selection of Selected Vendors	46.3 page no. 45	In all cases, matching of Prices will be on individual line items (for a particular State/UT) within the price bid table on total landed cost (including GST) for complete scope of work.	As per Price Bid Prices are exclusive of GST	Please confirm whether bidder has quoted with GST or without GST.	Prices quoted under this RfS shall be exclusive of GST. Typographical errors if any shall be read as per this clarification.
46	Testing Procedure for Universal Solar Pump Controller (USPC)	Technical Specifications Page no. 63	LCD screen provided on controller need to shows various applications which can be selected by keypad using up-down and enter key		Request to eliminate this requirement.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
47	Earthing and Lightning Protection	3.7.13 Technical Specifications Page no. 7	Motor shall have suitable provision for earthing to facilitate earthing of the motor as per IS 3043 at the time of installation. In case GI pipes are used for the purpose of earthing the motor, earthing connection may be made to the discharge pipe clamps. However, in case of HDPE/PVC pipes, a separate metallic cable from the motor to the control panel shall be provided and earthing given as if four-core cable is used, the fourth core not connected to the terminals can be used for earthing.		Requires clarification on 2 nos. earthing is sufficient for whole system or earthing quantity should be as per number of structures provided.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
48	RfSunderPM-KUSUM_Component-B-Finalupload	Section No. 1, Page No. 35, 36, 37 of 106, Clause No. 41.2 (iv)	Technical Eligibility Criteria: (As per mentioned Table) 1. For Solar Pumps/Controller (number of solar pumps installed/Controller installed or supplied). 2. For Solar PV Modules (Experience in kWp)	Whether both the experience required separately for technical eligibility or any one of them are sufficient to met the Technical Eligibility Criteria. Also can we use similar experience in all states for participation of the same?		The clauses at 41 of RfS are self-explanatory.

49	RfSunderPM-KUSUM_Component-B-Finalupload	Section No. 1, Page No. 5 of 106, Clause No. 1.5	The Bidders will be free to avail fiscal incentives like Accelerated Depreciation, Concessional Customs and Excise Duties, Tax Holidays etc.	Kindly request you to elaborate the same.		The Clause is self-explanatory.
50	RfSunderPM-KUSUM_Component-B-Finalupload	Section No. 1, Page No. 11 of 106, Clause No. 18 (xvi) of sub clause (iv)	Certified copies of annual audited accounts for the last three financial year, i.e., FY 2021-22/2020-21/2019-20, and provisional audited accounts, along with certified copies of Balance Sheet, Profit & Loss Account, Schedules and Cash Flow Statement supported with bank statements as on the date at least 7 days prior to the due date of bid submission (if applicable)	We will be able to provide the final Audited Balance sheet of the last three financial year, i.e., FY 2021-22/2020-21/2019-20.		The clause remains unchanged
51	RfSunderPM-KUSUM_Component-B-Finalupload	Section No. 1, Page No. 23 of 106, Clause No. 21.1	No documents will be accepted in person, on or before the date of bid submission. The bidders will be required to submit the bank guarantee/POI against EMD and DDs/Pay Orders (if applicable) against the bid processing fee, either in person or through post, at the office of SECI until the date as on 2 working days after the closing date of bid submission	Considering the location of offline submission (i.e. New Dehli) of EMD the time slot provided for submission only 2 days after due date, which is not possible practically. Hence kindly request to extends the same for 4-5 days.		The clause remains unchanged
52	RfSunderPM-KUSUM_Component-B-Finalupload	Section No. 1, Page No. 17 of 106, Clause No. 14.2	PBG(s) shall be submitted by selected vendors to SIA within 15 days from issuance of letter of award/empanelment	Submission of PBG should be at least 30 Days due to processing delays from the respective bank.		The clause remains unchanged
53	RfSunderPM-KUSUM_Component-B-Finalupload	Section No. 1, Page No. 29 of 106, Clause No. 31	The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft & burglary etc. during 5 years warranty period.	Insurance clause should be applicable only if claim within 5 days of defects.		The clause remains unchanged
54	SPECIFICATION FOR SOLAR PHOTOVOLTAIC WATER PUMPING SYSTEMS	Annexure A Page 3 of 66 clause 3.3.1	individual PV modules used in the PV array, under STC, should be a minimum of 300 Wp, with adequate provision for measurement tolerances	Required more clarity on Ploy and Mono Panel		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
55	Section - 3	16 Stage II	"In case of non-compliance with terms & conditions of letter of award/ NTP, the payment due date shall start from submission of all necessary documents".	"In case of non-compliance with terms & conditions of letter of award/ NTP, the vendor can rectify the same to be considered for payment". "Due Date shall start from..." should be removed.	Maintaining working capital cycle in a big Project is extremely critical. No payment is given on supply of pumps and all payment is backended, hence delays in payment of balance 10% can affect working capital cycle and inability of the vendor to execute project at a larger scale. It is humbly requested to remove any reference for delay in Payment.	The clause remains unchanged
56	Section - 3	16 Stage 1	Submission of software generated Installation Reports	If Software is not developed at time of installation, this clause will not be applicable. Or Provide for 70% Payment on Supply of Pumps	Software implementations take time so in case software is not developed, Vendor's payments should not be held up and linking it with a software generated installation report (which is not under Vendor's control) will inordinately delay the process.	The clause remains unchanged
57	Section - 2	3.2 - H	Vendor must obtain approval/ NOC from Appropriate govt. body for implementing the project	SIA should obtain approval/ NOC from appropriate government body, if required.	SIA is in a much better position to coordinate with other govt. bodies	The clause remains unchanged
58	Section - 2	3.1 - B	Specific Pump Number and same must be captured by SIA's web application.	If SIA Web based application is not developed at the time of installation, this clause will not be applicable. Or Additional Compensation to be provided to the Vendor for visits after the installation work.	Developing Apps after the installation work has been completed results in a lot of rework by vendors, which is not budgeted for in the initial project cost. As it's a distributed project across remote locations where electricity grid has not reached, reworks not budgeted for in project cost, come out to be very substantial.	The clause remains unchanged
59	Section - 2	3.4 - D	If any selected vendor , after getting empanelled does not go forward with the installation of pumps, apart from encashment of EMD, vendor will be blacklisted...	The exception to this is that beneficiary does not select the vendor as the preferred pump supplier, then the EMD Encashment / Blacklisting clause should not apply . As he can get empanelled but not be awarded pumps for installation	If beneficiary does not select the Vendor, then this clause would not be applicable.	The stitable amendments are being issued on the clause referred.
60	Section - 2	3.4 - g	Selected Vendor shall provide a copy of Valid insurance certificate of SPWPS to the beneficiary.	Selected Vendor shall provide a copy of Valid insurance certificates of all SPWPS to SIA and upload the Insurance certificate on the Kusum Portal for each beneficiary as being done currently.	Insurance certificates are issued by Insurance companies on a combined farmer list that lists all farmers and are are uploaded on the SIA - Kusum website for reference. Getting insurance claims is also Vendor's responsibility. Hence provision for providing certificate to each beneficiary should be removed as this will result in operational changes required at Insurance company level to provide for each farmer , which may be difficult to execute.	The clause remains unchanged
61	Annexure	3.5.4	Specifications of Solar PV Pumping Systems : Module Mounting Structures (MMS) are indicative of minimum standards and an Implementing Agency may specify higher standards which shall be certified by recognised structural engineering department of any IIT/ NIT or IISc	Module Mounting Structures (MMS) are indicative of minimum standards and an Implementing Agency Or Vendor or Structure design company may design higher standards which shall be certified by recognised structural engineering department of any IIT/ NIT or IISc	Last Kusum tenders, allowed for higher standards of design to be certified by recognised structural engineering department of IIT/NIT/IISc. It could come from any company and it did not limit to the implementing agency specifying it. This way new designs could also come up. As its a long 24 month period, it should allow for innovations at all levels to be incorporated in the tender.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023

62		Format 7.16	Price Schedule	Differential Prices should be asked for Poly - M5 Panels and for Mono - M10 Panels as both solar panel pricing and thereby Solar Water Pump System Pricing will be different.	This tender has rate validity & fixed rates for 2 years. The solar module technology is expected to shift from M5 Poly to M10 Mono solar cells and thereby availability of only M10 Mono Solar Panels in future. The prices of Poly and Mono are different. If bidder assumes Poly Panel rates today, and in near future, if only Mono Solar Panels are available, then the project will not be viable for the bidder to execute work. Since rates are fixed for next 2 years, it is requested to take different rates for Poly and Mono Solar Panels. So that companies can work out different pricing for both, which will be competitive rates.	The clause remains unchanged
63	SECTION 2.	3.3 - B	Only Indigenously manufactured solar panels with Indigenous solar cells and modules	We request for 50% of supplies to be DCR with Indigenous Cells and 50% to be Non- DCR Indigenous Modules.	DCR Cell Supplies are limited & it will help to expedite the project.	The clause remains unchanged
64	RIS	3.1 b	Each pump should be marked with Toll Free No. of successful bidder	Helpline number may not be toll-free number	Practically all calls made from mobile phones in the country are free. Toll-free numbers have higher call failure rates as compared to normal numbers causing inconvenience to the beneficiaries. Normal numbers also enable whatsapp support facility which is helpful for beneficiaries.	The clause remains unchanged
65	RIS	3.2 h	Vendor must obtain approval/ NOC from appropriate Govt body for implementing the project in each selected village.	Omit	Village authority have no say in the private affairs of individual farmers	The clause remains unchanged
66	RIS	3.2 I & 15.2	Selected vendor should have finalized sub-bidders and Purchase order for all materials such as PV Modules, Structure, Pump, Controllers, etc. within 30 days from date of award of contract and unpriced copy of such award letter/Purchase order will be submitted within 30 days from date of issuance of award. Successful vendor shall submit the unpriced purchase order copies of solar pump sets, controllers and solar PV modules to SIA within 30 day...	Omit	Since beneficiary selection in a vendor's favour is a rolling process, purchase of material is also a periodic activity over the life of the project. This point is thus not applicable.	The clause remains unchanged
67	RIS	3.2 j	Vendor should commission minimum pumps/ quarter as defined above at Clause 3.2b of Scope of work. Vendor must submit handing over certificates in the format prescribed by MNRE.	Omit	Since beneficiary selects the vendor, this point is not applicable.	The clause remains unchanged
68	RIS	3.4 g	.... including insurance coverage for the installed systems against natural calamities and theft.	Allow for minimum deductible to be passed on to beneficiary	Insurance policies have a minimum deduction clause which requires the policy holder to bear a certain amount (usually ₹10,000) while the rest is covered by insurance. Since the insurance policy is taken on behalf of the beneficiary, the beneficiary should be liable to bear this amount and hence the vendor should be able to pass on this liability to the beneficiary	The clause remains unchanged
69	RIS	3.4 g	CMC will include inspection by Vendor at least once in a quarter and submission of quarterly inspection report of the installed pumps as per prescribed format. Selected Vendor shall provide a copy of valid insurance certificate of SPWPS to the beneficiary and same shall be renewed every year.	Omit	Since systems are uploading data online and beneficiary will have a robust complaint mechanism provided by MNRE/SIA, periodic inspection visits are not required. Breakdowns will be attended to on-demand. Bulk insurance for multiple beneficiaries will be procured. A single policy might cover 100s of beneficiaries. Individual certificates are not generated by the insurance company and hence cannot be handed over to beneficiary.	The clause remains unchanged
70	RIS	13.1	Bidder shall submit Earnest Money Deposit (EMD) in the form of Bank Guarantee of 2 % of amount equivalent to the 6 % of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher,	Bidder shall submit Earnest Money Deposit (EMD) in the form of Bank Guarantee of 2 % of amount equivalent to the 6 % of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher, subject to a maximum of 1000 pumps	As per Section 4, scheme is demand based and hence total number of beneficiaries allocated to a vendor is not fixed at the beginning. Performance bank guarantees' limits will ensure that vendor cannot exceed his capacity to work. This high EMD will block working capital which is detrimental to the implementation of the scheme	The suitable amendments are being issued on the clause referred..
71	RIS	14.1	...Performance Guarantee for a value @ 3% of the amount equivalent to the 6% of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher (as per Annexure-E). ... Along with the first list of consent from beneficiaries in vendor's favor, vendor shall submit another PBG equivalent to differential value of order as per notice to proceed (NTP)	...a Performance Guarantee for a value @ 3% of the amount equivalent to the 6% of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher, subject to a maximum of 1000 numbers of SPWPS (as per Annexure-E). ...	As per Section 4, scheme is demand based and hence total number of beneficiaries allocated to a vendor is not fixed at the beginning. Historically, most SIAs only give a list of 500-1000 beneficiaries initially. There is a provision for the vendor to submit differential PBG in case his beneficiary selection exceeds 1000 SPWPS. Thus, SIA can ensure that the work allocated to the vendor never exceeds his PBG limits. This high EMD will block working capital which is detrimental to the implementation of the scheme	The suitable amendments are being issued on the clause referred..
72	RIS	16 Stage 1	Submission of evidence in hard copy regarding completion of installation of SPWPS in good condition at site duly verified and acknowledged by Engineer-In Charge/SIA and Beneficiary.	Submission of evidence in hard/soft copy regarding completion of installation of SPWPS in good condition at site duly verified and acknowledged by Engineer-In Charge/SIA and Beneficiary.	Allow soft copy submissions also. Discretion with SIA	The clause remains unchanged

73	RIS	16 Stage 1	All the relevant warranty and quality (Performance Test Reports) of the lot to be submitted.	All the relevant warranty and quality (Performance Test Reports) of the lot to be submitted.	Since this has rolling work orders, one time submission is Performance Test reports for a particular pump type must be sufficient. 5 years maintainance is in the scope of vendor, hence warranty is inbuilt.	The clause remains unchanged
74	RIS	16 Stage 1	Performance report for one week after commissioning based on the accurate data of the parameters received from RMS or data logger in case of internet unavailability.	Performance report on the day of commissioning based on the accurate data of the parameters received from RMS or data logger in case of internet unavailability.	Beneficiaries may not turn on their pumps post installation, especially when installation is done in seasons when water is not required. It is not feasible to submit this data in such cases. Data as on date of commissioning should be sufficient.	The clause remains unchanged
75	RIS	40 & 41	Various related to consortium/JV and technical qualification	exemption from the requirement to form an SPV.	There is no benefit in making an SPV when all the on-field work and procurement will be done by EPC/SI. No such condition mandated by MNRE. In the EESL tender, in case of JV, the technical JV partner also had to give an undertaking that in case of a default, both JV partners will be black-listed. Formation of SPV should be required only if the bid is being made as a consortium i.e. no single member is able to meet the Financial Eligibility Criteria or Technical QR of pumps	The suitable amendments are being issued on the clause referred.
76	RIS	41	Technical QR	Limit the maximum number of installed SPWPS for meeting technical qualification to 5000	This will increase the number of vendors who can qualify for the big states and thus ensure that beneficiaries have a wider choice of vendors and that work gets implemented faster. Vendor performance will directly impact their further selection by the beneficiaries due to feedback effect market forces. NO state has the capacity to install >5000 pumps/annum. Experienced EPC/SI will not qualify for the larger states while only module manufacturer will. Large states require atleast 15 agencies for smooth work.	The suitable amendments are being issued on the clause referred..
77	RIS, Annexure E	13, 14, 41, 42, Annexure E	Basis of calculation for technical and financial qualification requirements	Assume 3hp price discovered in Maharashtra as basis for all calculations	Turn-over, EMD & PBG calculations are based on a SPWPS assumed unit price of ₹ 2.67 lakhs. Technical qualification is based on 5hp SPWPS requirement of 4800Wp. What is the basis of these assumptions? In the state with the most number of pumps (MH), >80% of the SPWPS are 3hp & >99% non-USPC. The avg. discovered price for this category of pumps in MH in the previous KUSUM tender was ₹ 1.67 L. This should be the basis of all calculations for this tender.	The clause remains unchanged
78	RIS	45.5	Types of pumps	Pump cooling category should be: Waterfilled/OilFilled	Oil filled motors have lower failure rates than waterfilled motors. This will ultimately benefit the beneficiary due to higher uptime. Allow vendors to choose which type of technology they wish to provide based on their expertise and experience. Beneficiary can also choose between vendors based on their own preferences thus giving greater power of choice to beneficiary.	The suitable amendments are being issued on the clause referred..
79	Annexure A	3.5	Module mounting structure	Allow Al-Zn coated steel (Galvalume) sections to be used	Al-Zn coated steel brings benefits of weight saving, cost saving and aesthetics to the system while maintaining its weather tolerance properties. It is also stronger per KG compared to normal steel sections. Allow its usage for the MMS. If it is verified by premier educational institutes.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
80	Annexure A	3.5.4	Agency may specify higher standards which shall be certified by recognized structural engineering department of any IIT/NIT or IISC	Allow certification from all recognized (ranked) engineering/science institutes	Allow certification from any recognized institute. IITs/NITs are usually overloaded with work from various government agencies. Consider allowing top 100 institutes as per recognized ranking agency like India-Today	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
81	SECTION 4	40.1	The Bidder shall be a Company or a Limited Liability Partnership as defined	We are a EPC Proprietorship firm & we will make a consortium agreement with another Module Manufacturer which is also a Proprietorship firm. So are we allowed to enter into a consortium agreement. If not please allow us as if we are selected, we will go to form a SPV as per consortium agreement.		Under this RIS, sole proprietorship firms are not allowed to participate individually or as a part of consortium. However, LLPs (registered partnership firm) individually as well as part of consortium are allowed
82	SECTION 4	41.2	The bidder should be, either of the following: i. Manufacturer of Solar PV Module or ii. Manufacturer of Solar Pump or iii. Manufacturer of Solar Pump Controller using indigenous technology or iv. EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology.	We are a EPC Proprietorship firm & we will make a consortium agreement with another Module Manufacturer which is also a Proprietorship firm. So are we allowed to enter into a consortium agreement. If not please allow us as if we are selected, we will go to form a SPV as per consortium agreement.		Under this RIS, sole proprietorship firms are not allowed to participate individually or as a part of consortium. However, LLPs (registered partnership firm) individually as well as part of consortium are allowed

83	SECTION 4	42.2	Minimum Average Annual Turnover - The Bidder shall demonstrate a Minimum Average Annual Turnover (MAAT) as per the table below, during the last three financial years, i.e., 2021-22, 2020-21 and 2019-20. It is hereby clarified that "Other Income" as indicated in the annual accounts of the Bidder shall not be considered for arriving at the annual turnover	We request you for taking consideration of best 3 years for MAAT of last 5 Financial Years, because due to COVID-19 turnover of 2 years out of given 3 years are suffered.		The suitable amendments are being issued on the clause referred..
84	SECI000093-7633709-RISunderPM-KUSUM_Component-B-Finalupload	41.2	Technical Eligibility Criteria:- Joint Venture	<ol style="list-style-type: none"> 1) Can more than 2 companies be a part of JV? 2) What should be the minimum ratio of equity if the JV is between more than two companies? 3) Can the share allocation of each entity change from Project to project to basis in a JV firm? 4) can more than two companies be a part of single consortium? 5) Is it necessary to make a SPV after consortium? 6) For Implication of MSME criteria as mentioned, is it mandate that all the companies of JV/consortium should be MSME? 7) Apart from the lead partner if the other partner is an MSME then will the MSME exemption be applicable? 8) Who will be considered the Lead Partner - The company who meets the technical criteria or the financial criteria? 	<ol style="list-style-type: none"> 1) we request if there is any one MSME player then the MSME norms should be applicable. 2) There should be a timeline of 20 days to create an JV/ SPV . As all the process regulatory and banking norms take time to execute . As other parallel agencies take 10 to 14 working days to comply all details. 3) MSMEs should not be forced for Design sharing, As all pump and controller manufacturers have already pre approved product . MMS clearance as per the clause of SECI should be followed as per the guidelines in such case. 4) As the LOA will be awarded it will tuff for multiple compnies to provide the test report for the designs within 15 days. 	The suitable amendments are being issued on the clause referred. for necessary clarification.
85	SECI000093-7633709-RISunderPM-KUSUM_Component-B-Finalupload	SECTION 3. 11	Bid Processing Fees:- All MSMEs (Micro, Small and Medium Enterprises) notified as per clause 1.10.3 of GFR 2017 and as registered under NSIC/DIC/Udyog Aadhaar only are only exempted from submission of Bid Processing Fee and EMD	Participation of MSME's are eligible for technical Qualifying criteria exemption, and Turn over exemption as per the MSME policy , Partial exemption of EMD and tender fees is not a healthy opportunity for MSMEs in the tender	MSMEs clause should be implacated properly not partially. Minimum Procurement criteria should be done via MSMEs , as this is Honourable Prime Ministers scheme and Promotion of MSMEs within the Sectors is also the Honourable Prime Ministers Agenda. As per MSME policy, MINIMUM 20% is reserved for MSMEs in all public procurement. Therefore, this clause is absolute vague and in deviation to MSME policy for public procurement defeating the very purpose of MSEs getting more work orders in public procurement.	The clause remains unchanged
86	SECI000093-7633709-RISunderPM-KUSUM_Component-B-Finalupload	47 Validity of discovered prices	for each State/UT, In order to allow States/SIA sufficient time to implement SPWPS based on the prices discovered under this tender, all prices discovered under this tender will remain valid for 24 months from the date of opening the price bids, which will be announced by MNRE/SECI. Within this 24-month period, empanelled vendors have no right of refusal to complete the allocated work.	1) Prices should be Dicoverd for CFA not to bench mark the EPC players price fo each System.	<ol style="list-style-type: none"> 1) Discovering of prices shouyid be stopped.. As the present market is highly volatile related to imposition of duties, SCM, taxation revival , Statewise regulatory changes. 2) In the past two years from MNRE, MoF, MoT,DIPP, MoC&I have implemented multipile changes in from time to time sue to some or the reason. These chnages directly impact the value and flow of material within the market.Hence No price can stand for a single quarter. 3) Today manufacruers deny to share price for more than two months , then how can SECI expect that a price can be validated for 2years? 4) On the other hand MNRE and other SNAs have stopped 	The clause remains unchanged
87	SECI000093-7633709-RISunderPM-KUSUM_Component-B-Finalupload	49 Inspection and Audit by the Government/MNRE	All materials/ equipments manufactured by the bidder/ consortium of bidders against the Letter of Award shall be subject to inspection, check and/or test by the SIA/MNRE or his authorized representative at all stages and place, before, during and after the manufacture.	<ol style="list-style-type: none"> 1) The clearance of all stage sould not be more than a week process from the auditing entity (including submission of the document) . If this is not possible then SECI should declare in the following format :- a) Pre dispatch Inspection Stage - Location, Time line for inspection for Module, Controller, Pump, MMS, other Accesories b) After Installation - Location, Time Line for inspection of Documents, Executed Plant, DPR etc, 2) We request to please share the agreed time line stepwise with each SIA for SWPS I&C of site and SIA's time line to close any issue from their end during I&C and O&M period. 3) We request SECI to clearly mention each third party timeline who will be involved in execution of the complete project from site time to time. 	<p>If the mentined point A and B takes more than a week time then such a huge target will not be able to achieve in joint effort of EPC players, SECI, MNRE,SNAs.</p> <p>As the past experince complete KUSUM yojna is not been able to achieve its marked goals , due to market changes, Pandemic, Lack of proper third party agency support state wise.</p> <p>Pre dispatch Inspection if it needs to be done it should be done in such a timelien that the vendor has 60 to 90 days to complete the project execution. if there is the delay then the SIA/Auditing agency should be penalized</p>	The clause remains unchanged
88	SECI000093-7633709-RISunderPM-KUSUM_Component-B-Finalupload	42.2 Financial Eligibility Criteria	Minimum Average Annual Turnover The Bidder shall demonstrate a Minimum Average Annual Turnover (MAAT) as per the table below, during the last three financial years, i.e., 2021-22, 2020-21 and 2019- 2020	<p>We recommend Eligibility criteria of technical/Financial don't comply equally.</p> <p>A company inspite of having financial eligibility for a state of 1000 pumps capacity can not bid as he is restricted due to minimum technical experience of 25 pumps.</p> <p>MSMEs/Startup/entrepreneurs should be waived of from the technical and financial eligibilty .</p>	<p>we recommend that eligibilty or minimum 2% should be kept but limitation of criteria minnum 2%-6% should be removed. If the player has capability on turnover basis to meet the execution requirement then spec of technical criteira should not blocks its execution limit .</p> <p>Small EPC players will never be able to bid in for state where there is larger scope.</p> <p>Especially MSMEs should be waived of from this Technical and financial criteria. limitation .</p> <p>In such a big opportunity minimum qty should be reserved for Startups/ Entrepreneur/ MSMEs in each Category & Prototype within each state.</p>	The amendment is being issued on the clause referred.

89	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	45 Financial Bid Evaluation (Step 2)	Financial Bid format - requires prices FOR.	1) Related to FOR prices We request to share district wise capacity , as many states are so big that they can accommodate more than two to three small states easily. 2) FOR price depends upon logistic management , just by mentioning the state capacity it will be hypothetical to assume the FOR prices. 3) Taxation Part : Please mention the exact GST amount to be Considered at the time of rising the bill (12.80% Cumulative for complete system or 70% of Supply @ 12 % and 30% of installation O &M @18%) 4) Please do confirm the HSN code for all the proto ype models 5) Bid will be evaluated including GST or exclusive of GST. We recommend Bids should be evaluated exclusive of GST	1) Capacities should be mentioned district wise for each sstae. To cater the state wise FOR prices 2) Else it should be kept in client scope as per actual basis	The clause remains unchanged
90	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	SECTION 3. 14	Performance Bank Guarantee (PBG) 14.1 Bidders selected by SECI based on this RfS shall submit to the respective SIA, a Performance Guarantee for a value @ 3% of the amount equivalent to the 6% of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher (as per Annexure-E). 14.2 PBG(s) shall be submitted by selected vendors to SIA within 15 days from issuance of letter of award/empament.	1) The suggested PBG terms are unfavourable and onerous for small MSME's and are against the spirit of promoting and supporting MSME's under these tuff times where small companies are suffering on account of blockage of working capital . Kindly separate the bank Guarantee requirement in two separate bank guarantees. a) 3% of Contract value for supply , I&C for a period of one year b) 3% of O&M Contract value for the period of 5 years. 2) We request to give a flexibility that Bidder can submit 1 % of PBG within 30 days of LOA acceptance and remaining 2% can be deducted from its monthly cycle. It can be released when ever the EPC player submits his 2% remaining Balance PBG. 3) Kindly confirm the PBG time line (no of days / month) 4) The time of EPC submission should be extended upto 20 days from the	Relaxation of PBG submission will help small players especially MSMEs, to maintain easy cash flow , and deliver the project in a more faster method. 2) Forming a PSV /JV company and releasing the PBG in 15 days will be hinh on heel task after accepting LOA . Kindly review the PBG submission time line	The clause remains unchanged
91	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	SECTION 3. 15	Notice to Proceed/ Completion Time 15.1 The implementation work on ground should start within 15 days from the date of Notice to Proceed from SIA	1) We request that SIAs should be directed to support the selected bidders and close all the hindrances so that this target line is matched or else each SIA should confirm their own timeline . 2) We recommend each SIA should appoint a Single point contact who should also be accountable to close all the hindrances, and see smooth flow mechanism between the Bidders, SIA and client.	As same as PPA SIAs accountability and liability should be fixed. The value of penalty should be deducted from their incentive and pssed on to the bidders who have suffered. Any losses occured due to delay of timeline by SIA or third Party auditing end , should be penalized and passed on to the bidder to safe guard the project value and scheme integrity	The clause remains unchanged
92	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	SECTION 3. 16	Payment Terms- Stage 1 (90%) Stage 2 (10%)	1) Stage 1 should be spitted in two parts 60 and 30% We Request and recommend SECI to release 60% payment out of 90% Payment after Inspection of material and their warranty certificate. This will not only ease the business cash flow management but will also support the Integrator to provee its delivery and finish the project on time. 2) Kindly clarify the relase of timeline for stage 1 payement and Stage 2 payment 3) What will be the payment due days timeline for each section i.e supply , I&C, PGT, O&M, and Final payment . 4) Will the purchaser(Client ?Central CFA /State CFA) pay any late payment charges if it exceeds its due timeline of payment? 5) What will be the the Purchaser interest rate for delay in payments to the	Flexible payment terms not only ease the project amangement but also enhance the quality standard of the project. From previous experiences we request SECI to follow easy going payment terms , keepin in mind that small players such as MSMEs will also participate withn the project. Kindly follow the Direct benefit trasfer guideline as pass the CFA direct to End user. Flexible payment terms will ease the program functioning and its delivery to end user with satisfactory result.	The clause remains unchanged
93	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	SECTION 3. 9	Commissioning of Projects: Selected vendors must submit monthly consent of beneficiaries in their favours to SIA for which SIA will give notice to proceed and for this selected vendor shall complete the installation and commissioning of allocated SPWPS within 120 days from issuance of notice to proceed for general category state. However, for, special category states/Hill States/UTs/Island UTs, selected vendor shall complete the installation and Commissioning of allotted SPWPS within 150 days of issuance of notice to proceed.	We Request that any any outage due to SIA, delay of Payment terms from central, State, Bank loan disbursement, Client payment , lack of work front at SIA /Auditing agency, Availability of Client due to any force amjeure or any such condition which is not in control of the cotractor will be outaged from this period. NO Liquidity damagges will be implicable of contractor due to any of these coniditions	Kindly keep the Outage conditons, which have been always been the most expensive and delbirately loss making point for any EPC player to execute in such projects. This will not only secures the EPC players intrest but paralelly clears an ease of flow for succesful execution in the whole scheme	The clause remains unchanged
94	SECI000093-4049247-Annexure-A(Technical-Specifications)	3.3 Solar Photo Voltaic (SPV) Array	Sufficient number of modules in series and parallel could be used to obtain the required voltage or current output. The power output of individual PV modules used in the PV array, under STC, should be a minimum of 300 Wp, with adequate provision for measurement tolerances. Use of PV modules with higher power output is preferred.	We request that only those module companies should supply who are able to supply the watt peak of module supplied in this project uptill 5 years till the CMC period and oif they are not able to do it then they should replace the modules of whole plant at their own cost . EPC bidder should not be held responsible for the lack of availibility of that particular prototype of that brand. Majority Module players deny to give spares at time of requirement after a particular time, due to extensively technoiogly change. Example Poly module capacity is deteriorating on a large scale from domestic market. MAny Tier 1 Indian Brands have deteriorated there manufacturing capacity of Poly and are shifting to monoperc technology.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
95	SECI000093-4049247-Annexure-A(Technical-Specifications)	3.5.4 Module Mounting Structures and Tracking System	Details of Module Mounting Structure (MMS) for pumps of capacity 1HP and above attached at Annexure-I. These are indicative of minimum standards and an Implementing Agency may specify higher standards which shall be certified by recognized structural engineering department of any IIT/NIT or IISC.	Is it mandate to use the mentioned design or the bidder can get its own design approved as per client requirement at site, keeping inc ompliance of MMS mentioned within the contract ?		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023

96	SECI000093-4049247-Annexure-A(Technical-Specifications)	9 COMPREHENSIVE OPERATION AND MAINTENANCE	ii. CMC shall be in line with scheme guidelines and its amendment (if any). Apart from the monitoring, regular periodical maintenance of system has to be done. The report has to be maintained in a prescribed format containing Month, Inspection Date, Action taken against the Defects found in the System and along with signatures of both service Engineer and the farmer/beneficiary. Maintenance report in digital form to be sent to Scheme implementing agency(SIA) and also uploaded on portal of SIA whenever such portal or mobile app is made available. iii. The deputed personnel shall be in a position to check and test all the equipments regularly, so that preventive actions, if any, could be taken well in	1) We recommend Monthly or Quarterly site visit for regular service of system. 2) We recommend that Panel cleaning to be within the scope of Customer, as it reduces the cost of project and makes the customer more familiar with normal cleaning process during the guarantee period itself. (customer traing will be provided for same). 3) As per point (V) We undersatnd that customer will be responsible to pay any unwanted damage which occurs to system during the comprehensive maintenance period (such as Theft , Rivalary , Riots, Animal, or natural calamity - such as Flood or wind speed which is beyond 150km/hr) Please confirm.)		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
97	SECI000093-4049247-Annexure-A(Technical-Specifications)	9 COMPREHENSIVE OPERATION AND MAINTENANCE	The maintenance shall include replacement of any component irrespective of whether the defect was a manufacturing defect or due to wear and tear.	1) We request to mention repair/change of any defected item period /6 days /7 days as, some products need to be checked by manufacturer on run time analysis at site, so that actual fault/reason can be figured . Majority product Manufacturers ask for 6 to 7 working days for service visit as pumps are installed in remote locations . Even movement of service engineer from one rural area to other is a typical and threafull. We appreciateSECI practical lookout on post installation service issue. 2) We Recommend and request SECI, that bidder should have the full right to change/ add/ or replace the service person/ service dealer as per their working comfortability.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
98	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	3.1 Supply and Manufacture	To ensure timely maintenance of SPWPS, apart from training a local person and making available necessary spare parts & tools in each district, to ensure timely maintenance of the systems the vendor shall have one authorized service center in each operational district and a helpline in local language in each operational State	We recommend clause of Service center per district should be ammended to one service center / allied service partner per state is sufficient enough .	If a district has less than 5 or 10 systems per ditrict then opening a srvice center in each distric is not viable. Even clusters of ditrict will also fail. A service engineer can travel 300 to 500km from one position to other in one night . Majority EPC players have been sharing services to Multiple client consistently for Multiple years without having a service center. IF the service sector is kept an mandate distrcit wise, then the SNAs should share there data Distrit wise instead of STATE WISE for better clarity to BIDDERS	The clause remains unchanged
99	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	Clause 41.2 and 42.3	technical and finacial liquidity .	State wise declaration should be differentiated to District wise , Capacity wise , Prototype wise . Zones with lower water table pricing should be discovered additionally	For discovery of Rate there should be differentiated data. In a particular state water table is at 30 feet andd 200 feet also . How can a bidder calcualte the FOR price without knowing the actual capacity and quantity in each district	The clause remains unchanged
100	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	Clause 48	Recommendation and Issuance of LoAs If the Selected Vendor, to whom the LoA has been issued does not fulfil any of the conditions specified in Bid document, then SIA reserves the right to annul/cancel the award of the LoA of such Selected Vendor also imposing the penalty such as encashment of BG or/and Blacklisting	As per Clause 48 , we request an additional criteria to be added for the bidders. Any bidder who has participated in previous KUSUM B tender should provide an "NO DUE DECLARATION " which clearly states that they are not bided with any dues for the sub contractors/ vendor who have worked for/with them in any previous KUSUM Scheme	This criteria is mandatory as in previous KUSUM SCHEME it has been observed that, few bidders after succesful execution of the pump have not cleared the dues or done late payments of their installers on to the name of awaiting CFA from States. These kinds of Bidders should be only allowed to bid once they clear the dues before the submission of bid	The clause remains unchanged
101	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	3.4.g Operation & Maintenance (O&M), Training, Awareness and Sensitization	Vendors will mandatorily provide CMC for a period of 5 years from the date of commissioning of the systems including insurance coverage for the installed systems against natural calamities and theft. Selected Vendor shall provide a copy of valid insurance certificate of SPWPS to the beneficiary and same shall be renewed every year.	We recommend the client scope should also be mentioned within the insurance clause to safeguard undue advantage and liability of bidders	Points such as 1) Sharing of FIR copy within 48 hours of theft should be within the scope of client. 2) Bidder shall not be held reponsible if the insurance comapnies denies the insurance claim or delays the claim process for Breakage,theft, wear and tear or any damage caused due to any riot, unwanted intention or any such factor which is beyond the control of Contractor. This should be followed as per the insurance policy criteria. 3) Delay of operation/ non functioning of pump during this time should be outaged from the bidder scope. 4) if there is any issue in functioning of the pump due to	The clause remains unchanged
102	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	3.4 Operation & Maintenance (O&M), Training, Awareness and Sensitization	Scope of bidder	As Bidders scope, Client scope, should be mentioned clearly for pre and post execution within the tender		The clause remains unchanged

103	SECI000093-7633709-RISunderPM-KUSUM_Component-B-Finalupload	37 Role of SECI	Change of Law	We recommend CHANGE OF LAW should be implemented within the tender.	As per the uncertain and inconsistency of prices/ Duties/reforms on time to time interval post and pre COVID within the past two years Product pricing cannot be confirmed for more than a couple of quarter . Module , cable, MMS price have strict been out of control since past one year, they rise and fall multiple times in a month parallel to dollar market Hence we assume that SECI is well versed with this pain of the bidders, and stand to safeguard the bidder with such kind of financial challenges by implementing the change of Law within this tender	The clause remains unchanged
104	SECI000093-7633709-RISunderPM-KUSUM_Component-B-Finalupload	clause 42.4 and 42.8	42.4 The Bidder may seek qualification on the basis of financial capability of its Affiliate(s) for the purpose of meeting the qualification requirements as per Clauses 40.1, 40.2 and 40.3 above. In case of the Bidder being a Bidding Consortium, any Member may seek qualification on the basis of financial capability of its Affiliate. In this case, a Bidder can use the credential of only a single affiliate to meet all the financial eligibility criteria. In such cases, the Bidder shall be required to submit Board Resolutions from the respective Affiliate, undertaking to contribute the required equity funding and Performance Bank Guarantees/POI in case the Bidder(s) fail to do so in accordance with the RIS. In case of non-availability of the Board Resolution as required above, a Bidder from the C&P/MI/00/0010/2022-23	Both the clause 42.4 and 42.8 are contradictory. Kindly clarify or evaluate the figures		The suitable amendments are being issued on the clause 42.8 accordingly.
105	SECI000093-7633709-RISunderPM-KUSUM_Component-B-Finalupload	Clause 1.8	CFA of 30% of the benchmark cost or the tender cost, whichever is lower, of the standalone solar Agriculture pump will be provided. The State Government will give a subsidy of 30%; and the remaining 40% will be provided by the farmer. Bank finance may be made available for farmer's contribution, so that farmer has to initially pay only 10% of the cost and remaining up to 30% of the cost as loan. In case the State Government provides subsidy more than 30%, the beneficiary share will reduce accordingly	1) Agreement between Bidder, SIA and Central finance relasing agencies. 2) CFA should be directly relased into the end client account . 3) Timeline to release the CFA should be mentioned and accountability of the CFA realseing agncy should be mentioned and followed.	1) Agreement with SIAS and Central Agency or Bidder with ensurance for avialibility of CFA funds. There should be a turnaround time after which penalty should be imposed to fund releasing agency. MSMEs rate of interest rate should be implicable in case of MSME firm and for NON MSME firms general rate should be fixed. 2) CFA of PM- KUSUM scheme is a part of 310 Direct Benefit Transfer shemes. As per the NITI AYOG the CFA is to be transfered into the end user direct client . (kindly refer the Niti aayog website for same). We suggest the CFA should be directly to end user via bank Loan account. This will not ensure the BANK TRANSACTION (as per the Bank CFA Release Policy)	The clause remains unchanged
106	Annexure A	3.3.11	The RFID tag shall be placed on the SPV Modules inside the glass laminate.	RFID tag shall be placed at the outer back side of the module besides the back label.	To achieve higher efficiency in a compact module design, RFID is beneficial in backside of module. Metallic interference can be reduced by having RFID at back side of sticker and it also increases the readability. There is a possibility of minor bubble defects near RFID in case of inside lamination.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
107	Annexure A	4.5	All PV modules should have STC testing certificate from an NABL accredited test laboratory and the date of testing should not be later than a year	All PV modules produced for regular supply will be tested at STC in module manufacturers production facility.	Design qualifies IEC 61215 and BIS 14286 requirements, sample modules tested in NABL accredited lab. 100% module testing can be done only in in-house setup.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
108	RIS No. SECI/C&P/MI/00/0010/2022-23-Section 2	3.4 a	Vendor should submit bi-weekly installation report to SIA as per the prescribed format provided during the installation phase.	We request you to keep this fortnightly .	There are multiple reports already mentioned in the tender from 3.2 a. to 3.2 g.	The clause remains unchanged
109	RIS No. SECI/C&P/MI/00/0010/2022-23	3.2-b	Selected vendors have to submit monthly consent of beneficiaries in their favor to SIA for which SIA's will be Notice to Proceed and for this, vendor shall complete the installation and commissioning of SPWPS within 120 days from date of issuance of NTP for general category states. However, for special category states/Hill States & UTs and Island UTs, Vendor shall complete the installation and commissioning of SPWPS within 150 days of issuance of such NTP.	List of eligible beneficiaries should be given as per rfs document by SECI/SIA	It will same time and project will be adhere with the Central Ground Water Board & help SI to supply the correct capacity pumps.	The clause remains unchanged
110	RIS No. SECI/C&P/MI/00/0010/2022-23	3.2-e	Installation and Commissioning: e. Vendors will have to submit installation reports as per given format on weekly basis and Monthly basis to MNRE and SIA.	The duration of Installation reports should be monthly/Quarterly	There are multiple reports already mentioned in the tender from 3.2 a. to 3.2 g.	The clause remains unchanged
111	RIS No. SECI/C&P/MI/00/0010/2022-23	3.2-i	Selected vendor should have finalized sub-bidders and Purchase order for all materials such as PV Modules, Structure, Pump, Controllers, etc. within 30 days from date of award of contract and unpriced copy of such award letter/Purchase order will be submitted within 30 days from date of issuance of award.	Selected vendor should have finalized sub-bidders and Purchase order for all materials such as PV Modules, Structure, Pump, Controllers, etc. within 60 days from date of award of contract and unpriced copy of such award letter/Purchase order will be submitted within 60 days from date of issuance of award.	The Time line should be 60 days as we follow all QAP approval process with vendor before placing the PO for the project.	The clause remains unchanged

112	RfS No. SECI/C&P/MI/00/0010 /2022-23 - Section 2	6-6.1	Maximum Eligibility for Contracted Capacity Allocation for a Bidder Total allocation to your vendor for a particular State/UT shall not go beyond the Annual Turn Over requirement for that particular State/UT. However, if there are no vendors available in the corresponding package, who have agreed to match the L1 prize and circumstances necessitates additional award of work, additional allocation may be done by SIA as per MNRE approvals.	We would request is to keep this open for the performance basis.	It will help faster execution of the projects	The clause remains unchanged
113	RfS No. SECI/C&P/MI/00/0010 /2022-23 -Section 4	42.8	In case the response to RfS is submitted by a Consortium, then the financial eligibility requirement to be met by each Member of the Consortium shall be computed in proportion to the equity commitment made by each member in the Project Company. For example, if two companies A and B form a Consortium with equity participation in 70:30 ratio and submit their bid for a capacity of 10 MW, then, total Net-Worth to be met by the Consortium is Rs. 90 Lakhs x 10 MW = Rs. 9 Crores. Minimum requirement of Net-Worth to be met by Member A would be Rs. 6.3 Crores and the one to be met by Member B would be Rs. 2.7 Crores. Similar methodology shall be followed for computation of other requirements.	As we have request to allow consortium based on the agreement basis, we would request to allow cumulative experience for technical and financial parameters for the companies which are part of the consortium	This will provide performing players to get good business.	The suitable amendments are being issued on the clause referred.
114	ANNEXURE-A	3.4.4	The pump and all external parts of motor used in submersible pump which are in contact with water, should be of stainless steel of grade 304 or higher as required. Further for submersible pumps used in coastal areas or bores with higher salinity, preferably, stainless steel of grade 316 or higher grade may be used.	We would request to take SS 316 Pumps Price separately for states having coastal area same as UT and NE states prices	It's important as cost of pump and motor will be higher in case of SS 316.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
115	ANNEXURE-A	3.4.5	As per IEC 61683, Total Harmonic Distortion (THD) for Voltage and Current should be less than 3 % at the Motor Terminal over the entire radiation profile and in order to achieve this measures such as use of the choke coil (du/dt Filter) etc. can be adopted.	We request you to please remove or amend this clause that if total cable length will increase more than 100 M	DU DT filters will increase the project for the department .	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
116	ANNEXURE-A	3.7.2	Surge Protection Device : At the DC Input side of the controller, it should have protection from an External Surge Protection Device of Type-2 or higher (i.e. Type-1) in accordance with the IEC 61643-	We request you to kindly allow internal MOV/SPD	It will help to save the cost of the system.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
117	ANNEXURE-A	A-1	Structure : Combination of two standard MMS of 8 Modules or combination of standard MMS of 10 Modules and standard MMS 6 Modules for 5 HP	Flexibility should be given to reduce the number of structures used for 5hp when Mono- Modules come in future.	Wp per module is increasing due to higher efficiency cells and hence flexibility on number of structures or modules per structure should be given for different hp.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
118	RfS No. SECI/C&P/MI/00/0010 /2022-23 -Section 4	II. Financial Bid (Second Envelope) -B Bidding Parameter:	The above fixed price shall include all costs related to the Scope of Work as per the RfS and Obligations of the Successful Bidder/Selected Vendor. The Bidder shall quote for the entire facilities on a "single responsibility" basis such that the fixed price covers all the obligations in respect of Design, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance (05 years), inclusive of all taxes.	We request you to kindly consider rates basis on commodity price rise atleast 5% after six months of bidding if any changes happened	It give keep continue the overall project process	The clause remains unchanged
119	SECTION 4	40.7	A Bidder which has been selected as Selected Vendor based on this RfS can also execute the Project through a Special Purpose Vehicle (SPV) i.e., a Project Company especially incorporated/acquired as a subsidiary Company of the Selected Vendor for setting up of the Project, with at least 51% shareholding in the SPV which has to be registered under the Indian Companies Act, 2013. Multiple SPVs may also be utilized for executing more than one Project.	Consortium be allowed for 3-4 bidders jointly. There is no need for SPV in the project. SPV is required only for large scale projects wherein equity funding is required for centralised work which is to be operated for 15-20 years. This is a decentralised tender and each consortium partner chooses to operate in their preferred area of operations. So instead of SPV provision for joint bids, consortium be allowed and lead member of the consortium be decided as per choice of Consortium members to be given to state nodal agency when entering into execution contract with them.	Its not needed to have a (SPV) project company for consortium. Bidders be allowed to choose Lead bidder in specific state for ease of operations. Example : Company A & Company B going in consortium for 2 states of MH & HR. Let Company A be allowed to be Lead Bidder in Maharashtra Let Company B be lead bidder in Haryana As if SPV company needs to be formed another round of new registration in each state would be required for GST wherein Bid is submitted & this is unnecessary a hindrance for ease of doing business activity.	The suitable amendments are being issued on the clause referred.
120	SECTION 4	41.2	Experience required for the bidders to be counted for the past 7 years from the last date of bid submission shall be as per Table on page no.35 Annexure-E	The technical experience requirements taken as 6% which is very high compared to last tender. Proposed technical QR be at 2% from the existing 6% of total quantity. There is no exemption to MSME in the turnover or experience, which was given in last tender. MSME Act is applicable to this bid & norms of the same should be taken into consideration following fair tender policy. If required only EMD Bidders or bidders having minimum 25000 pumps experience be allowed to bid for price, rest all bidders will have to quote Technical bid and they will not be allowed to quote price bid as they have been given benefits to participate in the tender.	we hereby suggest you to decrease the Financial and Technical Qualification requirement to 2% of the total quantity from 6% as this will allow more bidders to participate in the bid and make the bid more competitive. If this programme has to be executed on the ground properly you need to liberally relax the qualifying requirements and allow minimum 100 empanelled agencies in every major state. If not, this programme will end up again as a disaster by design. If you look at the previous tenders you can find hardly one or two bidders who have crossed the installation of 25,000 pumps in each programme but you can find many smaller bidders who have installed between 500 to 5000 pumps	The suitable amendments are being issued on the clause referred.

121	SECTION 4	42.3	The Bidder shall demonstrate a Minimum Average Annual Turnover (MAAT) as per the table on page 38 during the last three financial years, i.e., 2021-22, 2020-21 and 2019-20.	The experience and the turnover requirements are taken as 6% which is very high compared to last tender. In last tender they have given an option for number of years for turnover due to the COVID year in between. They should also give the similar clause (best of 3 years out of 5 years) for the turnover this year also. Proposed technical & turnover QR be at 2% from the existing 6%. There is no exemption to MSME in the turnover or experience, which was given in last tender. MSME Act is applicable to this bid & norms of the same should be taken into consideration following fair tender policy.		The suitable amendments are being issued on the clause referred..
122			No Reservation for MSME bidders	If this project of solar pumps has to be executed properly there has to be some quantity reservation for the MSMEs bidders like you have reserved 25% in the previous bids. This will help to bring in more bidders for execution and will help in executing the programme fast.	MSME Act be implemented as per norms	The clause remains unchanged
123			No clause for Separate pricing for Poly and Mono Modules	Consider twin pricing for poly and mono separately (just like AC & DC Systems) There is a difference of a minimum Rs.5-6 per watt (which creates a 8% difference in overall price of system) If price while bidding is considered for Poly & we are forced to use Mono, it means we have to take into effect a straight loss of minimum 8-9% on the entire cost of system. Till Poly is available it can be worked out and after that Mono but change in pricing should be applicable. Twin Pricing should be proposed for all capacities.	This be implemented for ease of operations for change in technology be effected.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
124			No clause for Same Promoter		Please confirm if 2 companies with same promoter are bidding for the tender in different states, is allowed or not. For example: Company A having same promoter as Company B Bids in Maharashtra Company B having same promoter as Company A Bids in Haryana. This may please be clarified as there was confusion over this in last tender and since this doesnt overlap area of interest as states are different, there seems to be no objection of common interest created for the bid. This be clarified & allowed clearly as due to huge QR requirement already companies are falling short of minimum requirements of the bid.	Not allowed under this RIS.
125	ANNEXURE-A	3.2.2	Isolator Switch-Should be between Solar panels and controller	We would request to keep it same as KUSUM-2 tender as circuit breaker as it would serve the purpose of protection	DC isolator cost is very high compared to DC circuit breaker. Almost a cost increase of 1750/-	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
126	ANNEXURE-A	3.7.1	Earthing and Lightning Protection	Earthing and lightning protection is very heavy specifications. We request you to keep it same as KUSUM-2 tender	Heavy Earthing and Lightning protection specifications will increase the cost by minimum 2000-3000 per system.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
127	ANNEXURE-A		REMOTE MONITORING SYSTEM(RMS)	Dedicated connection ports for agri sensors has been made mandatory.		Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
128	ANNEXURE-A	3.4.4	The pump and all external parts of motor used in submersible pump which are in contact with water, should be of stainless steel of grade 304 or higher as required. Further for submersible pumps used in coastal areas or bores with higher salinity, preferably, stainless steel of grade 316 or higher grade may be used.	We would request to give clarity on states which would be considered under coastal belt	It's important as cost of pump and motor will be higher in case of SS 316	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
129	ANNEXURE-A	3.4.5	As per IEC 61683, Total Harmonic Distortion (THD) for Voltage and Current should be less than 3 % at the Motor Terminal over the entire radiation profile and in order to achieve this measures such as use of the choke coil (du/dt Filter) etc. can be adopted.	Request is to make this compulsory only for 100mtr+ installation as for lower heads impact would be very minimum against the total cost increase which would happen.	In case of 5hp around 12000/- and in case of 7.5hp 18000/- cost will increase. This is affect the viability of the system.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
130	ANNEXURE-A	3.8	Use of Indigenous components : It will be mandatory to use indigenously manufactured solar modules with indigenous mono/ multi crystalline silicon solar cells. Further, the motor-pump-set, controller and balance of system should also be manufactured indigenously. The vendor has to declare the list of imported components used in the solar water pumping system.	Kindly also make it mandatory to have indigeneous PCB declaration from controller manufacturers to promote local manufacturing of controllers.	It will help in creating local PCB manufacturing cabality of India and compete with China in export market also as volumes for local manufacturers will increase.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
131	ANNEXURE-A	A-2.11	Raw Material Test Certificates (MTC) of all types of raw material used in dual axis manual tracking type MMS as per appropriate Indian Standard shall be submitted along with dispatch documents.	This should not be made mandatory for every dispatch. This can be made as a document necessary during PDI	Every dispatch requirement can make operations difficult and complicated for SI and vendor both.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023

132	ANNEXURE-A	Annexure IV(remote monitoring)	Sensor Connectivity: RMS should have provision for at least two Analog and Digital inputs with 0.1% accuracy to address the requirement of local sensors connectivity if required by SIA/Consumer for applications such as irradiation, flow meter for water discharge, moisture sensor for micro-irrigation, etc.	Kindly clarify if provision has to be provided or a separate active port has to be given in the controller.	Separate active port will increase the cost and hence a clarification would be required.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
133	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload.pdf	46.2	For each line item (i.e., type of pump for each State/UT), option to match L1 price will be initially extended to all bidders falling under L1+25% and in case number of bidders in this range is less than five the same will be further extended to other bidders in the ascending orders of price bid quoted by them till at-least five bidders agreed for L1 matching or all bidders have been given option to match L1 price, whichever is earlier.	We Request you to allow atleast 5 Bidders to match the L1 Price for the states where the Pump Qty is up to 10000, atleast 10 Bidders to match the L1 Price for the states where the Pump Qty is above 10000 and up to 20000, atleast 20 Bidders to match the L1 Price for the states where the Pump Qty is above 20000.		The clause remains unchanged
134	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload.pdf	11	Bids submitted without Bid Processing Fee or Bank Guarantee against Earnest Money Deposit (EMD) (as applicable) (including partial submission of any one of the respective amounts), may be liable for rejection by SECI. All MSMEs (Micro, Small and Medium Enterprises) notified as per clause 1.10.3 of GFR 2017 and as registered under NSIC/DIC/Udyog Aadhaar only are only exempted from submission of Bid Processing Fee and EMD. For claiming this exemption, at the time of bid submission, MSMEs must provide valid proof of their being registered asMSME.	Kindly Clarify Whether The MSME bidder Has to submit the EMD during Bid submission or not.		The Clause is self-explanatory.
135	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload.pdf	20(f)	In case it is found that the Bidding Company including Ultimate Parent Company/Parent Company/Affiliate/Group Companies have submitted more than one response to this RfS, then all these bids submitted shall be treated as non-responsive and rejected.	Kindly Clarify, if 4 companies have one common promoter then could they participate individually so that they could quote for different sets of states or they have to participate combinly as a single bidder.		Not allowed under this RfS.
136	SECTION 4	41.2	The bidder should be, either of the following: i. Manufacturer of Solar PV Module or ii. Manufacturer of Solar Pump or iii. Manufacturer of Solar Pump Controller using indigenous technology or iv. EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology.	We are a Module Manufacturer. So are we allowed to enter into a multiple consortoum agreement. If not please allow us to form multiple SPV consoritium agreement with multiple Firm / Companies / LLP.		Not allowed under this RfS.
137	Specifications of solar water pumping system	3.4.5	As per IEC 61683, THD for Voltage and Current should be less than 3% at the motor terminal over the entire radiation profile and in order to achieve this measures such as choke coil (du/dt filter), etc can be adopted	This clause to be deleted as it in contravention to the existing MNRE specifications for Solar water pumps and also it is technically not possible to achieve this. Also, there is no mention of THD in IEC 61683, which pertains to measurement of efficiency. So the requirement of 3% THD has been wrongly attributed to the IEC 61683	This requirement of THD is technical not possible for DC/BLDC pumps which operate on trapezoidal waveform. As per IEC/IS 16221, clause 4.7.5.3.2 (Non-sinusoidal output waveform requirements) it is stated that "THD shall not exceed 40%". So for DC motors (pumps) which have trapezoidal (non sinusoidal waveforms) this figure of 40% should apply. But if 40% THD is accepted then there is no need for a sine wave or du/dt filter. Additionally, this very substantial change even if were to applied to Controllers meant for AC pumps, would need the existing controllers (as per existing MNRE specifications) to be totally redesigned and re-tested. So, first the MNRE specification will have to be changed to incorporate	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
138	Specifications of solar water pumping system	3.5.4	Details of the Module mounting structure (MMS)...shall be certified by the recognized structural engineering department of any IIT/NIT or IISc.	...shall be certified by the recognized structural engineering department of any IIT/NIT or IISc or structures as per the design used in previous KUSUM-B projects may be used without any change.	MNRE had permitted the use of better design structures, approved in KUSUM-B, first phase (first tender) in the second phase (second tender) without the need for any additional certification by IIT/NIT, etc. So similarly it would be prudent to allow the structures approved in KUSUM, Phase 1 and 2 (previous two tenders) also in this tender. This would eliminate the need for subsequent affirmation by MNRE to various SNAs and allow the contractors to commence the project execution quickly.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
139	RFS Section 1	45.7	Bidder has an option to choose out of the 34 State/UTs for the ones he/she wishes to quote for. Bidder has to mandatorily submit declaration for State/UTs it wishes to quote for (i.e., Format 7.1), subject to fulfillment of cumulative qualifying requirements of quoted State/UTs.	Bidder has an option to choose out of the 34 State/UTs for the ones he/she wishes to quote for. Bidder has to mandatorily submit declaration for State/UTs it wishes to quote for (i.e., Format 7.1), subject to fulfillment of individual qualifying requirements of quoted State/UTs. It means that a bidder can be qualify in other state with same qualifying requirement in existing state.	Bidder has an option to choose out of the 34 State/UTs for the ones he/she wishes to quote for. Bidder has to mandatorily submit declaration for State/UTs it wishes to quote for (i.e., Format 7.1), subject to fulfillment of individual qualifying requirements of quoted State/UTs. It means that a bidder can be qualify in other state with same qualifying requirement in existing state.	The Clause is self-explanatory.
140	RFS Section 1	41.2. (iv)	Similar Works' means - Design, Supply, Erection, Testing and Commissioning of standalone (off-grid) solar PV based water pump sets. Experience required for the bidders to be counted for the past 7 years from the last date of bid submission shall be as per Table below.	Experince of 3HP should be consider as 3 time , 5HP should be consider 5 times, experience of 7.5HP and 10 hp should be consider as 10 times for eligibility and experience of swps for calcaulation.	Experience for 7.5HP&10HP consider 10 Times.	The clause remains unchanged

141	RFS Section 3	16	Stage-1: 90% of the value of month wise nos. of SPWPS installed at site based on. Stage-2: Balance 10% on Completion of one month from date of completion certificate	We are requesting for 1) 50% Payment by the supply of SPWPS. 2) 40% Payment after Installation and Physical Verification by the SIA & 3) 10% after 1 month with the verification of RMS data	To Run smooth project. And achieved target within time limit.	The clause remains unchanged
142	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	Clause no. 11 (Bid Processing Fees & EMD) of SECTION 3. STANDARD CONDITIONS OF CONTRACT	All MSMEs (Micro, Small and Medium Enterprises) notified as per clause 1.10.3 of GFR 2017 and as registered under NSIC/DIC/Udyog Aadhaar only are only exempted from submission of Bid Processing Fee and EMD. For claiming this exemption, at the time of bid submission, MSMEs must provide valid proof of their being registered as MSME. However, upon empanelment under this RfS, selected MSMEs must submit Performance Bank Guarantee as per clause 12 of section III of RfS.	Please also include other Qualification/Eligibility related exemptions for MSMEs related to turnover and past experience (25% of experience and annual turnover as required for general bidders) as per Govt of India guidelines that have been a regular part of all previous PM-KUSUM tenders; 2. Since the MSMEs are exempt from submission of EMD, they should not be allowed to submit price bids. MSMEs should only be offered the L1 prices quoted by general category bidders for price acceptance;	In all previous tenders floated by MNRE for PM-KUSUM scheme, MSMEs have been given relaxation in the Qualification Requirements as per Govt of India guidelines (25% of experience and annual turnover as required for general bidders). The same may kindly be incorporated in the Tender Document to enable maximum participation of MSMEs and achievement of the extraordinary installation target of more than 6 Lac pumps under this tender.	The clause remains unchanged
143	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	Page no. 36, clause no. 41.2 (Similar works) SECTION 4. QUALIFICATION ON REQUIREMENTS FOR BIDDERS	Experience required for the bidders to be counted for the past 7 years from the last date of bid submission shall be as per Table below: SI No. 10; State/UT: Haryana: Quantity State-Wise (Nos.): 160000; For Solar Pumps/Controller (number of solar pumps installed/Controller installed or supplied): 9600; For Solar PV Modules (Experience in kWp): 46080	The state wise Quantity and relevant Technical and Financial QR may kindly be revised keeping in view past implementation records of the state and 2-year implementation period of the current tender. The state wise allocation may kindly be done based on the average annual SWPS implementation in last 3 years and further quantities may be allocated when previously allocated quantities have been achieved. The required quantities may also be halved for calculating QR requirements since they are to be installed in a 2-year period.	1. Very high Quantities have been mentioned for certain states that seem unrealistic from the perspective of their past implementation records. This will make majority of the bidders and all the MSMEs (Micro, Small and Medium Enterprises) unqualified due to extremely high Qualification requirements. Only 2-3 firms will be able to qualify in this tender as per these conditions, leaving out the entire Solar pump industry. The MNRE targets for Solar Pumps installation will also suffer badly. For example, Maharashtra state requires the bidder to have the Average Annual Turnover of Rs.288.36 Crores for qualification purpose. As per the definition of Small Enterprises (as per Ministry of MSME, Govt of India -	The suitable amendments are being issued on the clause referred.
144	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	Page no. 36, clause no. 41 (Bidding Consotium) SECTION 4. QUALIFICATION ON REQUIREMENTS FOR BIDDERS	Technical eligibility requirements for Consortium bidders including MSMEs	In case the response to RfS is submitted by a Consortium, then the technical eligibility requirement shall be cumulatively met with by all the members of the Consortium. The figures for each of the partner of the consortium shall be added together to determine the bidder's compliance with the minimum qualification criteria.	Technical eligibility requirements for Consortium bidders including MSMEs have not been mentioned and may kindly be specified on cumulative basis.	The suitable amendments are being issued on the clause referred.
145	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	Page no. 17, Clause no. 13.5, Forfeiture of EMD	In case, the SIA issues LoA to the Selected Vendor and if the Selected Vendor does not submit the Performance Bank Guarantee within the stipulated time period (i.e. 15 days from issuance of LoA);	In case, the SIA issues LoA to the Selected Vendor and if the Selected Vendor does not submit the Performance Bank Guarantee within the stipulated time period (i.e. 28 days from issuance of LoA)	PBG submission period: 15 days from issuance of LoA is Too short. It should be at least 28 days as in previous tender. Empanelled Vendors may need enhancement of credit facilities from the banks after award of LOA	The clause remains unchanged
146	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	Page np. 21, Clause no. 18. iv. b & c	b. Board Resolutions from the Bidding Company committing 100% (One Hundred Percent) of the equity requirement for the Project/ Board Resolutions from each of the Consortium Members together in aggregate committing to 100% (One Hundred Percent) of equity requirement for the Project (in case of Bidding Consortium); and c. Board Resolutions from each of the Consortium Members and Lead member contributing such additional amount over and above the percentage limit (specified for the Lead Member and other member in the Consortium Agreement) to the extent becoming necessary towards the total equity share in the Project Company, obligatory on the part of the Consortium pursuant to	This clause may kindly be deleted.	These conditions are relevant to RESCO mode projects and not the EPC projects wherein short-term working capital is required. May kindly be deleted to avoid complexities for the bidding consortiums.	The clause remains unchanged
147	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	Page no. 31, Clause no. 35. Warranty and Maintenance	Local representative of bidder should meet governing authorities of each block and should submit the minutes of meeting to SIA's on quarterly basis.	This clause may kindly be deleted.	It is not required and may kindly be deleted.	The suitable amendments are being issued on the clause referred.
148	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	Page no. 36, Clause no. 41.2 Joint Venture	EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology.		1. It has been stated that the EPC/SI can form a JV with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology. But can a Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller form a JV amongst themselves? Please confirm. 2. For Solar PV Modules (Experience in kWp): We are assuming the required experience for Solar PV Modules manufacturer is for supply only (and not installation). Please confirm.	1. Not Allowed under this allowed. 2. The Manufacturer may show the experience of Solar PV module manufacturing regardless of supply or installation of PV modules.

149	Section 3 Stanadered conditions of the contract	11	Bid submitted without BG against EMD will be rejected by SECI.	Central government PSU's may be exempted from submission of EMD.	Earlier EESL tenders for KUSUM scheme had exempted CPSE from submission of EMD.	The clause remains unchanged
150	Section 3 Stanadered conditions of the contract	14	Bidders selected by SECI shall submit PBG @ 3% to SIA.	Central government PSU's may be exempted from submission of PBG.	Under state GF&AR rules central government PSU's are exempted from submission of PBG.	The clause remains unchanged
151	Section 3 Stanadered conditions of the contract	16	Payment Term. Stag-I. On I&C of the system.	a. 40% payment be released on supply of material. b. 50% payment on I&C.	Said payment terms were used by RHDS, Rajasthan in all SPV water pumping projects. Thereby giving a successful example.	The clause remains unchanged
152	Section 4. Qualification Requirements.	42.3	Profitable in atleast two of the last four years.	Profitable in atleast two of the last five years.	Due to Covid Pandemic many companies suffered losses.	The suitable amendments are being issued on the clause referred.
153	RfS, Section 2, Special conditions of the contract	3.4 (a), Page 11	Selected vendor should keep necessary spare parts (minimum 2% of allotted quantity of each component of complete system at the service centre) at each district...	Selected vendor should keep necessary spare parts at each district ...	(Minimum 2% of allotted quantity of each component of the complete system at service centre) is to be deleted as it will be impossible to keep stock of modules, structures, BOS, even various ratings of pumps in every district. The ideal way is to have a centralised store (1-2 in each state) for all major spares and keep the fast moving spares in the district service centres. The quantity of spares at district service centers is governed by the nature and frequency of failures	The clause remains unchanged
154	RfS, Section 2, Special conditions of the contract	3.4 (g), Page 12	Vendors will mandatorily provide CMC for a period of 5 years from the date of commissioning of the systems including insurance coverage for the installed systems against natural calamities and theft. CMC will include inspection by Vendor at least once in a quarter and submission of quarterly inspection report of the installed pumps as per the prescribed format.	Vendors will mandatorily provide CMC for a period of 5 years from the date of commissioning of the systems including insurance coverage for the installed systems against natural calamities and theft. CMC will include inspection by Vendor at least once in a year and submission of annual inspection report of the installed pumps as per the prescribed format.	With RMS data being continuously uploaded on the SEDM portals as well as centralised portal, the need for physical visits every quarter to the site and manual filling of forms does not add any value. In any case any pumps which are not working are tracked and those who are working well may be visited once a year. Most industrial and farm equipment also need servicing not more frequently than once a year.	The clause remains unchanged
155	RfS, Section 2, Special conditions of the contract	6.1, Page 14	Total allocation to your vendor for any particular State/UT...	Total allocation to ANY vendor for any particular state/UT...	Use of the word 'your' in the RfS seems to be a typographical error. Word 'your' to be replaced by 'Any'. This clause will ensure that only few bidders will not monopolise the complete business and an equitable opportunity would be available to all successful bidders. Hence this clause should not be deleted or diluted. Even if the turnover criteria is diluted, these figures for the maximum business which any contractor can get should be retained.	The suitable amendments are being issued on the clause referred..
156	RfS, Section 3, Standard conditions of the contract	13.1 Page 15	Bidder must submit Earnest Money Deposit (EMD) in the form of Bank Guarantee of 2% of amount equivalent to the 6% of the value of total state-wise allocation or 25 numbers of SPWPS whichever is higher(as per Annexure-E) according to Format 7.3A/ Format 7.3B and valid for 27 months from the last date of the bid submission...	Bidder must submit Earnest Money Deposit (EMD) in the form of Bank guarantee of 2% of the amount equivalent to the 6% of the value of total state-wise allocation or 25 nos of SPWPS whichever is higher for the states where the quantities are less than 50000 nos. For quantities of 50000 nos and above, the Bank Guarantee shall be 2% of the amount equivalent to the 3% of the value of total state-wise allocation or 25 numbers of SPWPS which ever is higher. (Annexure E to have the EMD value half of the current value for all the states having allocation of 50000 nos and higher) according to the format 7.3A/Format 7.3B and valid for 12 months from the date of bid submission...This EMD shall be refunded to the bidders if they do not match the L1 in the respective states or accept the L1 and issue a performance bank guarantee of the amount specified in the RfS.	Going by the past experience of two previous KUSUM programmes, most states do not fully utilize their allocation. It would greatly stretch and stress the financial condition of the bidders if a very substantial amount is locked up in bank guarantees without securing suitable business from the states. Also, the purpose of EMD is to ensure that the bidders do not indulge in rogue bidding and are financially committed to submitting the performance bank guarantees. So once performance bank guarantees are submitted, retaining the EMD would be a duplication and an un-necessary burden on the bidders. The bidding process is expected to be completed maximum in 1 year as the price validity is also asked for 1 year	The suitable amendments are being issued on the clause referred.
157	RfS, Section 3, Standard conditions of the contract	16, Page 19	Stage 2: Balance 10% on completion of one month from the date of completion certificate	Stage 2: Balance 10% on completion of one month from the date of completion certificate issued in lots of 100 nos.	The allocations/NTPs to the bidders would be in hundreds of pumps and a huge amount of funds would get stuck in the balance 10% if the bidders have to wait for completion of the full allotted quantities. Therefore it would be prudent to release balance 10% payment to the bidders as soon as all procedures related to installation are completed for pumps in batches of 100 nos.	The clause remains unchanged
158	RfS, Section 3, Standard conditions of the contract	18- Xvi (iv), Page 21	Certified copies of annual audited accounts for the last three financial years i.e FY 2021-22/2020-21/2019-20 and provisional audited accounts...as on the date atleast 7 days prior to the due date of submission (if applicable), shall be...	If the audited annual accounts for the three years are specified the need for provisional audited accounts as on date, that is 7 days prior to the due date of submission is not to be made mandatory and should be deleted from this clause	Since the financial eligibility criteria shall take into account only the audited figures of the specified 3 years, it would not be feasible for the bidders to secure provisional audited accounts 7 days prior to the date of closing of the bid. Most auditing firms in India cannot issue provisional audited statements in such short a time.	The clause remains unchanged
159	RfS, Section 3, Standard conditions of the contract	31, Page 29	Insurance clause	Add: It shall be the responsibility of the beneficiary and the SNA to submit documents required for making an insurance claim within the time frame specified in the insurance policy. Reinstatement of the Solar pumping system or the missing parts shall be carried out by the Contractor within 15 days of acceptance of claims by the insurance company or 30 days from the date of submission and acceptance of documents by the insurance company.	The ownership of the beneficiary towards submitting proper documents within the prescribed time frame should be made mandatory otherwise the contractor gets financially penalised in form of rejected insurance claims. Also SNA insist on immediate reinstatement even without the insurance surveys being carried out.	The suitable amendments are being issued on the clause referred..

160	RfS, Section 3, Standard conditions of the contract	35, Page 30	Warranty and Maintenance clause	...shall be warranted and maintained for 05 years from the date of installation, against any manufacturing defect. Improper usage or storage, wilful physical damage, unauthorised removal and reinstallation, connection or operation with the grid lines, water submergence of surface pumps shall not qualify for warranty claims.	It is essential to quality that the warranty is only against manufacturing defects and subject to correct usage. There is a very significant quantum of pumps where there is wilful misuse or alternate use by the beneficiaries. It not only defeats the very purpose of the KUSUM programme but also is an unwarranted financial burden on the contractors.	The clause remains unchanged
161	RfS, Section 4, Qualification requirements	41.2 (iv), Page 35	Solar pump controller using indigenous technology	Add: ...indigenous technology supported by patents filed or granted in India.	Indigenous technology has to be defined otherwise every controller manufacturer will use an imported variable frequency drive and put it in an enclosure and label it as their own manufacture/ indigenous manufacture/technology. The proof of 'technology' lies only in patent or an invention however small.	Kindly refer the revised Annexure-A.
162	RfS, Section 4, Qualification requirements	42.5, Page 40	For the purpose of meeting financial requirements, only latest unconsolidated audited accounts shall be used. However, audited consolidated annual accounts of the bidder may be used for the purpose of financial requirements provided the bidder has atleast twenty six percent (26%) equity...	Delete: "For the purpose of meeting financial requirements, only latest unconsolidated audited accounts shall be used." Retain: Audited consolidated annual accounts of the bidder may be used for the purpose of financial requirements in all clauses, provided the bidder has atleast twenty six percent (26%) equity in each company...	Both the statements of this clause are contradictory. The first statement says that only the 'latest unconsolidated audited accounts shall be used. The second statement permits the use of consolidated annual accounts. Also, the 'latest' accounts is very ambiguous as it the meaning of latest can be anything- but typically shall mean the last year (that is 2021-22) accounts only. So this contradicts all other clauses where three years accounts are required for eligibility. So please remove the first statement and include the 'in all clauses' for absolute clarity to the bidders.	The suitable amendments are being issued on the clause referred.
163	RfS, Section 7, Sample forms & Formats	Table, Page 52	Capacity of Pumps quoted for column	The header to be labelled as 'Capacity of Pumps quoted for with Normal controller' and add another column saying 'Capacity of Pumps quoted for with USPC'	Since the financial bid is separate for pumps with NORMAL and USPC controllers, it is suggested that an additional table be provided for listing out the pump ratings with USPC controllers, because bidders may want to bid for lower/different ratings of pumps with USPCs.	Format for price-bid is self-explanatory
164	RfS, Section 7, Sample forms & Formats	12, Page 54	Contact person details	Add: Alternate contact person details	For a very important and a critical tender like this, no bidder would want to miss out any communication with SECI. An alternate person's contact details would give comfort both to the bidder and SECI in case there is a need for any clarification	The suitable amendments are being issued on the clause referred.
165	SECTION 4	40.1	The Bidder shall be a Company or a Limited Liability Partnership as defined	The Bidder shall be a Company, Partnership Firm or a Limited Liability Partnership as defined	Can a Registered Partnership Firm participate in Tender	In case of partnerships only LLPs are allowed.
166	SECTION 4	40.1	The Bidder shall be a Company or a Limited Liability Partnership as defined	we would request you to allow the propoiertship firm (Lead bidder and Non lead Bidder), like other national agency & state agencies to give equal opportunities .		The clause remains unchanged
167	SECTION 4	41.2	The bidder should be, either of the following: i. Manufacturer of Solar PV Module or ii. Manufacturer of Solar Pump or iii. Manufacturer of Solar Pump Controller using indigenous technology or iv. EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology.	We would request you to allow Non lead bidder can sign multiple consortium with multiple Lead bidder .		Not allowed under this RfS.
168	RfS Section 1	13.1	Bidder shall submit Earnest Money Deposit (EMD) in the form of Bank Guarantee of 2 % of amount equivalent to the 6 % of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher, (as per Annexure-E) according to Format 7.3A/ Format 7.3B and valid for 27 months from the last date of bid submission, shall be submitted by the Bidder along with their bid, failing which the bid shall be summarily rejected. The Bank Guarantees towards EMD must be issued in the name of the Bidding Company/ Lead Member of Bidding Consortium. In the event of encashment of EMD, the encashed amount shall include all applicable taxes.	Only those bidder who submits emd will be allowed to submit financial bid. Other bidder who do not submit emd will be allowed to work subject to their acceptance of discovered L1 prices. In order to motivate competitive bidding L1 to L5 bidder will be allotted with 5% of annual state target (not total target) and this will be binding on these bidders. Emd should be 2% of 2% of the value total statewise annual allocation (not total allocation). EMD will be released on submission of performance security deposit for first 1000 swps or first allocation whichever is lower in form BG to SIA.	In order to discovered competitive and rationale L1 prices, this clause will motivate players with attached responsibility of execution at discovered prices and also avoid unreasonable quotes by bidders. Emd should be average annual work order expected from bidder considering 35 contractors for states like Haryana, Maharashtra, Punjab, Rajasthan. As this tender is for RfS, emd, technical eligibility, financial eligibility should be considering average annual work expected from 35-40 contractors per state. As bidder has already submitted emd to SECI, it will be difficult for bidder to issue new BG to SIA before release of EMD as bank guarantee limits are also constraints if EMD is on very high side. If EMD is expected at 2% of	The clause remains unchanged
169	RfS Section 1	41.2. (iv)	EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology	EPC/SI of 'similar works' is allowed to participate individually or as consortium partner with manufacturer or financial partner.	This work is purely work of design, supply, installation, testing, commissioning and maintenance of solar pumping system at laes of distributed locations and for this even though EPC is best equipped with experience and expertise epc is forced to participate as consortium or JV with manufacturer and in reality it should be reverse. Even manufacturer of a components of solar pump has expertise on manufacturing of only any one components (spvm/motor pump/pump controller) but epc has experience and expertise on design, integration and cmc which is actually required to execute this tender. As there is clause that only ALMM approved manufacturer will be able to supply in this tender, quality of spvm is already assured.	The clause remains unchanged

170	RFS Section 1	41.2. (iv)	'Similar Works' means - Design, Supply, Erection, Testing and Commissioning of standalone (off-grid) solar PV based water pump sets. Experience required for the bidders to be counted for the past 7 years from the last date of bid submission shall be as per Table below	Experience in offgrid and on grid distributed sytem will also be considered.	As there are many bidders who have experience of execution of offgrid and on grid distributed projects, this projects must include them also so that targets can be achieved easily and also give change to these experience and expert epc to grow. Request to clarify 1) in case of epc who is manufacturer of motor pump and pump controller, will the experience be cumulative of solar pumping system, motor pump and pump controller supplied 2) in case of solar panel manufacturer should it be experience of supply in solar pumping system or any other distributed projects like grid tied distributed projects and other homelighting projects.	The clause remains unchanged
171	RFS Section 1	41.2. (iv)	Similar Works' means - Design, Supply, Erection, Testing and Commissioning of standalone (off-grid) solar PV based water pump sets. Experience required for the bidders to be counted for the past 7 years from the last date of bid submission shall be as per Table below.	Experience of 3hp should be consider as single , 5hp should be consider 1.5 times, experience of 7.5hp and 10 hp should be consider as 3 times to arrive at experience of swps for calculation of QR.	Higher weightage should be given to experience of 7.5hp, 10 hp. Example if a bidder has worked in harayna his experience will be mostly for 7.5hp and 10 hp which involves more resources and should be considered accordingly compared to experience of 1 or 2 hp.	The clause remains unchanged
172	RFS Section 1	42.1 network and 42.2 MAAT	Present clause required that both criteria of network and MAAT is required	clause of MAAT OR NETWORK SHOULD BE "or" and not "and"	Bidder must satisfy requirement of Turnover or network to satisfy financial capability from creditor or other resources. If a bidder has good network and bank credit then it is assurance of financial capability and liquidity to execute project. A bidder with minimum turnover also assures of capacity to manage finance. So any one of criteria is sufficient to check financial capability of bidder.	The clause remains unchanged
173	RFS Section 1	31	The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft & burglary etc. during 5 years warranty period.	State nodal agency should float separate tender for this work so that all risk can be covered and beneficiary or system integrator does not lose claim due to rejection by insurance company. It should be mandatory for beneficiary to notify losses within 48 hours of event.	We request that insurance should be covered by state implementing body as insurance company are not providing insurance coverage for 5 years. Also there are many clauses due to which it is not possible to recover the losses and for most of claim below Rs 20000/- per site we dont get anything from insurance company. In a event of mass destruction by hurricane it will not be possible for system integrator to bear 20000 rs per sites when number of sites are in large numbers. Also there should be clause to bound farmer to intimate for loss within 48 hours. If the loss is not intimated to insurance company within 48 hours then benefit of insurance cannot be passed to beneficiary.	The clause remains unchanged
174	Annexure-A(technical Specifications)	Cl 3.3.2 Page 2	For IS 16221 (Part-2) certification of the SPV pump controller the latest quality control order released by MNRE regarding IS 16221 (Part-2) must be followed	For IS 16221 (Part-2) certification of the SPV pump controller the latest quality control order released by MNRE regarding IS 16221 (Part-2) may be followed. The controller should have conformance as per IS 16221	During Bid submission conformance could be sought and during installation certification should be made mandatory	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
175	Annexure-A(technical Specifications)	Cl 3.3.2 Page 5	As per IEC 61683, Total Harmonic Distortion (THD) for Voltage and Current should be less than 3 % at the Motor Terminal over the entire radiation profile and in order to achieve this measures such as use of the choke coil (du/dt Filter) etc. can be adopted	Total Harmonic Distortion of Current & Voltage should be less than 5% on nominal voltage.	THD of less than 5% may be allowed at motor terminals for healthy running. For heads above 100m du/dt filters should be made mandatory	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
176	Annexure-A(technical Specifications)	Cl 3.6.4 Page 5	A DC switch as per IS/IEC 60947-1 suitable for switching dc power ON and OFF shall be provided in the SPV Pump Controller.	A d.c. Switch as per IS/IEC 60947-3 or d.c. circuit breaker as per IS/IEC 60947-2 suitable for switching d.c. power ON and OFF shall be provided in the SPV pump controller.	This clause is as per latest BIS Std IS 17018 Part 1. IS/IEC 60947-1 is generic clause, whereas 60947-3 & 60947-2 refers to switch or circuit breakers	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
177	Annexure-A(technical Specifications)	Cl 3.6.6 Page 6	The various parameters should be present on the SPV Pump Controller display/screen such as:.....	User should be able to view various parameters on Controller Display/RMS Portal/Mobile App.	Few parameters could be made available on Controller display and others could be made available on PMS Portal/WebPage/Mobile App	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
178	Annexure-A(technical Specifications)	Annex IV Page 37	REMOTE MONITORING SYSTEM(RMS)	Format for uploading the data should be included in the specification for consistency.	Portal and App will be developed by other agency. Format should be provided for singularity and consistency	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
179	Annexure-A(technical Specifications)	Annex IV i Page 37	Note: MNRE will provide the support for the development of the Mobile App for the PM-KUSUM scheme.	The clause is not clear that under whose scope the Mobile App would be there	The clause is not clear that under whose scope the Mobile App would be there	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
180	Annexure-A(technical Specifications)	Annex IV Page 37	Remote Connectivity: RMS of SWPS should be using GSM/GPRS/2G/3G/4G cellular connectivity	Remote Connectivity: Remote Connectivity module should be 4G enabled which could connect through GSM/GPRS/2G/3G/4G cellular connectivity	It is possible for 4G modem to support 2G/3G; where as 2G modem can't support 3G/4G. Also the 2G would be obsolete after a year	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
181	Annexure-A(technical Specifications)	Annex IV i iii. Page 37	Ethernet/Bluetooth/Wi-Fi connectivity to configure parameters, notifications, communication interval, set points etc. or to retrieve locally stored data	Definition of setpoints is required	Defination of setpoints is required	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023

182	Annexure-A(technical Specifications)	Annex IV v Page 38	RMS should have provision to give various modes of operations which are as follows: i. Remote Mode: - Pump can be made ON/Off using the Mobile App or in case, farmer do not have a smart phone, farmer shall be able to on-off pump thru SMS/missed call. ii. Auto Mode: - Pump can ON/Off automatically using the sensor data which are installed in the field by the beneficiary. (Cost of sensors will be worn by the beneficiary) iii. Timer Mode: - Pump controller shall operate pump as per configured schedule using mobile application i.e. daily start time and running hours of pump. iv. Manual Mode: - Pump can be made to run into manual mode from field	RMS should have provision to give various modes of operations which are as follows: i. Remote Mode: - Pump can be made ON/Off using the Mobile App or in case, farmer do not have a smart phone, farmer shall be able to on-off pump thru SMS/missed call. ii. Manual Mode: - Pump can be made to run into manual mode from field	For Auto mode more details would be required as how and to what signal the sensors and pump should respond. If its for float switch only then it should be made clear	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
183	Annexure-A(technical Specifications)	Annex IV f Page 38	In case of unavailability of cellular network, RMS should store data locally and on availability of network it should push data to central Server. Local data storage should be possible for one year in case of unavailability of cellular network. RMUs should have configuration update over the Air of multiple parameters such as IP, APN, Data logging Interval, Set Points etc. is essential. Software updating should be possible with 2G and even without the presence of SD card. Software updating process and/or failure to update software shouldn't disrupt pumping operations.	In case of unavailability of cellular network, RMS should store data locally and on availability of network it should push data to central Server. Local data storage should be possible for one year in case of unavailability of cellular network. RMUs should have configuration update over the Air of multiple parameters such as IP, APN, Data logging Interval, Set Points etc. is essential.	Last line is not required; During & After software/firmware update for configuration the system would need to be stopped and re-started	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
184	SECI000093-7633709-RfSunderPM-KUSUM_Component-B-Finalupload	13.1 (Page 15 of 106)	EMD BG Validity asked is for 27 months from the date of submission of bid	Request to consider the EMD BG validity for 12 months		The suitable amendments are being issued on the clause referred..
185	--do--	41.2 (Page 35 & 36 of 106)	Technical QR for Solar Pump / Controller / SPV kW	Request to reduce the QR for Number of Solar Pump / Controller / SPV kW - supply or installation to 3% instead 6% of tendered quantity	Compared to last tender the QR for numbers is very high and need to be revised	The suitable amendments are being issued on the clause referred..
186	ANNEXURE-A	3.7.2	Surge Protection Device : At the DC Input side of the controller, it should have protection from an External Surge Protection Device of Type-2 or higher (i.e. Type-1) in accordance with the IEC 61643-	Please remove the word "External" from the clause. Type II or higher specification can be made even by keeping the SPD internally on the inverter board. Hence, a mandate of an external device should not be there.	This will help us to save the cost for the same as external SPC will be costly. Further, as long as the specification of Type II or higher SPD is met, external mounting should be a necessity. If one wants to do it externally, it is upto them.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
187	Tender Document	40	Qualification Requirement for Bidders	We request you to consider 25% of the MAAT as required for the General Bidders and 25% of the Experience as required for the General Bidders for NSIC / MSMEs registered bidders as per Guidelines of MSME Ministry.		The suitable amendments are being issued on the clause referred.
188	Tender Document		Reservation of Quantity for NSIC / MSME bidders	We request you to reserve 25% of the Quantity to NSIC/MSME Registered bidders. this will help to bring in more bidders for execution and will help in executing the programme fast.		The clause remains unchanged
189	Section-4, Page No. 41 of 106	Clause No. 42.8	In case the response to RfS is submitted by a Consortium, then the financial eligibility requirement to be met by each Member of the Consortium shall be computed in proportion to the equity commitment made by each member in the Project Company.	We suggest the following in this regard: 1.) Total combined Financial Credentials (i.e. MAAT and Net Worth) of the JV Members should be considered for the Bidding Eligibility Criteria and not in the ratio of Financial Credentials of each member of the Joint Venture and this consideration should be independent of shareholding percentage in JV. 2.) Total combined Technical Experience of the JV members should be considered for the Bidding Eligibility Criteria irrespective of the shareholding percentage in JV 3.) Ratio of shareholding of each member in the Joint Venture Agreement or MoU will be independent of the ratio of their Financial Credentials 4.) There should not be any Working Capital requirement format because funds can be arranged project-based later after issuance of Letter of Empanelment	As per this current tender condition/calculation for JV, the smaller company with more Technical Experience will always be forced to have a considerably lower shareholding than other JV partner who has no Technical Experience but has very sound Financial Credentials. Large Companies with sound financials can form JV with smaller technical/manufacturing companies and should have flexibility to have any percentage of shareholding in JV (based on their investment and mutual understanding with the other JV partner) instead of having it in ratio of their financial credentials or existing Working Capital. Investment ratio can be decided by the members of JV after issuance of Letter of Empanelment depending on the project- based which can be agreed by the bidders before offer.	The suitable amendments are being issued on the clause referred.
190	Section-5, Page No. 45 of 106	Clause No. 47	All prices discovered under this tender will remain valid for 24 months from the date of opening the price bids, which will be announced by MNRE/SECI. Within this 24-month period, empanelled vendors have no right of refusal to complete the allocated work.	Price validity should be asked only for 6 months and there should be a clause of Price Escalation beyond that period of 6 months	It is not practically possible at all to give a price validity for 24 months because the rates of raw material and the components of Solar water pumping systems are not constant for such a long period of Time.	The clause remains unchanged
191	Section-3, Page No. 17 of 106	Clause No.14.2	PBG(s) shall be submitted by selected vendors to SIA within 15 days from issuance of letter of award/empanelment.	PBG(s) shall be submitted by selected vendors to SIA within 15 days from receiving the letter of award/empanelment or Work Order/NTP via email or postal delivery (and not within 15 days of issuance date). In case of JV/Consortium, all PBGs can be submitted by either Member of the JV and not just by the Lead Member.	There is always a considerable days lag between the issue date of LoA by SIA and date on which it is emailed to Successful Bidder or the date when a hard copy is received by Successful Bidder via Postal Delivery. All the SIA should be instructed to share the Work Orders over emails also and this timeline of 15 days should start from the date of Work order copy shared by the Department with the Successful Bidders via email or date of receipt via Postal Delivery and not the issue date.	The clause remains unchanged

192	Section-3, Page No. 21 of 106	Clause No. 18	Certified copies of annual audited accounts for the last three financial year, i.e., FY 2021-22/2020-21/2019-20, and provisional audited accounts, along with certified copies of Balance Sheet, Profit & Loss Account, Schedules and Cash Flow Statement supported with bank statements as on the date at least 7 days prior to the due date of bid submission (if applicable), shall be required to be submitted.	Please let us know which Provisional data is mentioned here and for which period? More Clarity is required for this point/clause as in Annexure/Format for Turnover there is no placeholder for unaudited data.		The Clause is self-explanatory.
193	Section-5, Page No. 45 of 106	Clause No. 48	Each Selected Vendor shall acknowledge the LoA and return duplicate copy with signature of the authorized signatory of the Selected Vendor to respective SIA within 15 (Fifteen) days of issue of LoA, failing which it will be deemed to have been accepted by the Bidder.	Each Selected Vendor shall acknowledge the LoA and return duplicate copy with signature of the authorized signatory of the Selected Vendor to respective SIA within 15 (Fifteen) days of receiving the of LoA via email or postal delivery, failing which it will be deemed to have been accepted by the Bidder. Selected Vendor can deny to accept the LoA by giving the denial in writing within 15 days of receiving the LoA or Work Order via email or postal delivery.	1.) There is always a considerable days lag between the issue date of LoA by SIA and date on which it is emailed to Successful Bidder or the date when a hard copy is received by Successful Bidder via Postal Delivery. All the SIA should be instructed to share the Work Orders over emails also and this timeline of 15 days should start from the date of Work order copy shared by the Department with the Successful Bidders via email or date of receipt via Postal Delivery and not the issuance date. 2.) No Response should not be considered as acceptance by default	The clause remains unchanged
194	Section-3, Page No. 18 of 106	Clause No. 15.4	Note withstanding the transfer of ownership of the plant and equipment the responsibility of care and custody thereof together with the risk of loss or damage there too shall remain with the Vendor pursuant to GCC hereof until completion of facilities or the part thereof in which such plant and equipment are incorporated.	Please elaborate what does Completion of Facilities Mean? Responsibility of Care and Custody should be Transferred to Customer on Material Supply or on Installation.		The suitable amendments are being issued on the clause referred.
195	Technical Specifications, Page No. 13	Clause No. 9(Vi)	The maintenance shall include replacement of any component irrespective of whether the defect was a manufacturing defect or due to wear and tear.	The Solar Water Pumping Systems where Submersible Pump Motor is Damaged by Sand as the bore is not clean or Surface Motor Submerged in Water due to Customer's Negligence, such Systems will be considered out of Warranty and hence Vendor will not be liable for the repair or maintenance of such Systems due to Customer's negligence	These are the instances where there is no fault of the Vendor since Customers are guided properly on do's and don'ts for the System and hence any such negligence on Customer's part should lead the System as Out of Warranty	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
196	Page 25/106	1.b.iii	The price shall remain firm and fixed and shall be binding on the Selected Vendor irrespective of actual cost of execution of the Project. No escalation on the price will be granted for any reason whatsoever. The Selected Vendor shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever	Kindly add Price Escalation Clause as per the Ministry of power other tenders as the validity of tender is for 24 months		The clause remains unchanged
197	Page 9/106	3.2.b	Selected vendors have to submit monthly consent of beneficiaries in their favor to SIA for which SIA's will be Notice to Proceed and for this, vendor shall complete the installation and commissioning of SPWPS within 120 days from date of issuance of NTP for general category states. However, for special category states/Hill States & UTs and Island UTs, Vendor shall complete the installation and commissioning of SPWPS within 150 days of issuance of such NTP.	Keep it 150 for non hill region and 180 for hill region and where the allocation is provided by SNA the duration of execution of project should be as per slab of number of quantity or monthly consent from vendors to be seeked by SNA	As if heavy quantity is assigned to vendors at a single order extra time to be provided there should not be equal time to execution of 100 pumps and 1000 pumps in single NTP	The clause remains unchanged
198	RfS	3.1(A)	The vendor shall have one authorized service center in each operational district and a helpline in local language in each operational State.	One authorized residence service person should be made available in district level in place of authorized service center		The clause remains unchanged
199	RfS	3.2(B)	Selected vendors have to submit monthly consent of beneficiaries in their favor to SIA, vendor shall complete the installation and commissioning of SPWPS within 120 days from date of issuance of NTP for general category states.	Please Provide the format		The clause remains unchanged. Format will be provided by SIA.
200	RfS	3.2(C)	Selected Vendor and SIA representative should conduct site survey and submit Progress report on fortnight basis as per the requirement of SIA via PM-KUSUM App released by MNRE.	Please Provide standrad formats.		The clause remains unchanged. Format will be provided by SIA.
201	RfS	3.4(G)	CMC for a period of 5 years from the date of commissioning of the systems including insurance coverage for the installed systems against natural calamities and theft. Selected Vendor shall provide a copy of valid insurance certificate of SPWPS to the beneficiary and same shall be renewed every year.	In Insurance we don't get the claim of for total amount, insurance company deduct excess charges as well as depreciation while settling claim. So we should be liable for insurance claim amount received and any excess amount required to reinstate system then that need to be paid by the beneficiary. Deliberated damage under the head of malpractices and not eligible to take the insurance claim. In such a cases calling us that should be prevented to make payment from own pocket		The clause remains unchanged
202	RfS	13.1	Bidder shall submit Earnest Money Deposit (EMD) in the form of Bank Guarantee of 2 % of amount equivalent to the 6 % of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher	Its market mode tender and for 24 months, there is no clarity that single Vender can get 6% of total Allocation, so it's request to consider 3 % in place of 6 % as base to provide level playing for all. You are asking BG for 27 month that shall be 12 month and shall be extended as per requirement		The suitable amendments are being issued on the clause referred..

203	RfS	13.5(B)	In case, the SIA issues LoA to the Selected Vendor and if the Selected Vendor does not submit the Performance Bank Guarantee within the stipulated time period (i.e. 15 days from issuance of LoA)	LOA is not confirmation of getting the work. PPG shall submit in lot of 100 pumps as advance and shall submit further as work orders get release from SIA		The clause remains unchanged
204	RfS	16(Stage-2)	SIA has the right to seek any additional documents/ certificates/ information it deems fit prior to releaser of any payment.	As mention SIA has right to seek any additional document certificate information for release of the payment - kindly provide the required list certificate document and information. In tender so work will not be impact and smoothness of execution.As any addition requirement have direct relativity with price we are going to offer.		The suitable amendments are being issued on the clause referred.
205	RfS	20(F)	In case it is found that the Bidding Company including Ultimate Parent Company/ Parent Company/Affiliate/Group Companies have submitted more than one response to this RfS, then all these bids submitted shall be treated as non-responsive and rejected.	We are Relatives working in the solar industry as director, in both company share holder and director are different but Both company is planing for bidding, so does we can bid in both company? This clarification require as do you consider this as affiliate company ?		The bidder has to comply the provisions are per Format 7.8 (Format for Disclosure) of the RfS document
206	RfS	31	The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft & burglary etc. during 5 years warranty period.	As insurance company have there own mechanisms under IRADA, anything not cover under there guidelines shall be exempted or you please empanel insurance company who will provide claim under your terms and conditions		The clause remains unchanged
207	RfS	41.2(IV)	Design, Supply, Erection, Testing and Commissioning of standalone (off-grid) solar PV based water pump sets. Experience required for the bidders to be counted for the past 7 years from the last date of bid submission shall be as per Table Given	It's kept vey high ,please consider actual implementation took place india , with this QR limiting state to bid as this tender is for two years so it's need to be 25 % then only more numbers of bidder will be able to bid		The clause remains unchanged
208	RfS	(G) EARNEST MONEY DEPOSIT (EMD) page no. 3 of 106	Amount: As per clause 11 of section III of this RfS to be submitted in the form of Bank Guarantee/Payment on Order Instrument, along with the Response to RfS.	Amount: As per clause 13 of section III of this RfS to be submitted in the form of Bank Guarantee/Payment on Order Instrument, along with the Response to RfS.	Typo Error in clause no.	The suitable amendments are being issued on the clause referred..
209	RfS	(H) PERFORMAN CE BANK GUARANTEE page no. 3 of 106	Amount: As per clause 12 of section III of this RfS to be submitted in the form of Bank Guarantee/Payment on Order Instrument, along with the Response to RfS.	Amount: As per clause 14 of section III of this RfS to be submitted in the form of Bank Guarantee/Payment on Order Instrument, along with the Response to RfS.	Typo Error in clause no.	The suitable amendments are being issued on the clause referred..
210	RfS	3.1 Supply and Manufacture b. page no. 9 of 106	Each pump should be marked with Toll Free No. of successful bidder (Toll Free No. shall be affix on controllers and shall be readable for 5 years) operating in English/Hindi and Regional language of respective state and specific pump number and same must have been captured by SIA's web-based application (as per instruction of SIA) at the time of installation at site. During the time of PDI of each component, test reports of Equipment's, warranty certificates, calibration certificates and any other certificates as specified in the guidelines and specification issued by MNRE should be provided by the bidder.	Each pumping system at every site should be marked with Toll Free No. of successful bidder (Toll Free No. shall be affix on controllers and shall be readable for 5 years) operating in English/Hindi and Regional language of respective state and specific pump number and same must have been captured by SIA's web-based application (as per instruction of SIA) at the time of installation at site. During the time of PDI, test report of ordered solar pumping system's test report, warranty certificates and structure certificate as specified in the guidelines and specification issued by MNRE should be provided by the bidder.	Toll free no. on pump shall not workable. Hence term pump is replaced with pumping system PDI also conducted as per test report of solar water pumping system's test report. There is no need to have components/equipment's test report during PDI including the calibration certificate. These certificates are been held and owned by test laboratories for testing of solar pumping system. In PDI, The inspection of the material is done according to test reports and specifications only. PDI & Performance tests both are different things.	The clause remains unchanged
211	RfS	3.2 Installation and Commissioning c. page no. 9 of 106	Selected Vendor and SIA representative should conduct site survey and submit Progress report on fortnight basis as per the requirement of SIA via PM-KUSUM App released by MNRE.	The selected vendor shall conduct the site survey and submit the progress report on fortnight basis to SIA via PM-KUSUM App released by MNRE.	The site survey should be done by vendor after getting the NTP only. The final inspection of the installed system is done by vendor and SIA representative jointly.	The clause remains unchanged
212	RfS	3.2 Installation and Commissioning e. page no. 10 of 106	Vendors will have to submit installation reports as per given format on weekly basis and Monthly basis to MNRE and SIA.		1) Installation report format should be provided at tender stage only to have universal process and documentation. 2) Like the previous tenders (through amendments); The submission of installation reports to SIA must be in digital form either by Email OR at Web- portal though mobile application only.	The clause remains unchanged
213	RfS	3.2 Installation and Commissioning f. page no. 10 of 106	Vendor will have to submit the completion reports of each district to SIA within one week from 100% completion of work as per allocation of each district.		Like the previous tender (though amendment); It is requested to consider the installation completion report digitally either by web portal or Email to SIAs as the collecting and forwarding the physical reports from the village level to district level and then to state level of SIAs is time consuming process.	The clause remains unchanged

214	RIS	3.2 Installation and Commissioning h. page no. 10 of 106	Vendor shall comply with all applicable regulatory and statutory norms. Vendor must obtain approval/ NOC from appropriate Govt body for implementing the project in each selected village.		Kindly delete this clause as; the solar pumps are getting installed at farmer's site not at any govt. property. The farmer's consent to own at its farmland is itself an NOC.	The clause remains unchanged
215	RIS	3.2 Installation and Commissioning i. page no. 10 of 106	Selected vendor should have finalized sub-bidders and Purchase order for all materials such as PV Modules, Structure, Pump, Controllers, etc. within 30 days from date of award of contract and unpriced copy of such award letter/Purchase order will be submitted within 30 days from date of issuance of award.		Please clarify scope to be covered by sub-bidder, if any.	The clause remains unchanged
216	RIS	3.2 Installation and Commissioning j page no. 10 of 106	Vendor should commission minimum pumps/ quarter as defined above at Clause 3.2b of Scope of work. Vendor must submit handing over certificates in the format prescribed by MNRE.		Kindly provide the handing over certificate format the time of bid process only as part of uniform documentation work among all the participating states.	The clause remains unchanged. Format will be provided by SIA.
217	RIS	3.2 Installation and Commissioning l. page no. 10 of 106	Vendor should submit the prescribed certificate and photographs of each SPWPS installed which must show complete installation setup along with beneficiary pump number etc.	Vendor should submit the prescribed certificate and photographs of each SPWPS installed online only which must show complete installation setup along with beneficiary pump number etc.	It is requested to consider the installation report along with photographs in digital mode only (either through Email/web-portal/mobile application)	The clause remains unchanged
218	RIS	3.3 Technical Requirement and Testing d. page no. 11 of 106	Systems installed under this programme should be follow OM-F.No.283/33/3029- GRID SOLAR of MNRE, Govt of India dated 23.09.2020.	d. Systems installed under this programme should be follow OM-F.No.283/22/2019- GRID SOLAR of MNRE, Govt of India dated 09.02.2021. (Attached with pre-bid points submission)	The circular no. is to be corrected. In the previous tender it was F.No. 283/22/2019-GRID SOLAR dated 23.09.2020. This said OM (Amended) was reissued by MNRE on 09.02.2021. It is related to procurement (preference to Make in India).	The suitable amendments are being issued on the clause referred.
219	RIS	3.4 Operation & Maintenance (O&M), Training, Awareness and Sensitization a. page no. 11 of 106	Selected Vendor should keep necessary spare parts (minimum 2% of allotted quantity of each component of the complete system at the service centre) at each district and should ensure proper maintenance of SPWPS to 5 years from date of installation of each SPWPS. Vendor should also ensure to provide local training to local persons regarding proper maintenance of SPWPS. Vendor should submit bi-weekly installation report to SIA as per the prescribed format provided during the installation phase		Kindly allow the installation report submission to SIA digitally by Email/ at web-portal. Additionally, provide the format at the time of bidding only.	The clause remains unchanged
220	RIS	3.4 Operation & Maintenance (O&M), Training, Awareness and Sensitization h. page no. 12 of 106	Vendors have to provide the Remote Monitoring System (RMS) with all the SPWPS installed under the scheme. Further, vendor has to maintain the RMS in working condition for the period of 5years and RMS systems shall push the accurate data of the parameters as specified in the specification and guidelines of the scheme failing which the installation of the system will not be accepted by SIA.		It is requested to clarify the case arised, if there is no network available in any remote area.	The clause remains unchanged
221	RIS	3.4 Operation & Maintenance (O&M), Training, Awareness and Sensitization i. page no. 12 of 106	Vendor shall ensure that the local training, awareness and sensitization campaigns on usage of the SPWPS are conducted.	i. vendor shall ensure the training to the beneficiary owning the sola pump for it's easy operation. The awareness and sensitization campaigns on SPWPS shall be in scope of SIAs only as per the PM-KUSUM Scheme guidelines.	The local awareness program/ campaigning's must be in the scope of SIAs only.	The clause remains unchanged
222	RIS	6.1 page no. 14 of 106	Total allocation to your vendor for a particular State/UT shall not go beyond the Annual Turn Over requirement for that particular State/UT. However, if there are no vendors available in the corresponding package, who have agreed to match the L1 prize and circumstances necessitates additional award of work, additional allocation may be done by SIA as per MNRE approvals.	Kindly delete this clause.	This clause was already deleted in previous tenders through amendments, because as per the PM- KUSUM scheme guideline; the entire program has to be implemented in market mode by taking farmer's consent for agency selection like previous 03 tenders.	The suitable amendments are being issued on the clause referred

223	RIS	9 Commissioning of Projects page no. 14 of 106	Commissioning of Projects Selected vendors must submit monthly consent of beneficiaries in their favours to SIA for which SIA will give notice to proceed and for this selected vendor shall complete the installation and commissioning of allocated SPWPS within 120 days from issuance of notice to proceed for general category state. However, for, special category states/Hill States/UTs/Island UTs, selected vendor shall complete the installation and Commissioning of allotted SPWPS within 150 days of issuance of notice to proceed.	Commissioning of Projects Selected vendors must submit bi-weekly consent of beneficiaries in their favours to SIA for which SIA will give notice to proceed after collecting the beneficiary share and for this selected vendor shall complete the installation and commissioning of allocated SPWPS within 120 days from issuance of notice to proceed for general category state. However, for, special category states/Hill States/UTs/Island UTs, selected vendor shall complete the installation and Commissioning of allotted SPWPS within 150 days of issuance of notice to proceed.	Since taking consent under market mode is a continuous process, Hence it is requested to kindly change the monthly submission of consent to bi-weekly submission in online-mode. It shall lead to speed up the implementation of the program The NTP shall be issued after the collection of beneficiary share by SIAs.	The clause remains unchanged
224	RIS	11 page no. 15 of 106	All MSMEs (Micro, Small and Medium Enterprises) notified as per clause 1.10.3 of GFR 2017 and as registered under NSIC/DIC/Udyog Aadhaar only are only exempted from submission of Bid Processing Fee and EMD. For claiming this exemption, at the time of bid submission, MSMEs must provide valid proof of their being registered as MSME. However, upon empanelment under this RIS, selected MSMEs must submit Performance Bank Guarantee as per clause 12 of section III of RIS.	All MSMEs (Micro, Small and Medium Enterprises) notified as per clause 1.10.3 of GFR 2017 and as registered under NSIC/DIC/Udyog Aadhaar only are only exempted from submission of Bid Processing Fee and EMD. For claiming this exemption, at the time of bid submission, MSMEs must provide valid proof of their being registered as MSME. However, upon empanelment under this RIS, selected MSMEs must submit Performance Bank Guarantee as per clause 14 of section III of RIS.	1) Typo error: Clause 14 to be mentioned in place of clause 12. All the MSME bidders must be treated as general bidders for technical qualification into the tender while price bid of only general bidders must be considered that shall be matched by MSME bidders. This RFS is issued under the Works contract category over which the MSME's purchase preference policy is not applicable.	The suitable amendments are being issued on the clause referred..
225	RIS	13 page no. 15 of 106	Bank Guarantee/ Payment on Order Instrument (POI) against Earnest Money Deposit (EMD)	As per the OM dated 2nd February, 2022 issued by Procurement Policy Division, Dept. Of Expenditure, Ministry of Finance; It is requested to kindly consider Insurance Surety Bond also as part of EMD/Bid Security. (The OM is attached for reference.)		The clause remains unchanged
226	RIS	13 Bank Guarantee/ Payment on Order Instrument (POI) against Earnest Money Deposit (EMD) 13.1 page no. 15 of 106	Bidder shall submit Earnest Money Deposit (EMD) in the form of Bank Guarantee of 2 % of amount equivalent to the 6 % of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher, (as per Annexure-E) according to Format 7.3A/ Format 7.3B and valid for 27 months from the last date of bid submission, shall be submitted by the Bidder along with their bid, failing which the bid shall be summarily rejected. The Bank Guarantees towards EMD must be issued in the name of the Bidding Company/ Lead Member of Bidding Consortium. In the event of encashment of EMD, the encashed amount shall include all applicable taxes.	As per clause no. 22 of bid validity mentioned at page no. 26 of 106 (RFS). The banks are not agreed to issue the bank guarantees beyond this period. It is requested to consider EMD validity equal to BID validity period from the date of bid submission.		The suitable amendments are being issued on the clause referred..
227	RIS	14 page no. 17 of 106	Performance Bank Guarantee (PBG)	As per the OM dated 2nd February, 2022 issued by Procurement Policy Division, Dept. Of Expenditure, Ministry of Finance; It is requested to kindly consider Insurance Surety Bond also as part of performance security. (The OM is attached for reference.)		The clause remains unchanged
228	RIS	15.1 page no. 18 of 106	The implementation work on ground should start within 15 days from the date of Notice to Proceed from SIA.	SIA shall issue the NTP after the collection of beneficiary share. The implementation work on ground should start within 15 days from the date of Notice to Proceed from SIA. NTP shall contain following minimum information for selected vendor: 1) Farmer Name, 2) Mobile No., 3) Place, 4) Pump capacity, type & category, 5) Dynamic Head (mtrs.), 6) Application No. (Or ID).	Like the previous tender (though amendment); The NTP should be issued by SIA to selected vendor after collecting the beneficiary share. Since NTPs shall be issued after the consent & site survey acceptance, hence every NTP must contain minimum following information: 1) Farmer Name, 2) Mobile No., 3) Place, 4) Pump capacity, type & category, 5) Dynamic Head (mtrs.), 6) Application No. (Or ID).	The clause remains unchanged
229	RIS	16 Payment Terms Stage-1: Page 19 of 106	Payment Terms	Payment Terms: 1) 100% payment on bi-weekly (every 15 days) bill submission without capping of any minimum quantity of solar pump installations. 2) Payment invoice, installation reports and site inspection reports with photographs shall be considered in digital form either at portal or by Email only for payment realisation. No other physical document should be required to ask for payment release.	The repetitive submission of documents as mentioned in existing payment terms is not required. Like below: 1) project plan 2) contract agreement. 3) Undertaking to withstand ability of SPWPS. 4) Test Reports Additionally, It is also requested that like the penalty clauses for delay in work completion to vendor as well as "Late payment surcharge rule 2022 issued by Ministry of Power"; Kindly introduce some mechanism for interest surcharge on outstanding payment after the due date of payment.	The clause remains unchanged
230	RIS	17 Minimum Paid Up Share Capital to be Held by Project Promoter 17.1 Page 19 of 106	Minimum Paid Up Share Capital to be Held by Project Promoter 17.1 The Bidder shall provide complete information in their bid in reference to this RIS about its promoters and upon issuance of LoA, the Successful Bidder/Selected Vendor shall indicate its shareholding in the company indicating the controlling.		Please clarify that; Such information is required from all the bidders or only by those who are participating in bid through JV/Consortium or through any project company.	The Clause is self-explanatory.

231	RfS	18 xvi. Attachments ii Page 21 of 106	Certificate of Incorporation of Bidding Company/ all member companies of Bidding Consortium.	Certificate of Incorporation of Bidding Company/ all member companies of Bidding Consortium. The manufacturers also submit Factory licence issued according to Factory Act, 1948 for the product being manufactured by them. All the general bidders (except MSME) must submit the copy of IEM acknowledgment certificate issued by DPIIT, Ministry of Commerce & Industries.	The only incorporation certificate does not fulfil the requirement of a manufacturer as it is only the registration of the company. In addition to incorporation certificate; Factory licence must be asked from the manufacturers. Every manufacturer has to own Factory licence according to Factory Act, 1948 for manufacturing setup in any part of country. Similarly, IEM acknowledgment (issued by DPIIT, Ministry of commerce & Industries) is also mandatory for the manufacturing industries having the annual turnover of more than Rs. 250 Cr. or/and having an investment in plant and machinery of Rs 50 Crore and above.	The suitable amendments are being issued on the clause referred.
232	RfS	18 xvi. Attachments iv Page 21 of 106	Certified copies of annual audited accounts for the last three financial year, i.e., FY 2021-22/2020- 21/2019-20, and provisional audited accounts, along with certified copies of Balance Sheet, Profit & Loss Account, Schedules and Cash Flow Statement supported with bank statements as on the date at least 7 days prior to the due date of bid submission (if applicable), shall be required to be submitted.		Kindly provide the period for bank statements required.	The Clause is self-explanatory.
233	RfS	21.1 (ii) Page 23 of 106	Bank Guarantee/ Payment on Order Instrument towards EMD as mentioned in the Bid Information Sheet (as per Format 7.3A/ 7.3B). One EMD shall be submitted for the cumulative capacity quoted by the Bidder.	Bank Guarantee/ Payment on Order Instrument towards EMD as mentioned in the Bid Information Sheet (as per Format 7.3A/ 7.3B). Bidder shall submit the separate BG for all the participating states.	It is requested consider separate BGs for all the participating states like the first tender issued for the PM-Kusum scheme in 2019. If any State / SIA does not sign the contract or issue the LoA for up to 6 months then our entire EMD shall be stuck with SECI which in turn shall affect the limits with banks for issuing the CPGs.	The suitable amendments are being issued on the clause referred.
234	RfS	21.2 I. Technical Bid (First Envelope) Page 25 of 106	Formats - 7.1, 7.2 (if applicable), 7.3 A/7.3 B, 7.4, 7.5 (if applicable), 7.6, 7.7, 7.8/7.8A and 7.9, 7.11, 7.12, 7.13, 7.14, 7.15 as elaborated in Clause 16 of the RfS.		The format 7.8, format 7.8A & format 7.8/7.8A are different. It may be a typo error. Please make the format no. correction for format no. 7.8/7.8A at page no. 82 of Section 7.	The clause remains unchanged
235	RfS	21.2 I. Technical Bid (First Envelope) Page 25 of 106	All attachments elaborated in Clause 16 of the RfS, under the sub-clause xi: Attachments, with proper file names.		Clause 16 is related to payment terms. Please amend it with the relevant clause no. and sub-clause.	The suitable amendments are being issued on the clause referred.
236	RfS	21.2 I. Technical Bid (First Envelope) Page 25 of 106	Submission of Pass-phrases: In line with Clause 17.7 and Annexure-B, the Bidder shall be required to submit the Pass-Phrase to decrypt the relevant Bid- part is submitted into the 'Time Locked Electronic Key Box (EKB)' after the deadline of Bid submission, and before the commencement of the Online Tender Opening Event (TOE) of Technical bid.		Clause 17.7 is not available in tender. It may be typo error. The relevant clause must be 19.7 of the RFS.	The suitable amendments are being issued on the clause referred.
237	RfS	21.2 II. Financial Bid (Second Envelope) b) Bidding Parameter: iv Page 26 of 106	The fixed price for each line item shall be exclusive of all duties and taxes, insurance etc. The prices quoted by the firm shall be complete in all respect.	iv. The fixed price for each line item shall be exclusive of all duties and taxes. The prices quoted by the firm shall be complete in all respect.	Insurance shall be considered in quoted rates.	The clause remains unchanged
238	RfS	31 Insurance Page 29 of 106	Insurance The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery. For delivery of goods at site, the insurance shall be obtained by the Contractor/selected Vendor, for an amount not less than the Contract Price of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War risks and strikes. The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft & burglary etc. during 5 years warranty period.	31 Insurance The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery. For delivery of goods at site, the insurance shall be obtained by the Contractor/ selected Vendor, for an amount not less than the Contract Price of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War risks and strikes. The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft & burglary during 5 years warranty period.	The term etc. is to be removed to have the clarity on the scope of insurance to be covered for SPWPS. Additionally, it is requested to consider following: - 1) for any case of insurance claim, the beneficiary shall inform the vendor within 7 working days along with FIR copy from local police station. 2) The pumps damaged due to sandy water shall not considered for insurance as well as manufacturing defect.	The suitable amendments are being issued on the clause referred..
239	RfS	34 Statutory Compliance/ Certification regarding Cyber Security Products Page 30 of 106	Statutory Compliance/ Certification regarding Cyber Security Products A certificate as per format 7.15 is to be submitted by the bidders that the items offered meet the definition of domestically manufactured/produced Cyber Security Products as per MeitY notification vide File no. 1(10)/2017-CLES dt. 02.07.18. The above certificate shall be on Company's letterhead and signed by Statutory Auditor or Cost Auditor of the Company.		In the format at 7.15 at page no. 97; The format is not having the provision of signature by cost auditor along with UDIN no.	The suitable amendments are being issued on the clause referred.

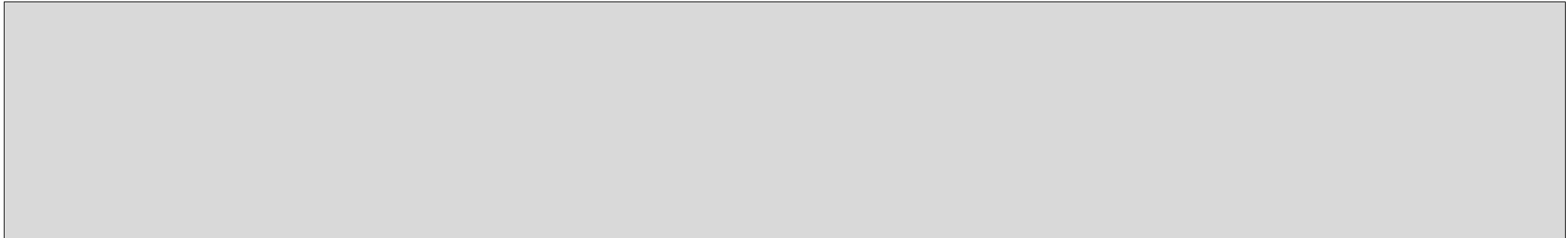
240	RIS	35 Warranty and Maintenance Page 30 of 106	Warranty and MaintenanceThe complete Solar Photovoltaic Water Pumping System and display board / Name Plate (SIA's will provide the details) shall be warranted and maintained for 05 years from the date of installation.The maintenance service provided shall ensure proper functioning of the system as a whole. All preventive/ routine maintenance and breakdown/corrective maintenance required for ensuring maximum uptime shall have to be provided by the Contractor.	Please amend this clause so that any unauthorized changes done by the beneficiary will not cover in the warranty in warranty clause only manufacturing defects will be covered.	It is requested to kindly consider that:Any unauthorized changes or alteration to the installation will cease the warranty for the remaining period of CMC. This clause was considered in Phase-1 tender of PM-KUSUM scheme (through amendment.)	The clause remains unchanged
241	RIS	39 Roles and Responsibilities of Implementation Agency Page 31 of 106	Roles and Responsibilities of Implementation Agency.		It is requested to add followings points: 1) Ensure the timely payment to vendors as per the terms and condition of the RFS document 2) Compliance to Uniform formats and procedures as mentioned in RFS.	The clause remains unchanged
242	RIS	40.10. Page 34 of 106	For avoidance of doubt, it is clarified that the fully owned subsidiary Company as mentioned in Clauses 38.3 and 38.6 above should be an immediate subsidiary of the bidder, without any intermediaries involved. The following illustrations are provided to clarify the same:		Clause 38.3 and 38.6 are not available in RFS document.	The suitable amendments are being issued on the clause referred.
243	RIS	41.3 Page 37 of 106	Detailed technical parameters of the Pumps to be met by Vendors is at Annexure-A. The Bidders shall strictly comply with the technical parameters detailed in the Annexure-A. Further, the provisions as contained in the O.M. dated 10.03.2021 issued by MNRE on the subject "Approved Models and Manufacturers of Solar Photovoltaic Modules (Requirement of Compulsory Registration) Order, 2019-Implementation- Reg." and its subsequent amendments and clarifications issued until the bid submission deadline, shall be applicable for this RIS. The modules used in the Project under this RIS should have been included in the List-I under the above Order, valid as on the date of invoicing of such modules.		Please clarify the case that may arise; if particular model of solar panel gets removed from the list at the time of invoicing. As the list of modules of particular make is maintained by respective module manufacturer.	The clause remains unchanged
244	RIS	42.6 Page 40 of 106	A Company/Consortium would be required to submit annual audited accounts for the last FY, 2021-22, or as on the day at least 7 days prior to the bid submission deadline, along with net worth, annual turnover, working capital certificate (if applicable) from a practicing Chartered Accountant/Statutory Auditor to demonstrate fulfillment of the criteria.		1) It is requested to consider at lead 15 days prior to the bid submission deadline. 2) Shall the same certificate be considered, if tender is extended for 15 days more.	The clause remains unchanged
245	RIS	45.5 Page 44 of 106	Each state/ UT has following type of pumps as per table below in RFS.		Since the specification in bid is given upto 25 HP capacity. Therefore, it is requested to kindly ask the rate upto 25 HP SPWPS capacity also. there is demand for large capacity solar pumping systems.	The clause remains unchanged
246	RIS	46.1 Page 44 of 106	For each line item (i.e., type of pump for each State/UT), the Bidder quoting the lowest price (L1 price) will be identified and shall be declared as the Selected Vendor. In case of multiple Bidders quoting the L1 price, all such Bidders ("L1 Bidders") will be declared as Selected Vendors.		It is requested to consider the prices of general bidders with greater experience only for L1 rate discovery and let the MSME & others bidders allow to match the L1 rate discovered from general bidders. Since; it is a rate contract with no quantity allocation to L1 bidder, therefore above mechanism is possible to implement.	The clause remains unchanged
247	RIS	49 Inspection and Audit by the Government/MNRE Page 45 of 106	inspection and audit by the Government/MNRE All materials / Equipments manufactured by the bidder/consortium of bidders against the Letter of Award shall be subject to inspection, check and/or test by the SIA/MNRE or his authorized representative at all stages and place, before, during and after the manufacture. All these tests shall be carried out in the as per technical specifications and bidder shall submit the relevant test reports at the time of bid submission to SECI. If upon delivery the material/equipment does not meet the specification, the materials /equipment shall be rejected and returned to the bidder for repairs / modification etc. or for replacement and SIA may also impose the penalty or/and blacklist the vendor. In such cases all		Since the tender has new specification over the existing specifications issued by MNRE in July-2019, hence test report of each quoted capacity as per July-2019 specifications should be asked from the bidder at the time of bid participation as part of technical qualification. Additionally, if bidder does not have any test report for any particular model then the test laboratory acknowledgement should be considered in tendering stage as per the specifications mentioned in RFS document.	The clause remains unchanged
248	RIS	Format 7.1 page 52 of 106 & Annexure-D (Price bid Schedule) page 100 of 10652 of 106	Table	It is requested to kindly clarify the followings: 1) Is it necessary for bidder to quote for all the capacity (1-10 HP) for participating states into the tender.? 2) Is it mandatory to quote for all the categories i.e. surface / submersible for quoting capacity of SPWPS.? 3) Whether the bidder has the right to bid for AC or DC type pumps OR both AC & DC type WPS rates quote is mandatory.?		1., 2., & 3. The bidder has to quote for the capacity, category of pump and type of the pump in line with the fulfillment of qualifying criteria including the specifications as per the RIS document.

249	RIS	Format 7.1 COVERING LETTER Point 2. Page 52 of 106	Earnest Money Deposit (EMD): - (Please read Clause 11 carefully before filling)	2. Earnest Money Deposit (EMD): - (Please read Clause 13 carefully before filling)	It should be clause 13 please amend the same.	The suitable amendments are being issued on the clause referred.
250	RIS	Format 7.1 COVERING LETTER Point 3. Page 52 of 106	We hereby declare that in the event our bid get selected and we are not able to submit Bank Guarantee of the requisite value(s) towards PBG, within due time as mentioned in Clauses 11 & 12 of this RIS, SECI shall have the right to encash the EMD/ PBG submitted by us and return the balance amount (if any) for the value of EMD pertaining to unsuccessful capacity.	3. We hereby declare that in the event our bid get selected and we are not able to submit Bank Guarantee of the requisite value(s) towards PBG, within due time as mentioned in Clauses 14 of this RIS, SECI shall have the right to encash the EMD/ PBG submitted by us and return the balance amount (if any) for the value of EMD pertaining to unsuccessful capacity.	It should be clause 14 please amend the same.	The suitable amendments are being issued on the clause referred.
251	RIS	Format 7.6 FORMAT FOR FINANCIAL REQUIREMENT Page 72 of 106	This Net Worth has been calculated in accordance with instructions provided in Clause 40.1 of the RIS.		It should be clause 42 please amend the same.	The suitable amendments are being issued on the clause referred.
252	RIS	Format 7.6FORMAT FOR FINANCIAL REQUIREMENTLast Page 72 of 106	Note: (i) Along with the above format, in a separate sheet on the letterhead of the Chartered Accountant's Firm, provide details of computation of Net Worth and Annual Turnover duly certified by the Chartered Accountant.(ii) Certified copies of Balance sheet, Profit & Loss Account, Schedules and Cash Flow Statements are to be enclosed in complete form along with all the Notes to Accounts.		Please clarify that whether the bidder has to submit the CA certificate for note i) & ii) both separately along with the format 7.6	The Clause is self-explanatory.
253	RIS	Format 7.8 FORMAT FOR DISCLOSURE Page 78 of 106	We further declare that we have read the provisions of Clause 30.4 of the RIS, and are complying with the requirements as per the referred OM dated 23.07.2020 except Sl.11 of the OM, including subsequent amendments and clarifications thereto. Accordingly, we are also enclosing necessary certificates (Annexure to this format) in support of the above compliance under the RIS. We understand that in case of us being selected under this RIS, any of the above certificates is found false, SECI shall take appropriate action as deemed necessary.		The clause 30.4 is missing in the tender documents please provide the same.	The suitable amendments are being issued on the clause referred.
254	RIS	Format 7.12 DECLARATION FOR THE LOCAL CONTENT Page 94 of 106	Format 7.12 DECLARATION FOR THE LOCAL CONTENT	In the given format at 7.12 the option of signing of a practicing cost accountant or practicing chartered accountant is not mentioned we request to please mention the same also mention the UDIN No. of the Auditor who is certifying the format.	As per the previous tenders of Kusum Scheme, The bidder must be Class-I and have to submit the certificate from statutory auditor on auditor's or bidder's letter head to meet order issued towards "Make-In-India" according to Manual for Procurement of Works updated and issued in June-2022 by Dept. of Expenditure, Min. of Finance, Govt. of India and order issued by MNRE through ORDER no. F.NO. 283/22/2019-GRID SOLAR dated 09th February, 2021.	The clause remains unchanged
255	RIS	Format 7.13 Page 95 of 106	We are agreeing to accept that the same make of solar panels, pumps, VFD/inverter/controller for which the test report is to be submitted to the Implementing agency, as per MNRE solar pump testing procedure 2019 and amendments thereof, will be supplied by us. In case, if some different make of solar panels, pumps, VFD/inverter/controller will be supplied during the implementation or AMC period, we will submit the test report for that particular make component(s). We also agree that such test reports shall be issued by the National Institute of Solar Energy and any other lab accredited by NABL for testing of solar PV water pumping system Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023 and testing procedure.	We are agreeing to accept that the same make of solar panels, pumps, VFD/inverter/controller for which the test report is to be submitted to the Implementing agency, as per MNRE solar pump testing procedure specified in tender document at Annexure-A and amendments thereof, will be supplied by us. In case, if some different make of solar panels, pumps, VFD/inverter/controller will be supplied during the implementation or AMC period, we will submit the test report for that particular make component(s). We also agree that such test reports shall be issued by the National Institute of Solar Energy and any other lab accredited by NABL for testing of solar PV water pumping system Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023 and testing procedure.	It is requested to consider that; Testing procedure as per new process as mentioned in tender at Annexure-A shall be followed.	The clause remains unchanged

256	RfS	Format 7.14 Page 96 of 106	We are agreeing to accept that the test certificates are to be submitted to the Implementing Agency, reports as per MNRE technical specifications and testing procedures issued in 2019 and amendments thereof, will be submitted by us within 30 days of issuance of Letter of Empanelment by Implementing Agency. In failure of which our empanelment will stand cancelled, without any prior intimation. These certificates shall be submitted either in original form or attested copy by the issuing test lab.	We are agreeing to accept that the test certificates are to be submitted to the Implementing Agency, reports as per MNRE technical specifications and testing procedures issued in the tender document at Annexure-A and its amendment thereof shall be submitted by us within 45 days of issuance of Letter of Empanelment by Implementing Agency. In failure of which our empanelment will stand cancelled, without any prior intimation. These certificates shall be submitted as self-attested copy	1) As the specification are updated in this tender, hence it is requested to allow test report submission time within 45 days instead of 30. 2) The test reports shall be as per specification mentioned in tender; not as per specifications issued in 2019 & its amendments. 3) Please consider self attested copy of test reports rather than original copy or attested copy from lab. Because original copy cannot be submitted to all SIA at the same time and taking the attested copy of test report from issuing ab shall also be an time consuming process.	The clause remains unchanged
257	suggestion	Additional points	taxes and cess	As per the previous experience in last Kusum tenders of Phase-I & II, some state nodal agencies deduct 1% of welfare cess from the invoice, so it is our suggestion that such taxes and duties should be excluding from the quoted price.		Vendor shall comply with all applicable regulatory and statutory norms of the respective State.
258	Annexure-A Technical Specification	3.2.2 SPV Controller	For IS 16221 (Part-2) certification of the SPV pump controller the latest quality control order released by MNRE regarding IS 16221 (Part-2) must be followed.	For IS 16221 (Part-2) certification of the SPV pump controller, the latest quality control order released by MNRE regarding IS 16221 (Part-2) must be followed. The supplied controller must have IS 16221 (Part-2) certification and the same is to be marked on each & every controller's name plate.	IS 16221 (Part-2) is considered and enlisted in CRS i.e. Compulsory Registration Scheme by BIS. Therefore, from quality control's point of view, the solar pump controller must have IS- 16221 (Part-2) BIS certificate.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
259	Annexure-A Technical Specification	3.4.3	Additional point	d) All surface/monoset pumps shall be supplied with canopy/cover to protect motor from rain.	Surface pump cover is necessary to protect the motor from the rain and to avoid the further failure of the pump operation.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
260	Annexure-A Technical Specification	3.4.4	The pump and all external parts of motor used in submersible pump which are in contact with water, should be of stainless steel of grade 304 or higher as required. Further for submersible pumps used in coastal areas or bores with higher salinity, preferably, stainless steel of grade 316 or higher grade may be used.	3.4.4 The pump and all external parts of motor used in submersible pump & casing used in shallow well (surface) pump which are in contact with water, should be of stainless steel of grade 304 or higher as required. Further for submersible pumps used in coastal areas or bores with higher salinity, preferably, stainless steel of grade 316 or higher grade may be used.	It is suggested that like the submersible pump, the pump section of surface pump which shall in direct contact of water, should be on stainless steel. Of SS-304 or higher as required.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
261	Annexure-A Technical Specification	3.5 Module Mounting Structures and Tracking System	The PV modules should be mounted on metallic structures of adequate strength and appropriate design, which can withstand load of modules and high wind velocities up to 150 km per hour. The raw material used and process for manufacturing of module mounting structure including welding of joints should conform to applicable IS 822. The module mounting structure should be hot dip galvanized according to IS 4759. Zinc content in working area of the hot dip galvanizing bath should not be less than 99.5% by mass.	3.5.1 The PV modules should be mounted on metallic structures of adequate strength and appropriate design, which can withstand load of modules and high wind velocities up to 150 km per hour. The raw material used and process for manufacturing of module mounting structure including welding of joints should conform to applicable IS 822. The module mounting structure should be hot dip galvanized according to IS 4759. Zinc content in working area of the hot dip galvanizing bath should not be less than 99.5% by mass. The supplied structure should have IS 4759 Certificate for hot dip galvanization with IS mark.	This is the only IS for marking on structures where output is also available as visual inspection. Rest IS are part of process of the structure manufacturing that can not be marked on it.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
262	Annexure-A Technical Specification	3.5.4	Details of Module Mounting Structure (MMS) for pumps of capacity 1HP and above attached at Annexure-I. These are indicative of minimum standards and an Implementing Agency may specify higher standards which shall be certified by recognized structural engineering department of any IIT/NIT or IISC.	Details of Module Mounting Structure (MMS) for pumps of capacity 1HP and above attached at Annexure-I These are indicative of minimum standards and a vendor may also supply the structures with design duly approved & certified by recognized engineering department of any IIT/NIT or IISC.	If implementing agency would provide the design detail then It shall be very difficult for the vendor to have the variety of structure for different states for the same capacity of solar water pumping system. Therefore, It should be same as present case of the PM-KUSUM program tenders.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
263	Annexure-A Technical Specification	3.6.2	The SPV Controller must have IP (65) protection or shall be housed in a cabinet having at least IP (65) protection.	The SPV Controller must have IP (65) protection or shall be housed in a cabinet having at least IP (65) protection. The IP 65 protection report in case of external cabinet must be issued with the controller used as per the capacity of SPWPS.	It is requested that; The solar pump controller must have IP65 certification as per applicable IEC, which further must be mentioned by test laboratory in the test report along with controller capacity by laboratories. If external enclosure is used then the IP65 protection test report must be consider with the controller only used for solar water pumping system.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
264	Annexure-A Technical Specification	6.2.2	Solar Photo Voltaic Water Pumping Systems shall be guaranteed by the manufacturer against the defects in material and workmanship under normal use and service for a period of at least 60 months from the date of commissioning.	Solar Photo Voltaic Water Pumping Systems shall be warranted by the manufacturer against the defects in material and workmanship under normal use and service for a period of at least 60 months from the date of commissioning. Any miss handling or the changes made post installations by the user/farmer to the SWPS shall lead to waive off the warrantee period to be zero for remaining CMC period	It is requested to kindly replace the term guaranteed by term "warranted". And	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
265	Annexure-A Technical Specification	7.1.1 Point j)	7.1.1 Motor Pump-set j) Voltage Range (V) and;	Voltage (V)	The motors are design for rated voltage not for voltage range. The voltage range is marked on controllers only.	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
266	Annexure-A Technical Specification	7.1.1 Note	Note: -In addition, a metal name plate containing the above details shall be fixed on the module mounting structure for the information of user.	Note: -In addition, a metal name plate/ high quality water proof sticker containing the above details shall be fixed on the module mounting structure for the information of user.	As the high-quality waterproof sticker is an ongoing practice in inverters and controllers hence same can be used for Pumpsets name plate	Please follow the specification issued vide OM No. 41/3/2018-SPV Division dated 02.02.2023
267	RfS	Format 7.3A page 58 of 106	In Para 1: hereby agrees unequivocally, irrevocably and unconditionally to pay to SECI at [Insert Name of the Place from the address of SECI] forthwith without demur on demand in writing from SECI or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees	In Para 1: hereby agrees unequivocally, irrevocably and unconditionally to pay to SECI at [Insert Name of the Place from the address of SECI] withing 03 working days without demur on demand in writing from SECI or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees	The term "forthwith" should be replaced with the term "03 working days" as suggested by bank.	The clause remains unchanged

268	RIS	Format 7.3C page 63 of 106	As per the terms of the RfS, the _____ [Insert name & address of Bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to SIA at _____[Insert Name of the Place from the address of the SIA] forthwith on demand in writing from SIA or any Officer authorised by it in this behalf, any amount up to and not exceeding Indian Rupees _____ [Total Value] only, on behalf of M/s _____ [Insert name of the selected Vendor].	As per the terms of the RfS, the _____ [Insert name & address of Bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to SIA at _____[Insert Name of the Place from the address of the SIA] withing 03 working days on demand in writing from SIA or any Officer authorised by it in this behalf, any amount up to and not exceeding Indian Rupees _____ [Total Value] only, on behalf of M/s _____ [Insert name of the selected Vendor].	The term "forthwith" should be replaced with the term "03 working days" as suggested by bank.	The clause remains unchanged
269	RIS	Format 7.3C page 64 of 106	The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to SIA and may be assigned, in whole or in part, (whether absolutely or by way of security) by SIA to any entity to whom SIA is entitled to assign its rights and obligations.	Kindly delete this clause.	SIA can not handover the PBG to any other entity as these financial instruments are issued to SIAs only by bank.	The suitable amendments are being issued on the clause referred.
270	RIS	14.1 page 17 of 106	Further, SIA reserves the right to encash the existing CPG, in case the vendors doesn't renew/extend the existing PBG at-least 30 days in advance	Further, SIA reserves the right to encash the existing CPG, in case the vendors doesn't renew/extend the existing PBG at-least 07 days in advance	30 days adance time is very high considering the high value of BG amount for PBG.. It shall also lead to have difficulty in working capital management for project mangement.	The clause remains unchanged
271	RIS	16 page 19 of 106	Payment terms: Stage-I 90 % of the value of month wise nos. of SPWPS installed at site based on: -	90 % of the value and 100% GST of the invoices submitted of month wise nos. of SPWPS installed at site based on: -	Since the GST for the billing cycle is to be paid in advance on monthly basis; hence it requested to kindly issue the 100% GST amount at stage-I ; It was considered in previous tender of PM-KUSUM Scheme also.	The clause remains unchanged

Note: All the queries received from various prospective bidders have been scrutinized and have been tried to be answered comprehensively. In case of any query not published here or the same not being addressed through the Amendments, it shall be construed in such cases, tender conditions shall prevail.



INTEGRITY PACT

Between

Solar Energy Corporation of India

having its Registered Office at 6th Floor, Plate-B, NBCC Office Block Tower-2, East
Kidwai Nagar, New Delhi-110023, India

hereinafter referred to as

"SECI",

and

[Insert the name of the Sole Bidder/all members of the of Joint Venture/Consortium]

having its Registered Office at _____

(Insert full Address/Lead member address in case of Joint Venture/Consortium)

and

[Insert the name of all members of the of Joint Venture/Consortium, as applicable]

having its Registered Office at _____

(Insert full Address/ Lead member address in case of Joint Venture/Consortium)

hereinafter referred to as

"The Bidder/Contractor"**Preamble**

SECI intends to award, under laid-down organisational procedures, contract(s) for

[Insert the name of the tender/package]

_____ Package and NIT Number

_____ SECI values full compliance with all

[Insert Specification Number of the package]

relevant laws and regulations, and the principles of economical use of resources, and of



fairness and transparency in its relations with its Bidders/ Contractors.

In order to achieve these goals, SECI and the above-named Bidder/Contractor enter into this agreement called '**Integrity Pact**' which will form an integral part of the bid.

It is hereby agreed by and between the parties as under:

Section I - Commitments of SECI

- (1) SECI commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - a) No employee of SECI, personally or through family members, will in connection with the tender, or the execution of the contract, demand, take a promise for or accept, for him/herself or third person, any material or other benefit which he/she is not legally entitled to.
 - b) SECI will, during the tender process treat all Bidder(s) with equity and fairness. SECI will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - (c) SECI will exclude from evaluation of Bids its such employee(s) who has any personal interest in the Companies/Agencies participating in the Bidding/Tendering process
- (2) If Managing Director obtains information on the conduct of any employee of SECI which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a substantive suspicion in this regard, he will inform its Chief Vigilance Officer and in addition can initiate disciplinary actions under its Rules.

Section II - Commitments of the Bidder/Contractor

- (1) The Bidder/Contractor commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution:
 - a) The Bidder/Contractor will not, directly or through any other person or firm, offer, promise or give to SECI, or to any of SECI's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange an advantage during the tender process or the execution of the contract.



- b) The Bidder/Contractor shall not enter into any agreement/ arrangement/ understanding/ action in concert, whether or not the same is formal or in writing with other Bidders/Contractors. This applies in particular to agreements pertaining to prices, territorial or geographical allocations of market, specifications, certifications, subsidiary contracts, submission or non-submission of bids, bid rigging or other actions restricting competitiveness or leading to cartelization in the bidding process or amounting to any other violation under the Competition Laws for the time being in force.
- c) The Bidder/Contractor will not commit any criminal offence under the relevant Anti-corruption Laws of India; further, the Bidder/Contractor will not use for illegitimate purposes or for purposes of restrictive competition or personal gain, or pass on to others, any information provided by SECI as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- d) Bidders will not pass any information provided by Principal as part of business relationship to others and not to commit any offence under PC/ IPC Act
- e) The Bidder/Contractor of foreign origin shall disclose the name and address of the Agents/representatives in India, if any, involved directly or indirectly in the Bidding. Similarly, the Bidder/Contractor of Indian Nationality shall furnish the name and address of the foreign principals, if any, involved directly or indirectly in the Bidding.
- f) The Bidder/Contractor will, when presenting his bid, disclose any and all payments he has made, or committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and/or with the execution of the contract.
- g) The Bidder/Contractor will not misrepresent facts or furnish false/forged documents/information in order to influence the bidding process or the execution of the contract to the detriment of SECI.
- (2) The Bidder/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section III- Disqualification from tender process and exclusion from future contracts

- (1) If the Bidder, before contract award, has committed a serious transgression through a violation of Section II or in any other form such as to put his reliability or credibility as Bidder into question, SECI may disqualify the Bidder from the tender process or terminate the contract, if already signed, for such reason.



- (2) If the Bidder/Contractor has committed a serious transgression through a violation of Section II such as to put his reliability or credibility into question, SECI may after following due procedures also exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder/Contractor and the amount of the damage. The exclusion will be imposed for a minimum of 12 months and maximum of 36 months.
- (3) If the Bidder/Contractor can prove that he has restored/recouped the damage caused by him and has installed a suitable corruption prevention system, SECI may revoke the exclusion prematurely. However, decision of SECI in this regard shall be final and binding on the bidder/Contractor.

Section IV - Liability for violation of Integrity Pact

- (1) If SECI has disqualified the Bidder from the tender process prior to the award under Section III, SECI may forfeit the applicable Bid Security/Earnest Money Deposit under the Bid.
- (2) If SECI has terminated the contract under Section III, SECI may forfeit the Contract Performance Security of this contract besides resorting to other remedies under the contract.

Section V- Previous Transgression

- (1) The Bidder shall declare in his Bid that no previous transgressions occurred in the last 3 years with any other Public Sector Undertaking or Government Department that could justify his exclusion from the tender process.
- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section VI - Equal treatment to all Bidders/Contractors

- (1) SECI will enter into agreements with identical conditions as this one with all Bidders.
- (2) SECI will disqualify from the tender process any bidder who does not sign this Pact or violate its provisions.

Section VII - Punitive Action against violating Bidders/Contractors

If SECI obtains knowledge of conduct of a Bidder or a Contractor or his subcontractor or of an employee or a representative or an associate of a Bidder or Contractor or his



Subcontractor which constitutes corruption, or if SECI has substantive suspicion in this regard, SECI will inform the Chief Vigilance Officer (CVO).

Nothing mentioned hereinabove may deem to restrict the right of SECI, in case of a suspected violation of Section II, Clause (1) (b) by the Bidders/ contractors to initiate necessary action under the Competition Laws for the time being in force.

(*) Section VIII - Independent External Monitor/Monitors

- (1) SECI has appointed a panel of Independent External Monitors (IEMs) for this Pact with the approval of Central Vigilance Commission (CVC), Government of India, details of which has been indicated in the tender document.
- (2) The IEM is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement. He has right of access to all project documentation. The IEM may examine any complaint received by him and submit a report to Managing Director, SECI, at the earliest. He may also submit a report directly to the CVO and the CVC, in case of suspicion of serious irregularities attracting the provisions of the PC Act. However, for ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter shall be referred to the full panel of IEMs, who would examine the records, conduct the investigations and submit report to Managing Director, SECI, giving joint findings.
- (3) The IEM is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Managing Director, SECI.
- (4) The Bidder(s)/Contractor(s) accepts that the IEM has the right to access without restriction to all documentation of SECI related to this contract including that provided by the Contractor/Bidder. The Bidder/Contractor will also grant the IEM, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his documentation. The same is applicable to Subcontractors. The IEM is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality.
- (5) SECI will provide to the IEM information as sought by him which could have an impact on the contractual relations between SECI and the Bidder/Contractor related to this contract.
- (6) As soon as the IEM notices, or believes to notice, a violation of this agreement, he will so inform the Managing Director, SECI and request the Managing Director, SECI to discontinue or take corrective action, or to take other relevant action. The IEM can in this regard submit non-binding recommendations. Beyond this, the IEM has no right to demand from the parties that they act in a



specific manner, refrain from action or tolerate action. However, the IEM shall give an opportunity to SECI and the Bidder/Contractor, as deemed fit, to present its case before making its recommendations to SECI.

- (7) The IEM will submit a written report to the Managing Director, SECI within 8 to 10 weeks from the date of reference or intimation to him by SECI and, should the occasion arise, submit proposals for correcting problematic situations.
- (8) If the IEM has reported to the Managing Director, SECI, a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Managing Director, SECI has not, within the reasonable time taken visible action to proceed against such offence or reported it to the CVO, the Monitor may also transmit this information directly to the CVC, Government of India.
- (9) The word 'IEM' would include both singular and plural.
- (*) *This Section shall be applicable for only those packages wherein the IEMs have been identified in Section - I : Invitation for Bids and/or Clause ITB ... in Section - III: Bid Data Sheets of Conditions of Contract, Section-.. of the Bidding Documents.*
- (10) A bidder/Contractor signing the IP shall not approach the Courts while representing the matters to IEMs and he will await till their decision in the matter.

Section IX - Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor after the closure of the contract and for all other Bidder's six month after the contract has been awarded.

Section X - Other Provisions

- (1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the establishment of SECI.
- (2) Changes and supplements as well as termination notices need to be made in writing.
- (3) If the Contractor is a partnership firm or a consortium or Joint Venture, this agreement must be signed by all partners, consortium members and Joint Venture partners.
- (4) Nothing in this agreement shall affect the rights of the parties available under the General Conditions of Contract (GCC) and Special Conditions of Contract (SCC) which are part of the Bidding Document.
- (5) Views expressed or suggestions/submissions made by the parties and the recommendations of the CVO/IEM# in respect of the violation of this agreement, shall not be relied on or introduced as evidence in the arbitral or judicial



proceedings (arising out of the arbitral proceedings) by the parties in connection with the disputes/ differences arising out of the subject contract.

CVO shall be applicable for packages wherein IEM are not identified in the bidding document IEM shall be applicable for packages wherein IEM are identified in the bidding document.

- (6) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(Signature) ASM
(For & On behalf of SECI)



Name: A K Singh
Designation: ASM (C&P)

(Signature) _____
(For & On behalf of Bidder/ Partner(s)
of Joint Venture/ Consortium/
Contractor)

(Office Seal)

Name: _____
Designation: _____

Witness 1 : [Signature]
(Name & Address) Sandeep Kumar
Solar Energy Corporation of
India Limited, New Delhi.

Witness 1 : _____
(Name & Address) _____

Witness 2 : [Signature]
(Name & Address) PRATIK PRASUN
Solar Energy Corporation of India Ltd.
East Kidewai Nagar, New Delhi

Witness 2 : _____
(Name & Address) _____

SOLAR ENERGY CORPORATION OF INDIA LIMITED

NEW DELHI

Ref No. SECI/C&P/MI/13/0010/2022-23/Amendment-01

Dated 17-02-2023

Amendment-01 to the RfS for Selection of Vendors for Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning Off-Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-10 HP capacities in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component-B of PM-KUSUM scheme of MNRE			
RfS No. SECI/C&P/MI/00/0010/2022-23 dated 31.12.2022			
S. No.	Clause/Article No.	Existing Clause/Article	Amended Clause/Article
Amendments in the RfS document			
1.	General	<p>The Title of the RfS shall be read as:</p> <p>“RfS Document for Selection of Vendors for a work contract to Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of Off Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-15 HP capacities in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component-B of PM-KUSUM scheme of MNRE”</p>	
2.	General	Wherever it is mentioned as 1-10 HP in RfS, it shall be read as 1-15 HP.	
3.	1.7	<p>Solar PV capacity in kW for the pump capacity in HP will be allowed as per MNRE specifications under the scheme. It will be mandatory to use indigenously manufactured solar panels with indigenous solar cells and modules. Further, the motor-pump-set, controller and balance of system should also be manufactured indigenously. The vendor has to declare the list of imported components used in the manufacturing of solar water pumping system.</p>	<p>Solar PV capacity in kW for the pump capacity in HP will be allowed as per MNRE specifications under the scheme. It will be mandatory to use indigenously manufactured solar panels with indigenous solar cells and modules. In addition to the bids for SPWPS with indigenously manufactured solar cells, interested bidders can also submit their bids for SPWPS with non-indigenous solar cells as per Annexure-D2 (open) format. However, work for SPWPS with non-indigenous solar cells would be awarded only if the Government approves use of non-indigenous solar cells under Component-B of the PM-KUSUM Scheme. Further, for the purpose of price estimation under both the categories mentioned above, all other components including solar modules shall be considered as indigenous and in compliance to the provisions of the PM-KUSUM Guidelines and ALMM Guidelines as</p>

			amended from time to time and other applicable documents/ orders issued by the Government in this regard. Further, the motor-pump-set, controller and balance of system shall be manufactured indigenously. The vendor has to declare the list of imported components used in the manufacturing of solar water pumping system.
4.	3.1 c	New Clause: Test reports can be submitted with the bids. However, the bidders can also submit a self-certificate with the bids in lieu of test reports affirming that the test certificates for all the models for which the bids are submitted will be provided by the bidder before signing of agreement with the SIAs, failing which the bidder will be liable for penalties including encashment of EMD and/ or blacklisting.	
5.	3.3 d	Systems installed under this programme should be follow OM-F.No.283/33/3029GRID SOLAR of MNRE, Govt of India dated 23.09.2020.	Systems installed under this programme should be follow OM-F.No.283/22/2019-GRID SOLAR of MNRE, Govt of India dated 09.02.2021.
6.	3.4 c	..... with the guidelines and specification and tender terms and conditions. SIA reserves the right to encash the CPG and/or blacklist the vendor for the period 3 years.	..... with the guidelines and specification and tender terms and conditions. SIA reserves the right to encash the PBG and/or blacklist the vendor for the period 5 years.
7.	3.4 d	If any selected vendor, after getting empaneled doesn't go forward with the installation of pumps, apart from encashment of EMD, the said vendor shall also be blacklisted for 3 years period from the date of issuance of such notice of blacklisting by the respective SIA/MNRE.	If any selected vendor, after getting empanelled does not go forward with signing of agreement with SIA and execution of work after the issuance of NTP(s), apart from encashment of EMD, vendor will be blacklisted for 5 years period from the date of issuance of such notice of blacklisting by the respective SIA/MNRE.
8.	3.4 h	Vendors have to provide the Remote Monitoring System (RMS) with all the SPWPS installed under the scheme. Further, vendor has to maintain the RMS in working condition for the period of 5years and RMS systems shall push the accurate data of the parameters as specified in the specification and guidelines of the scheme failing which the installation of the system will not be accepted by SIA.	Vendors have to provide the Remote Monitoring System (RMS) as per Annexure-F (RMS Communication and Security Architecture- PM KUSUM National Portal) of the RfS with all the SPWPS installed under the scheme. Further, vendor has to maintain the RMS in working condition for the period of 5 years and RMS systems shall push the accurate data of the parameters as specified in the specification and guidelines of the scheme as per Annexure-F (RMS Communication and Security Architecture- PM KUSUM National

			Portal), failing which the installation of the system will not be accepted by SIA.
9.	6.1	Total allocation to your vendor for a particular State/UT shall not go beyond the Annual Turn Over requirement for that particular State/UT. However, if there are no vendors available in the corresponding package, who have agreed to match the L1 prize and circumstances necessitates additional award of work, additional allocation may be done by SIA as per MNRE approvals.	Not Used
10.	11	..... All MSMEs (Micro, Small and Medium Enterprises) notified as per clause 1.10.3 of GFR 2017 and as registered under NSIC/DIC/Udyog Aadhaar only are only exempted from submission of Bid Processing Fee and EMD. For claiming this exemption, at the time of bid submission, MSMEs must provide valid proof of their being registered as MSME. However, upon empanelment under this RfS, selected MSMEs must submit Performance Bank Guarantee as per clause 12 of section III of RfS.	..... MSMEs Bidders registered as MSMEs (Micro, Small and Medium Enterprises) under NSIC/DIC/Udyog Aadhaar Only are exempted from submission of Bid Processing Fee & EMD. In this regard, the Bidder will have to furnish MSME Registration certificate issued by the appropriate authority (as applicable). Further, submission of MSME certificates issued in the name of Affiliate / Promoter/ Company will not be considered However, upon empanelment under this RfS, selected MSMEs must submit Performance Bank Guarantee as per clause 14 of section III of RfS.
11.	13.1	Bidder shall submit Earnest Money Deposit (EMD) in the form of Bank Guarantee of 2 % of amount equivalent to the 6 % of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher, (as per Annexure-E) according to Format 7.3A/ Format 7.3B and valid for 27 months from the last date of bid submission, shall be submitted by the Bidder along with their bid, failing which the bid shall be summarily rejected.....	Bidder shall submit Earnest Money Deposit (EMD) in the form of Bank Guarantee of 2 % of amount equivalent to the 6 % of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher, subject to a maximum of 1000 pumps. For simplification, EMD requirement for each State/UT is as per Annexure-E. Bidders have to submit EMD according to Format 7.3A/ Format 7.3B and valid for 12 months from the last date of bid submission along with their bid, failing which the bid shall be summarily rejected. EMD validity to be extended by another 15 months prior to 15 days to expiry. In case of failure, it may lead to encashment of EMD & blacklisting of Firm/Members for period of 5 years from the date of issue of notice of blacklisting.....
12.	13.6	..... by SECI within the provisions of RfS. This instrument would have to be	..... by SECI within the provisions of RfS. This instrument would have to be

		furnished as per Format 7.3 B of the RfS, within the timelines as per Clause 11.1 above, for the amount and validity period as per those Clause 11.1 above.	furnished as per Format 7.3 B of the RfS, within the timelines as per Clause 13.1 above, for the amount and validity period as per those Clause 13.1 above.
13.	14.1	Bidders selected by SECI based on this RfS shall submit to the respective SIA, a Performance Guarantee for a value @ 3% of the amount equivalent to the 6% of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher (as per Annexure-E). However, if total number of SPWPS awarded to vendor	Bidders selected by SECI based on this RfS shall submit to the respective SIA, a Performance Bank Guarantee (PBG) for a value @ 3% of the amount equivalent to the 6% of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher subject to a maximum of 1000 pumps. For simplification, PBG requirement for each State/UT is as per Annexure-E. However, if total number of SPWPS awarded to vendor.....
14.	15.4	Note withstanding the transfer of ownership of the plant and equipment the responsibility of care and custody thereof together with the risk of loss or damage there too shall remain with the Vendor pursuant to GCC hereof until completion of facilities or the part thereof in which such plant and equipment are incorporated.	Not withstanding the transfer of ownership of the plant and equipment the responsibility of care and custody thereof together with the risk of loss or damage there too shall remain with the Vendor pursuant to GCC hereof until completion of facilities in which such plant and equipment are incorporated.
15.	16	Note: SIA has the right to seek any additional documents/ certificates/ information it deems fit prior to releaser of any payment.	Not Used
16.	16	Note: Payment shall be made to vendor within 30 days after submission of three copies of invoices to Engineer-in charge, complete in all respect (showing description, quantity, unit rate and total number of systems).	Note: Payment shall be made to vendor within 30 days after submission of three copies of invoices to Engineer-in charge, complete in all respect (showing description, quantity, unit rate and total number of systems). However, this is subject to the availability of the accurate performance data/parameter of SPWPS through RMS on State SEDM portal and central portal of PM-KUSUM.
17.	18.xvi.i	If the selected vendor wishes to execute the project through a Special Purpose Vehicle (SPV), the MoA/ AoA of the SPV highlighting the relevant provision which highlights the objects relating to Power/ Energy/ Renewable Energy/ Solar Water Pumping Station/Solar Power	Not Used

		plant development/Manufacturer of pump-sets, solar panels and controllers has to be submitted.	
18.	18.xvi.iv	Certified copies of annual audited accounts for the last three financial year, i.e., FY 2021-22/2020-21/2019-20, and provisional audited accounts, along with certified copies of Balance Sheet, Profit & Loss Account, Schedules and Cash Flow Statement supported with bank statements as on the date at least 7 days prior to the due date of bid submission (if applicable), shall be required to be submitted.	Certified copies of annual audited accounts for any three financial years out of the last five financial years, i.e., 2021-22, 2020-21, 2019-20, 2018-19, and 2017-18, and provisional audited accounts, along with certified copies of Balance Sheet, Profit & Loss Account, Schedules and Cash Flow Statement supported with bank statements as on the date at least 7 days prior to the due date of bid submission (if applicable), shall be required to be submitted.
19.	21.1.ii	Bank Guarantee/ Payment on Order Instrument towards EMD as mentioned in the Bid Information Sheet (as per Format 7.3A/ 7.3B). One EMD shall be submitted for the cumulative capacity quoted by the Bidder.	Bank Guarantee/ Payment on Order Instrument towards EMD as mentioned in the Bid Information Sheet (as per Format 7.3A/ 7.3B). Bidder shall submit the separate/cumulative EMD for all the states/UTs applied/quoted for.
20.	21.1	<p>.....</p> <p><u>No documents will be accepted in person, on or before the date of bid submission. Bank Guarantee/POI against EMD needs to be submitted in both online and offline modes.</u> The bidders will be required to submit the bank guarantee/POI against EMD and DDs/Pay Orders (if applicable) against the bid processing fee, either in person or through post, at the office of SECI until the date as on 2 working days after the closing date of bid submission. The 2-day duration will be counted from the date of bid submission.</p> <p>For e.g., if the bid submission deadline is 18:00 hrs. on 22.08.2022, the above deadline will expire at 18:00 hrs. on 24.08.2022. In case the above deadline being a holiday, the next working day in SECI will be the deadline for submission of Bank Guarantees.</p> <p>Note: In all cases, the Bank Guarantee/POI against EMD along with DDs/Pay Orders (if applicable), shall be issued on or before the bid submission deadline. These instruments issued after</p>	<p>.....</p> <p><u>No documents will be accepted after the due date and time of bid submission.</u> Bank Guarantee against EMD needs to be submitted in both online and offline modes.</p>

		the expiry of the deadline will be summarily rejected.....															
21.	21.1	<p>The table is modified as follows:</p> <table border="1"> <tr> <td colspan="2" style="background-color: black; color: white; text-align: center;"> RfS Document for Selection of Vendors for a work contract to Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of Off Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-15 HP capacities in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component-B of PM-KUSUM scheme of MNRE </td> </tr> <tr> <td style="width: 50%;"><i>Number of States applied for</i></td> <td style="width: 50%;">_____ Nos.</td> </tr> <tr> <td><i>RfS Reference No.</i></td> <td>SECI/C&P/_____ dated _____</td> </tr> <tr> <td><i>Submitted by</i></td> <td><i>(Enter Full name and address of the Bidder)</i></td> </tr> <tr> <td><i>Organization ID (OID) on ETS portal</i></td> <td><i>(Enter the OID through which the Bid has been submitted online on ETS portal)</i></td> </tr> <tr> <td><i>Authorized Signatory</i></td> <td><i>(Signature of the Authorized Signatory)</i> <i>(Name of the Authorized Signatory)</i> <i>(Stamp of the Bidder)</i></td> </tr> <tr> <td><i>Bid Submitted to</i></td> <td> AGM (C&P) Solar Energy Corporation of India Limited 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi-110023 Tel No. 011-24666200 Email - contracts@seci.co.in </td> </tr> </table>		RfS Document for Selection of Vendors for a work contract to Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of Off Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-15 HP capacities in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component-B of PM-KUSUM scheme of MNRE		<i>Number of States applied for</i>	_____ Nos.	<i>RfS Reference No.</i>	SECI/C&P/_____ dated _____	<i>Submitted by</i>	<i>(Enter Full name and address of the Bidder)</i>	<i>Organization ID (OID) on ETS portal</i>	<i>(Enter the OID through which the Bid has been submitted online on ETS portal)</i>	<i>Authorized Signatory</i>	<i>(Signature of the Authorized Signatory)</i> <i>(Name of the Authorized Signatory)</i> <i>(Stamp of the Bidder)</i>	<i>Bid Submitted to</i>	AGM (C&P) Solar Energy Corporation of India Limited 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi-110023 Tel No. 011-24666200 Email - contracts@seci.co.in
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22.	21.2	<p>..... If the Bidder has submitted its bid online and fails to submit the Bank Guarantee/POI for requisite amount offline within 2 working days from last date of bid submission, then the same shall be treated as an incomplete bid, Cost of RfS document and Processing fee submitted at this stage will be encashed and the EMD(s) shall be returned and the submitted bid will stand cancelled.</p>	<p>..... If the Bidder has submitted its bid online and fails to submit the Bank Guarantee/POI for requisite amount offline before the due date and time of bid submission, then the same shall be treated as an incomplete bid, Cost of RfS document and Processing fee submitted at this stage will be encashed and the EMD(s) shall be returned and the submitted bid will stand cancelled.</p>														
23.	21.2.I.a	Formats - 7.1, 7.2 (if applicable), 7.3 A/7.3 B, 7.4, 7.5 (if applicable), 7.6, 7.7, 7.8/7.8A and 7.9, 7.11, 7.12, 7.13, 7.14,	Formats - 7.1, 7.2 (if applicable), 7.3 A/7.3 B, 7.4, 7.5 (if applicable), 7.6, 7.7, 7.8/7.8A and 7.9, 7.11, 7.12, 7.13, 7.14,														

		7.15 as elaborated in Clause 16 of the RfS.	7.15, 7.18 as elaborated in Clause 18 of the RfS.
24.	21.2.I.b	All attachments elaborated in Clause 16 of the RfS, under the sub-clause xi: Attachments, with proper file names.	All attachments elaborated in Clause 18 of the RfS, under the sub-clause xvi: Attachments, with proper file names.
25.	21.2.I	<u>Submission of Pass-phrases:</u> In line with Clause 17.7 and Annexure-B, the Bidder shall be required to submit the Pass-Phrase to decrypt the relevant Bid-part is submitted into the ‘Time Locked Electronic Key Box (EKB)’.....	<u>Submission of Pass-phrases:</u> In line with Clause 19.7 and Annexure-B, the Bidder shall be required to submit the Pass-Phrase to decrypt the relevant Bid-part is submitted into the ‘Time Locked Electronic Key Box (EKB)’.....
26.	21.2.II.b).v	Only a single price bid for each line item (i.e., type of pump in each State/UT), for the cumulative Project capacity quoted by the bidders, shall have to be filled online in the Electronic Form provided at the ISN-ETS portal. The instructions mentioned in the Financial Bid Electronic Form have to be strictly followed without any deviation, else the bid shall be considered as non-responsive.	Only a single price bid for each line item (i.e., type of pump in each State/UT), quoted by the bidders, shall have to be filled online in the Electronic Form provided at the ISN-ETS portal. The instructions mentioned in the Financial Bid Electronic Form have to be strictly followed without any deviation, else the bid shall be considered as non-responsive.
27.	21.2.II.b).vi.(b)	In case the Bidder submits the online documents on ISN-ETS within the bid submission deadline and fails to submit the pass phrases in the ETS portal within 2 working days after bid submission deadline, the online bid of the Bidder shall not be opened and shall be ‘archived’ on the ISN-ETS portal. Similarly, bids submitted offline but without any online submission on ISN-ETS portal shall not be opened. For e.g., if the bid submission deadline is 18:00 hrs. on 05.10.2022, the above deadline will expire at 18:00 hrs. on 07.10.2022. In case of the above deadline being a holiday, the next working day in SECI will be the deadline for online submission of Pass-phrases in the ETS portal.	In case the Bidder submits the online documents on ISN-ETS within the bid submission deadlines and fails to submit the offline documents in the office of SECI within the bid submission deadlines, the online bid of the Bidder shall not be opened and shall be ‘archived’ on the ISN-ETS portal. Similarly, bids submitted offline but without any online submission on ISN-ETS portal shall not be opened and the EMD shall be returned to the respective bidder.
28.	21.2.II.c	New Clause: Break-up of the Preliminary Estimate of Cost of Project as per Format 7.17, separately for each line item (i.e., type of pump in each State/UT) is to be provided by each empanelled vendors within 7 days from date of publication of their empanelment.	
29.	29.2	..... occurrence of a Force Majeure Event; provided that the Party claiming relief under this Clause 27 shall	..... occurrence of a Force Majeure Event; provided that the Party claiming relief under this Clause 29 shall

		immediately (i) notify the other Party in writing of the existence of the Force Majeure Event,.....	immediately (i) notify the other Party in writing of the existence of the Force Majeure Event,.....												
30.	31	<p>Clause modified as follows:</p> <p>A. Insurance</p> <p>The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery. For delivery of goods at site, the insurance shall be obtained by the Contractor, for an amount not less than the Contract Price of the goods from “warehouse to warehouse” (final destinations) on “All Risks” basis including War risks and strikes.</p> <p>The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft, burglary, & damage, etc. during 5 years warranty period. The empaneled bidder shall file insurance claim and shall be responsible to bring the insurance claim to a final settlement. The farmer and the empaneled bidder shall be jointly responsible for collection and submission of documents for the processing of the insurance claim. The insurance policy taken for the individual farmer shall be handed over to the beneficiary under intimation to SIA at the time of processing of payment for the completed installations. The empaneled company shall do renewal of insurance certificate every year up to 5 years as per insurance clause.</p> <p>In case of an incident covered under insurance, bidder must replace the lost/damaged part within 7 days from the date of intimation, failing which the rectification/replacement (keeping the same configuration in consideration) will be done by SIA at the risk and cost of system integrator, after rectification/ replacement the warranty clause will remain compliable as per tender conditions.</p> <p>B. Penalty</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Default</th> <th>Penalty</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Failure to Accept Letter of Intent (LoI)</td> <td>EMD shall be encashed and/or bidder blacklisted for 5 years.</td> </tr> <tr> <td>2.</td> <td>Failure to sign the Agreement or submission of the PBG.</td> <td>EMD shall be encashed and/or bidder blacklisted for 5 years.</td> </tr> <tr> <td>3.</td> <td>In case of any non-execution or delay in the execution of the order or delay in maintenance beyond the stipulated time schedule decided including any extension permitted in writing.</td> <td>SIA reserves the right to recover from the bidder a sum equivalent to 0.5 % of the value of the delayed SPWPS installation or on the unexecuted portion of the work for each week of the delay and part thereof subject to a maximum of 10 % of the total value of the contract. The amount will be first recovered from the PBG amount and the balance will be adjusted by SIA in release of payment to the concerned vendor. Further, SIA may also blacklist the Empaneled firm for 5 years.</td> </tr> </tbody> </table>		S. No.	Default	Penalty	1.	Failure to Accept Letter of Intent (LoI)	EMD shall be encashed and/or bidder blacklisted for 5 years.	2.	Failure to sign the Agreement or submission of the PBG.	EMD shall be encashed and/or bidder blacklisted for 5 years.	3.	In case of any non-execution or delay in the execution of the order or delay in maintenance beyond the stipulated time schedule decided including any extension permitted in writing.	SIA reserves the right to recover from the bidder a sum equivalent to 0.5 % of the value of the delayed SPWPS installation or on the unexecuted portion of the work for each week of the delay and part thereof subject to a maximum of 10 % of the total value of the contract. The amount will be first recovered from the PBG amount and the balance will be adjusted by SIA in release of payment to the concerned vendor. Further, SIA may also blacklist the Empaneled firm for 5 years.
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31.	35.	Local representative of bidder should meet governing authorities of each block and should submit the minutes of meeting to SIAs on quarterly basis.	Not Used
32.	40.1	For avoidance of doubt, it is clarified that the fully owned subsidiary Company as mentioned in Clauses 38.3 and 38.6 above should be an immediate subsidiary of the bidder, without any intermediaries involved. The following illustrations	For avoidance of doubt, it is clarified that the fully owned subsidiary Company as mentioned in Clauses 40.3 and 40.6 above should be an immediate subsidiary of the bidder, without any intermediaries involved. The following illustrations
33.	40.2	Bidding Consortium with one of the Companies as the Lead Member. Consortium shortlisted and selected based on this RfS has to necessarily form a Project Company and get it registered under the Companies Act, 2013, keeping the original shareholding of the Bidding Consortium unchanged. In case applications for multiple Projects have been made by a Consortium, separate Project Companies can be formed for each Project. For the avoidance of doubt, it is hereby clarified that the shareholding pattern of the Project Company shall be the identical to the shareholding pattern of the Consortium as indicated in the Consortium Agreement (Format 7.5).	Bidding Consortium of two companies with one of the Companies as the Lead Member as per Consortium Agreement (Format 7.5) can submit bids under this RfS.
34.	40.5	In case of a Limited Liability Partnership (LLP) participating as a Bidder and in case of the LLP being declared as a Selected Vendor, the LLP shall be required to incorporate an SPV.	A Limited Liability Partnership (LLP) is allowed to participate under this RfS.
35.	40.7	A Bidder which has been selected as Selected Vendor based on this RfS can also execute the Project through a Special Purpose Vehicle (SPV) i.e., a Project Company especially incorporated/acquired as a subsidiary Company of the Selected Vendor for setting up of the Project, with at least 51% shareholding in the SPV which has to be registered under the Indian Companies Act, 2013. Multiple SPVs may also be utilized for executing more than one Project.	Not Used

36.	40.8	Any consortium, if selected as Selected Vendor for the purpose of supply of power to SECI, shall incorporate a Project company with equity participation by the Members in line with consortium agreement (to be submitted along with the response to RfS) i.e., the Project Company incorporated shall have the same shareholding pattern as that indicated in the Consortium Agreement given at the time of submission of response to RfS.	Not Used			
37.	40.10	For avoidance of doubt, it is clarified that the fully owned subsidiary Company as mentioned in Clauses 38.3 and 38.6 above should be an immediate subsidiary of the bidder, without any intermediaries involved. The following illustrations are provided to clarify the same:	Not Used			
38.	41	The table is modified as follows:				
			Technical QR			
		Sl. No.	State/UT	Quantity State-Wise (Nos.)	For Solar Pumps/Controller (No. of solar pumps installed or supplied/Controller installed or supplied)	For Solar PV Modules (Experience in kWp)
		1	Andaman & Nicobar	100	25	120
		2	Andhra Pradesh	1000	60	288
		3	Arunachal Pradesh	200	25	120
		4	Assam	5000	300	1440
		5	Bihar	5000	300	1440
		6	Chhattisgarh	25000	1000	4800
		7	Delhi	1000	60	288
		8	Goa	200	25	120
		9	Gujarat	7000	420	2016
		10	Haryana	160000	1000	4800

		11	Himachal Pradesh	700	42	201.6
		12	Jammu & Kashmir	4500	270	1296
		13	Jharkhand	8000	480	2304
		14	Karnataka	10000	600	2880
		15	Kerala	100	25	120
		16	Ladakh	1600	96	460.8
		17	Lakshadweep	100	25	120
		18	Madhya Pradesh	50000	1000	4800
		19	Maharashtra	180000	1000	4800
		20	Manipur	150	25	120
		21	Meghalaya	200	25	120
		22	Mizoram	1700	102	489.6
		23	Nagaland	100	25	120
		24	Odisha	4500	270	1296
		25	Puducherry	100	25	120
		26	Punjab	50000	1000	4800
		27	Rajasthan	110000	1000	4800
		28	Sikkim	100	25	120
		29	Tamil Nadu	4000	240	1152
		30	Telangana	400	25	120
		31	Tripura	3000	180	864
		32	Uttarakhand	1500	90	432
		33	Uttar Pradesh	30000	1000	4800
		34	West Bengal	1000	60	288

		Total	666250	
39.	41.2.v	<p>New Clause:</p> <p>In case Bidder wishes to participate in as a Joint Venture, following conditions are additionally applicable: -</p> <ol style="list-style-type: none"> 1. The term Bidder used hereinafter would therefore apply to both a single entity and a Consortium/ Joint Venture. 2. Both members should be a registered as an MSE to claim the benefits provided to the MSE. 3. A consortium of maximum two (02) members is allowed in this RfS including one as lead bidder. 4. Lead Bidder accepts primary responsibility for providing a robust and quality product meeting technical specifications of tender. Declaration regarding the lead member shall be provided in the Format 7.5 However, both the members of the Joint Venture shall be jointly and severally liable for compliance of the conditions of the tender and the PM-KUSUM Guidelines including amendments and other Orders/ directions issued by MNRE related to implementation of the Scheme. 5. Any member of the Joint Venture participating in the tender shall not be permitted to participate either in individual capacity or as a member of any other Consortium/Joint Venture in the same tender. Submission or participation in more than one bid will cause disqualification of all the proposals submitted by the bidder. 6. All formalities in respect of submission of tender shall be done only in the name of 'Lead Member' and not in the name of Joint Venture. However, name & other details of both the members of Consortium/ Joint Venture Firm should be clearly mentioned in the Bid/Response. 7. A copy of Memorandum of Understanding (MOU) executed between the members of Joint Venture shall be submitted along with the tender. The complete details of the members of the Joint Venture Firm, their share and responsibility in the Joint Venture etc. particularly with reference to financial, technical and other obligations shall be furnished in the MOU. 8. Once the offer/ bid is submitted, the bid shall not be modified / altered/ terminated during the period of execution including any extension thereafter by SIA/MNRE or validity of any letter of award awarded to the said Consortium/Joint Venture Firm. In case, the tenderer fails to observe/comply with this stipulation, the full Security Deposit/ Performance Bank Guarantee (PBG) shall be liable to be forfeited. 9. A duly notarized agreement of Joint Venture Firm shall be executed between the 'Lead Member' and Consortium/Joint Venture Partner. This Agreement should be submitted in original with your offer/ bid. 10. Authorized Member of Joint Venture Firm: 'Lead Member' shall be authorized on behalf of Joint Venture Firm to deal with the tender/SECI, sign the agreement or enter into contract in respect of the said tender, to receive payment and such activities in 		

		<p>respect of the said tender/ contract. All notices/ correspondences with respect to the contract would be sent only to this 'Lead Member' of Joint Venture Firm.</p> <p>11. Required processing fee shall be submitted by the 'Lead Member'. Submission of processing fee by the 'Lead Member' it should be deemed as processing fee submitted by the Joint Venture Firm.</p> <p>12. Duration of work and Joint Venture Agreement shall be valid during the entire execute in period/ validity of letter of award and any extension thereafter/ currency of the contract including the period of extension, if any and 5-year maintenance contract.</p> <p>13. Any change in constitution of Joint Venture Firm shall not be allowed.</p> <p>14. On award of any contract to the Joint Venture Firm, a single Performa i.e., Bank Guarantee shall be submitted by the lead bidder as per tender conditions. All the Guarantees like Security Deposit, Earnest money Deposit, Performance Guarantee, and Bank Guarantee for Mobilization Advance etc. shall be accepted only in the name of 'Lead Member' and splitting of guarantees among the members of Joint Venture shall not be permitted.</p> <p>15. Members of the Joint Venture Firm shall be jointly and severally liable to the SIA/MNRE/SECI for execution of the project/ Work/ Assignment etc. The Joint Venture members shall also be liable jointly and severally for the loss, damages caused to the SIA/MNRE/SECI during the course of execution of any awarded contract or due to nonexecution of the contract or part thereof. Governing Laws for Consortium/ Joint Venture Firm: The Joint Venture Agreement in all respect be governed by and interpreted in accordance with Indian Laws.</p> <p>16. In case a group of MSMEs registered with NSIC (under single point registration scheme) form a Joint Venture under NSIC, the Consortium needs to provide an authorization letter from NSIC accepting the terms and conditions of tender (except for those terms and conditions in which NSIC consortia are given special status as per Government of India Policy for the Government Purchase Programme) and also provide details of Consortium members, their manufacturing capacities, the share-out of quantities with schedule of supplies as per SECI tender schedule. Further, NSIC consortium mandatorily submit their service tax, pan card and other relevant documents.</p> <p>17. In case of Consortium of NSIC, the lead members/ partners in the consortium shall not separately participate as independent bidder or as members of any other consortium in this bidding process. All bids in contravention of this shall be rejected.</p> <p>18. Under this tender, only bid from one NSIC Consortium will be accepted.</p> <p>19. All correspondence by SECI will be done with 'Lead member' only.</p>
40.	41.4	<p>New Clause:</p> <p>Copy of Factory License Indian Factories Act, 1948 or any document to establish factory in running operations under the and GST registration Certificate, supporting the fact of the bidder being engaged in the business field mentioned shall be submitted. If factory license does not specify that business field, a separate Government issued document shall be submitted in support of the bidder being engaged in the business field mentioned.</p>

41.	42.2	<p>Minimum Average Annual Turnover</p> <p>The Bidder shall demonstrate a Minimum Average Annual Turnover (MAAT) as per the table below, during the last three financial years, i.e., 2021-22, 2020-21 and 2019-20. It is hereby clarified that “Other Income” as indicated in the annual accounts of the Bidder shall not be considered for arriving at the annual turnover.</p>	<p>Minimum Average Annual Turnover</p> <p>The Bidder shall demonstrate a Minimum Average Annual Turnover (MAAT) as per the table below, during any three financial years out of the last five financial years, i.e., 2021-22, 2020-21, 2019-20, 2018-19, and 2017-18. It is hereby clarified that “Other Income” as indicated in the annual accounts of the Bidder shall not be considered for arriving at the annual turnover.</p>																																												
42.	42.3	<p>Liquidity</p> <p>The Bidder shall demonstrate Working Capital or Line of Credit for the last Financial Year, 2021-22, as per the table below.</p>	Not Used																																												
43.	42	The table is modified as follows:																																													
<table border="1"> <thead> <tr> <th>Sl. No.</th> <th>State/UT</th> <th>Quantity State-Wise (Nos.)</th> <th>MAAT/ Annual Turn Over Requirement (in lakhs INR) in any 3 years out 5 years</th> <th>Profitability</th> <th>Net Worth</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Andaman & Nicobar</td> <td>100</td> <td>66.75</td> <td>Profitable in at least two of the last five years</td> <td>Not less than paid up capital in last FY 2021-22</td> </tr> <tr> <td>2</td> <td>Andhra Pradesh</td> <td>1000</td> <td>160.2</td> <td>Profitable in at least two of the last five years</td> <td>Not less than paid up capital in last FY 2021-22</td> </tr> <tr> <td>3</td> <td>Arunachal Pradesh</td> <td>200</td> <td>66.75</td> <td>Profitable in at least two of the last five years</td> <td>Not less than paid up capital in last FY 2021-22</td> </tr> <tr> <td>4</td> <td>Assam</td> <td>5000</td> <td>801</td> <td>Profitable in at least two of the last five years</td> <td>Not less than paid up capital in last FY 2021-22</td> </tr> <tr> <td>5</td> <td>Bihar</td> <td>5000</td> <td>801</td> <td>Profitable in at least two of the last five years</td> <td>Not less than paid up capital in last FY 2021-22</td> </tr> <tr> <td>6</td> <td>Chhattisgarh</td> <td>25000</td> <td>2670</td> <td>Profitable in at least two</td> <td>Not less than paid up</td> </tr> </tbody> </table>						Sl. No.	State/UT	Quantity State-Wise (Nos.)	MAAT/ Annual Turn Over Requirement (in lakhs INR) in any 3 years out 5 years	Profitability	Net Worth	1	Andaman & Nicobar	100	66.75	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22	2	Andhra Pradesh	1000	160.2	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22	3	Arunachal Pradesh	200	66.75	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22	4	Assam	5000	801	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22	5	Bihar	5000	801	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22	6	Chhattisgarh	25000	2670	Profitable in at least two	Not less than paid up
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					of the last five years	capital in last FY 2021-22	
		7	Delhi	1000	160.2	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		8	Goa	200	66.75	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		9	Gujarat	7000	1121.4	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		10	Haryana	160000	2670	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		11	Himachal Pradesh	700	112.14	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		12	Jammu & Kashmir	4500	720.9	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		13	Jharkhand	8000	1281.6	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		14	Karnataka	10000	1602	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		15	Kerala	100	66.75	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		16	Ladakh	1600	256.32	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		17	Lakshadweep	100	66.75	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22

		18	Madhya Pradesh	50000	2670	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		19	Maharashtra	180000	2670	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		20	Manipur	150	66.75	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		21	Meghalaya	200	66.75	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		22	Mizoram	1700	272.34	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		23	Nagaland	100	66.75	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		24	Odisha	4500	720.9	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		25	Puducherry	100	66.75	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		26	Punjab	50000	2670	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		27	Rajasthan	110000	2670	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		28	Sikkim	100	66.75	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		29	Tamil Nadu	4000	640.8	Profitable in at least two of the last	Not less than paid up capital in last

					five years	FY 2021-22	
		30	Telangana	400	66.75	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		31	Tripura	3000	480.6	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		32	Uttarakhand	1500	240.3	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		33	Uttar Pradesh	30000	2670	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
		34	West Bengal	1000	160.2	Profitable in at least two of the last five years	Not less than paid up capital in last FY 2021-22
			Total	666250			
44.	42.4	The Bidder may seek qualification on the basis of financial capability of its Affiliate(s) for the purpose of meeting the qualification requirements as per Clauses 40.1, 40.2 and 40.3 above.....			The Bidder may seek qualification on the basis of financial capability of its Affiliate(s) for the purpose of meeting the qualification requirements as per Clauses 42.1, 42.2 and 42.3 above.....		
45.	42.5	For the purposes of meeting financial requirements, only latest unconsolidated audited annual accounts shall be used. However, audited consolidated annual accounts of the Bidder may be used for the purpose of financial requirements provided the Bidder has at least twenty six percent (26%) equity in each Company whose accounts are merged in the audited consolidated account.			For the purposes of meeting financial requirements, unconsolidated audited annual accounts for any three financial years out of the last five financial years shall be used. However, audited consolidated annual accounts of the Bidder may be used for the purpose of financial requirements provided the Bidder has at least twenty six percent (26%) equity in each Company whose accounts are merged in the audited consolidated account.		
46.	42.7	..... used for such conversion. After such conversion, Bidder shall follow the procedure/ submit document as elaborated in Clause 40.6 above.			..... used for such conversion. After such conversion, Bidder shall follow the procedure/ submit document as elaborated in Clause 42.6 above.		

47.	42.8	<p>In case the response to RfS is submitted by a Consortium, then the financial eligibility requirement to be met by each Member of the Consortium shall be computed in proportion to the equity commitment made by each member in the Project Company. For example, if two companies A and B form a Consortium with equity participation in 70:30 ratio and submit their bid for a capacity of 10 MW, then, total Net-Worth to be met by the Consortium is Rs. 90 Lakhs x 10 MW = Rs. 9 Crores. Minimum requirement of Net-Worth to be met by Member A would be Rs. 6.3 Crores and the one to be met by Member B would be Rs. 2.7 Crores. Similar methodology shall be followed for computation of other requirements.</p>	<p>In case the response to RfS is submitted by a Consortium/Joint Venture, then the financial requirement is required to be met by the Consortium/Joint Venture members on an aggregate basis.</p>																																																																														
48.	45.5	The table is modified as follows:																																																																															
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USPC	DC	Submersible	Waterfilled/Oil filled	with USPC	DC	Surface	-	with USPC	5	AC	Submersible	Waterfilled/Oil filled	Normal (Without USPC)
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			AC	Surface	-	with USPC
			DC	Submersible	Waterfilled/Oil filled	with USPC
			DC	Surface	-	with USPC
		7.5	AC	Submersible	Waterfilled/Oil filled	Normal (Without USPC)
			AC	Surface	-	Normal (Without USPC)
			DC	Submersible	Waterfilled/Oil filled	Normal (Without USPC)
			DC	Surface	-	Normal (Without USPC)
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			AC	Surface	-	with USPC
			DC	Submersible	Waterfilled/Oil filled	with USPC
		10	DC	Surface	-	with USPC
			AC	Submersible	Waterfilled/Oil filled	Normal (Without USPC)
			AC	Surface	-	Normal (Without USPC)
			DC	Submersible	Waterfilled/Oil filled	Normal (Without USPC)
			DC	Surface	-	Normal (Without USPC)
			AC	Submersible	Waterfilled/Oil filled	with USPC
			AC	Surface	-	with USPC
		12.5	DC	Submersible	Waterfilled/Oil filled	with USPC
			DC	Surface	-	with USPC
			AC	Submersible	Waterfilled/Oil filled	Normal (Without USPC)
			AC	Surface	-	Normal (Without USPC)
			DC	Submersible	Waterfilled/Oil filled	Normal (Without USPC)
			DC	Surface	-	Normal (Without USPC)
			AC	Submersible	Waterfilled/Oil filled	with USPC
		15	AC	Surface	-	with USPC
			DC	Submersible	Waterfilled/Oil filled	with USPC

			AC	Surface	-	Normal (Without USPC)
			DC	Submersible	Waterfilled/Oil filled	Normal (Without USPC)
			DC	Surface	-	Normal (Without USPC)
			AC	Submersible	Waterfilled/Oil filled	with USPC
			AC	Surface	-	with USPC
			DC	Submersible	Waterfilled/Oil filled	with USPC
			DC	Surface	-	with USPC
49.	46.3	<u>Note:</u> In all cases, matching of Prices will be on individual line items (for a particular State/UT) within the price bid table on total landed cost (including GST) for complete scope of work.	<u>Note:</u> In all cases, matching of Prices will be on individual line items (for a particular State/UT) within the price bid table on total landed cost (exclusive of GST) for complete scope of work.			
50.	51.29	“RfS” or “RfS DOCUMENT” or “BIDDING DOCUMENT(S)” or “TENDER DOCUMENTS” shall mean the “Request for Selection” document issued by SECI including standard Power Purchase Agreement along with subsequent clarifications and amendments thereof, vide RfS No. SECI/C&P/MI/00/0010/2022-23 Dated 31.12.2022.	“RfS” or “RfS DOCUMENT” or “BIDDING DOCUMENT(S)” or “TENDER DOCUMENTS” shall mean the “Request for Selection” document issued by SECI along with subsequent clarifications and amendments thereof, vide RfS No. SECI/C&P/MI/00/0010/2022-23 Dated 31.12.2022.			
51.	51.33	“VENDOR” or “SUCCESSFUL BIDDER” or “SELECTED VENDOR” shall mean the Bidding Company or a Bidding Consortium participating in the bid and having been selected and allocated a Project capacity by SECI (through a competitive bidding process) {in case of the Selected Vendor Project}, or the SPV formed by the selected /Bidding Consortium itself executing t vendor he /consortium for the purpose of setting up of the Project {in case of Project execution through SPV}.	“VENDOR” or “SUCCESSFUL BIDDER” or “SELECTED VENDOR” shall mean the Bidding Company or a Bidding Consortium participating in the bid and having been selected and allocated a Project capacity by SECI (through a competitive bidding process) {in case of the Selected Vendor Project}.			
52.	Format 7.1	2. Earnest Money Deposit (EMD): - (Please read Clause 11 carefully before filling) as per Format 7.3A/7.3B from [Insert name of bank providing bank guarantee/POI] and valid up to.....in terms of Clause 11 of this RfS. (Strike off whichever is not	2. Earnest Money Deposit (EMD): - (Please read Clause 13 carefully before filling) as per Format 7.3A/7.3B from [Insert name of bank providing bank guarantee/POI] and valid up to.....in terms of Clause 13 of this RfS. (Strike off whichever is not			

		applicable)	applicable)
53.	Format 7.1	3. We hereby declare that in the event our bid gets selected and we are not able to submit Bank Guarantee of the requisite value(s) towards PBG, within due time as mentioned in Clauses 11 & 12 of this RfS, SECI shall have the right to encash the EMD/PBG submitted by us and return the balance amount (if any) for the value of EMD pertaining to unsuccessful capacity.	3. We hereby declare that in the event our bid gets selected and we are not able to submit Bank Guarantee of the requisite value(s) towards PBG, within due time as mentioned in Clauses 13 & 14 of this RfS, SECI shall have the right to encash the EMD/PBG submitted by us and return the balance amount (if any) for the value of EMD pertaining to unsuccessful capacity.
54.	Format 7.1	In case of our selection as the Selected Vendor under the scheme and the Project (SPWPS) being executed by a Special Purpose Vehicle (SPV) incorporated by us which shall be our subsidiary, we shall infuse necessary equity to the requirements of RfS.	Not Used
55.	Format 7.1	<p>Addendum to the clause:</p> <p>12. Alternate Contact Person</p> <p>Details of the representative to be contacted by SECI are furnished as under:</p> <p>Name:</p> <p>Designation:</p> <p>Company:</p> <p>Address:</p> <p>Phone Nos.:</p> <p>Mobile Nos.:</p> <p>Fax Nos.:</p> <p>Email address:</p>	
56.	Format 7.3A	<p>This guarantee shall be valid and binding on this Bank up to and including _____ [insert date of validity in accordance with Clause 11 of this RfS] and shall not be terminable by notice.....</p> <p>Our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ only). Our Guarantee shall remain in force until _____ [insert date of validity in accordance with Clause 11 of this RfS]. SECI shall be entitled to</p>	<p>This guarantee shall be valid and binding on this Bank up to and including _____ [insert date of validity in accordance with Clause 13 of this RfS] and shall not be terminable by notice.....</p> <p>Our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ only). Our Guarantee shall remain in force until _____ [insert date of validity in accordance with Clause 13 of this RfS]. SECI shall be entitled to invoke</p>

		<p>invoke this Guarantee till _____ [insert date of validity in accordance with Clause 11 of this RfS]</p> <p>Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only) and it shall remain in force until _____ [Date to be inserted on the basis of Clause 11 of this RfS].</p>	<p>this Guarantee till _____ [insert date of validity in accordance with Clause 13 of this RfS]</p> <p>Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only) and it shall remain in force until _____ [Date to be inserted on the basis of Clause 13 of this RfS].</p>
57.	Format 7.3 C	The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to SIA and may be assigned, in whole or in part, (whether absolutely or by way of security) by SIA to any entity to whom SIA is entitled to assign its rights and obligations.	Not Used
58.	Format 7.6	This Net Worth has been calculated in accordance with instructions provided in Clause 40.1 of the RfS.	This Net Worth has been calculated in accordance with instructions provided in Clause 42.1 of the RfS.
59.	Format 7.8	We further declare that we have read the provisions of Clause 30.4 of the RfS, and are complying with the requirements as per the referred OM dated 23.07.2020 except Sl.11 of the OM, including subsequent amendments and clarifications thereto. Accordingly, we are also.....	We further declare that we have read the provisions of Clause 40.4 of the RfS, and are complying with the requirements as per the referred OM dated 23.07.2020 except Sl.11 of the OM, including subsequent amendments and clarifications thereto. Accordingly, we are also.....
60.	Format 7.15	<p>Notes:</p> <p>1. Only a single price bid for each line item (i.e., type of pump in each State/UT), cumulative Project capacity quoted by the bidders, shall have to be filled for the online in the Electronic Form provided at the ISN-ETS portal</p>	<p>Notes:</p> <p>1. Only a single price bid for each line item (i.e., type of pump in each State/UT), quoted by the bidders, shall have to be filled for the online in the Electronic Form provided at the ISN-ETS portal</p>
61.	General	FORMAT FOR SUBMISSION OF PRICE BID has to be read as Format 7.16.	
62.	Annexure B	In addition to the above, the bidders are required to submit certain documents physically offline also as per Clause 19 of the RfS, failing which the technical bids will not be opened.	In addition to the above, the bidders are required to submit certain documents physically offline also as per Clause 21 of the RfS, failing which the technical bids will not be opened.

PRELIMINARY ESTIMATE OF COST OF SPWPS

S. No.	Particulars	Estimated Cost (In Lakhs INR) (exclusive of GST)
1.	System Cost	
	<i>i. Module</i>	
	<i>ii. Pump</i>	
	<i>iii. Controller</i>	
	<i>iv. Module Mounting Structure (MMS)</i>	
	<i>v. Balance of System (BoS)</i>	
2.	Transportation Cost	
3.	Installation Cost	
4.	5-year EMC Cost	
5.	5-year Insurance Cost	
6.	Others (if any)	

Dated the _____ day of _____, 20....

Thanking you,
We remain,
Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

**DECLARATION REGARDING THE DIFFERENT MODELS OF SOLAR WATER PUMPING
SYSTEMS SPECIFIED IN THE MNRE SPECIFICATION FOR THE PARTICULAR
CATEGORY/TYPE OF THE PUMPS**

(To be provided on the letter head of the firm)

Ref No. _____

Date: _____

From: _____ (Insert name and address of Bidding Company/ Lead Member of Consortium)

Tel.#: _____

Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Vide this declaration this is to certify that that M/s..... (Name of the Bidder) has all the models(*e.g. Model-5, Model-6 & Model-7, it is mentioned w.r.t. 5HP-AC-Submersible pump*) of the Solar Water Pumping System as specified in the table, category/type-wise of the pumps (5HP-AC-Submersible) as per the MNRE specifications published vide 41/03/2018-SPV Division dated 02.02.2023, for which the firm is participating in the bid for the various state(s) and will furnish the required **test reports** and details of the models specified: Shut Off-Head (meters), Dynamic-Head (meters), Water output (Liters per day), No. of stages in the model, diameter of each stage of the respective model, Diameter of the discharge pipe (in inches) to MNRE and the concerned SIA at the time of signing of agreement with SIA for supply of such pumps.

Table

The details of the different models which are to be supplied by the firm:

S. No.	Type/Category of the pump	Model No. as per MNRE Specification, to be supplied by the firm

I,, on behalf of M/s..... (Name of the Bidder) am aware, without any doubt, that any deviation of the above information with the information provided to SIA/MNRE at the time of signing of agreement would invite penalties such as forfeiture of EMD by SIA and/or blacklisting of firm for the period of 5 years from the date of the issue of the Notice for the blacklisting.

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

(RfS Document for Selection of Vendors for a work contract to Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of Off Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-15 HP capacities in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component-B of PM-KUSUM scheme of MNRE): Clarifications to the queries on the RfS (RfS No. SECI /C&P/MI/0010/2022-23)

S. No.	Documents	Clause No.	Existing Clause	Proposed Modifications	Rationale/Remarks	SECI's response
1	RfS	16	SIA to seek any additional documents / certificates/ information it deems fit prior to releaser of payment. In case of non-compliance with terms & conditions of letter of award/ NTP, the payment due date shall start from submission of all necessary documents.	Request to remove this Clause. As additional requirement for Data is specified in the Corrigendum.		Already amended in Amendment-01 issued on 17.02.2023.
2	RfS	Format 7.18	In Table - Model Nos., as per MNRE specification, to be supplied by the firm	Please clarify , if we specify the Model Nos. in the table for the Type/ Category of Pumps, then will our empanelment be applicable only for the Model Nos mentioned. And we would need to submit test reports of only those Model Nos. For Example - If a company applies for 5 HP AC Submersible Motor Pumpset, but only mentions Model 6 in the table. Will then empanelment and test report only be required for Model 6 ?	Kindly allow for either separate pricing for different Model Nos. or allow Bidder to choose the Models that he can participate in within a Category of Pumps. As some farmers prefer to take a higher pump head , as they get extra HDPE Pipe, Cable etc.	The vendors will be empanned for the specific model for a particular category of the pump and bidder will be required to submit the test report of that model only and will be allowed to install that model of the pump in the state. For example:-If a company applies for 5 HP AC Submersible Motor Pumpset , but only mentions Model 6 in the table of Format 7.18 then it will be empaneled for model 6 only and test report for this model to be submitted to SIA.
3	RfS	Point 4 / 3.1 ©	Test certificate for all the models for which bid is submitted will be provided by the bidder before signing of agreement with the SIAs	Kindly allow for use of MNRE 2019 Specifications for 1 year after signing of agreement and then transition to MNRE 2023 specs. As development of components as per new specs & getting it tested will take time. This will not result in any sudden disruption to project.		Latest Specification issued by MNRE to be followed.
4	RfS	3.2.b	Vendor Shall Complete installation & commissioning of SPWPS within 120 Days from Date of Issue	Vendor Shall Complete installation & commissioning of SPWPS within 180 Days from Date of Issue	In Practical experience, we have seen that there are a lot of farmer related issues that take time to resolve. Hence 180 days is appropriate time for supply and installation.	The referred clause remains unchanged.
5	Amendment-01	Format 7.5	Bidding Consortium of two companies with one of the Companies as the Lead Member as per Consortium Agreement (Format 7.5) can submit bids under this RfS.	Request to share revised format 7.5 for Consortium Agreement. Or you will accept the existing Format with modification		Suitable amendments are being issued to the referred clause.
6	RfS	Format 7.8 A	To be submitted by all such bidders in which a common Company/companies directly/indirectly own(s) more than 10% but less than 26% shareholding	kindly confirm Format 7.8A mandatory if the lead bidder is own 100% shareholding		Not Applicable in case of individual bidders.
7	Amendment-01	31.A	In case of an incident covered under insurance, bidder must replace the lost/damaged part within 7 days from the date of intimation....	In case of an incident covered under insurance, bidder must replace the lost/damaged part within 7 days from the date of Approval of claim by insurance company....	Insurance companies need to conduct physical survey of site, vett the documents submitted by vendor and approve the claim IF ONLY it is found satisfactory. This part of the process is not in vendor's control. Sometimes insurance companies also reject the claim if they suspect wrongdoing. Vendor cannot assume responsibility in such cases.	The referred clause remains unchanged.
8	Amendment-01	31.B.3	....The amount will be first recovered from the PBG amount and the balance will be adjusted by SIA in release of payment to the concerned vendor.	....The amount will be first adjusted by SIA in release of payment to the concerned vendor and the balance will be recovered from the PBG amount	Since the overall work consists of many work orders and payment will be made after installation of each pump, it will be easier to deduct penalty from the balance payment rather than encashing the PBG.	The referred clause remains unchanged.
9	Amendment-01	31.B.3	SIA reserves the right to recover from the bidder a sum equivalent to 0.5 % of the value of the delayed SPWPS installation or on the unexecuted portion of the work for each week of the delay and part thereof subject to a maximum of 10 % of the total value of the contract	OMIT	There is already a provision for Liquidated damages in clause 33 of the original RfS. That clause should remain applicable.	Suitable amendments are being issued to the Clause 33 of the RfS.
10	SECI000093-404924	1(Page-41/66)	Guidelines on Testing Procedure for Solar Photovoltaic Water Pumping System	As per tender test certificates demand for all the models of each types of pumps set we hereby request you to consider. Highest Head for a particular HP of pump validates the Lower heads of the same HP to qualify the tender.		The vendors will be empanned for the specific model for a particular category of the pump and bidder will be required to submit the test report of that model only and will be allowed to install that model of the pump in the state. For example:-If a company applies for 5 HP AC Submersible Motor Pumpset , but only mentions Model 6 in the table of Format 7.18 then it will be empaneled for model 6 only and test report for this model to be submitted to SIA.
11	RfS	Format 7.14	We are agreeing to accept that the test certificates are to be submitted to the Implementing Agency, reports as per MNRE technical specifications and testing procedures issued in 2019 and amendments thereof, will be submitted by us within 30 days of issuance of Letter of Empanelment by Implementing Agency. In failure of which our empanelment will stand cancelled, without any prior intimation. These certificates shall be submitted either in original form or attested copy by the issuing test lab.	As per tender condition we agree to submit report within 30 day but providing all types of model wise report will takes 4 to 6 month duration request you considerd highest head for each model HP pump validated for lowest Head also Duration should also increase for submission of report as it depend on test Lab and receipt of test certification also acceptable in case of any delay. Sample submission also acceptable in that case of delay		Suitable amendments are being issued in Format 7.14.

12	RfS	31	The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft & burglary etc. during 5 years warranty period.	As a bidder we are responsible for providing insurance policy to Farmers , but providing material after incident without insurance company approval is total wrong process.		The referred clause remains unchanged.
13	RfS	16 Stage 1	90% of the value of month wise nos. of SPWPS installed at site based on. Stage-2: Balance 10% on Completion of one month from date of completion certificate	Please amend the payment terms: 90 % of the payment value must release after supply and installation of material and 10 % should be release after Performance report for one week after commissioning based on the accurate data of the parameters received from RMS or data logger in case of internet unavailability.		The referred clause remains unchanged.
14	SECI000093-7633709-47	47	In order to allow States/SIA sufficient time to implement SPWPS based on the prices discovered under this tender, all prices discovered under this tender will remain valid for 24 months from the date of opening the price bids, which will be announced by MNRE/SECI. Within this 24-month period, empanelled vendors have no right of refusal to complete the allocated work	Price validity should be 12 months from the bid submission date, as present solar market price of raw materials is very day by day. Request you RC made validate for 12 months and if market is stable then further increase for 12 months taking consideration from bidder.		The referred clause remains unchanged.
15	Annexure IV	3.4.5	Total Harmonic Distortion (THD) of the AC output waveform of the inverter at the motor input of the motor pump set shall be less than or equal to 10% and further no individual harmonic shall exceed the limit of 6%. For checking its compliance it should be done as per IS 16221.	For inverter having Non Sinusoidal Output Wavform like BLDC motor controller THD limit should be Extend to 40% as per clause no 4.7.5.3.2 of IS 16221(part-2) Please consider and amend the same		Latest Specification issued by MNRE to be followed.
16	Amendment-01	45.5	Pump Cooling Catagory- Waterfilled / Oilfilled / Both	Pump Cooling Catagory - Waterfilled / Oilfilled / Resin Filled / Any of three	As per IS 9283 resin filled also acceptable	The referred clause remains unchanged.
17	Amendment-01	42.8	In case the response to RfS is submitted by a Consortium/Joint Venture, then the financial requirement is required to be met by the Consortium/Joint Venture members on an aggregate basis.	We are Manufacturer of Solar Pump Controller and we wish to form JV for meeting Financial Criteria regarding MAAT. We qualify Technical requirement. Can we club Financial requirement of both Lead and member under JV for participating in additional clusters.		The clause is self-explanatory
18	RfS	41.2	EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology.	If we make JV with module manufacturer, then can we use our Pump Controller experience for Technical Eligibility criteria in one cluster as lead member and use module experience for technical eligibility criteria of consortium member in other cluster?		A Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology can participate in the tender either individually or in Joint venture with system integrator. If the entities which chose to participate with the JV, they cannot participate individually or as a member of any other JV in the same or different cluster. Further, lead bidder mentioned in the bid cannot be changed for bidding purpose or during the implementation of program.
19	Amendment-01	41.2.v.16	In case a group of MSMEs registered with NSIC (under single point registration scheme) form a Joint Venture under NSIC, the Consortium needs to provide an authorization letter from NSIC accepting the terms and conditions of tender (except for those terms and conditions in which NSIC consortia are given special status as per Government of India Policy for the Government Purchase Programme) and also provide details of Consortium members, their manufacturing capacities, the share-out of quantities with schedule of supplies as per SECI tender schedule. Further, NSIC consortium mandatorily submit their service tax, pan card and other relevant documents.	If one SSI registered with NSIC and other Medium Scale form JV then authorisation letter from NSIC required or not	Under this RfS, 41.2.v.18 needs to be rephrased as, Under this tender, only bid from one NSIC Consortium will be accepted and a bidder can be part of only one consortium./ A bidder can not be part of more than one consortium. Point no. 20 under Annexure II of EESL tender. "MSMEs are also eligible to participate in tender directly provided they meet all QR in their individual capacities and are not part of NSIC consortium or any other consortium."	The Clause has been deleted. Please refer to the Amendment-02 of the RfS.
20	RfS	Format No 7.2 Sub Point no 1		Should all the member of consortium sign the complete bid documents or only lead member. Only JV documents may be signed by all JV members kindly clarify.		The complete bid documets to be signed by authorised signatory of the Lead bidder.
21	Amendment 01	Annexure-A		Specification are very high in nature while MNRE has not updated, water outflow in LPD. This will unnecessarily increase the cost of SPV Pump against current output.		Latest Specification issued by MNRE to be followed.
22	Amendment 01	31	In case of an incident covered under insurance, bidder must replace the lost/damaged part within 7 days from the date of intimation, failing which the rectification/replacement (keeping the same configuration in consideration) will be done by SIA at the risk and cost of system integrator, after rectification/ replacement the warranty clause will remain compliable as per tender conditions.	Insurance companies have given maximum time to report latest by 7 days of the incidence occurrence. Hence This must be changed to 14 days replace lost / damaged part. Penalty may be imposed after this period.		The referred clause remains unchanged.

23			AS PER MSME Norms	There is no exemption to MSME accepted in Amendment 01 in the turnover MAAT, which was given in last tender of EESL. The Gol MSME Act is applicable to this bid & norms of the same should be taken into consideration following fair tender policy. As per Government norms of 25%. The relevant documents shall be submitted in Pre-bid meeting scheduled on 24-03-2023.		The referred clause remains unchanged.
24	RfS	40.1	The Bidder shall be a Company or a Limited Liability Partnership as defined	Allow Proprietorship Firms to participate in the tender.	Please Allow Sole proprietorship firms to participate in the tender as previously in every tender it was allowed. The Firms have worked for years and have the required experience to qualify for the bid but due to this one decision all the efforts of firms gets wasted. Please allow Sole Proprietorship firms to participate in the tender.	Suitable amendments are being issued for Proprietorship firms.
25	RfS	31	Insurance	It will be the responsibility of Beneficiary to provide the documents within specified time frame from insurance company. Reinstallation of damaged or stolen part will be done on receipt of payments from insurance company.		The referred clause remains unchanged.
26			No clause for Same Promoter		Please confirm if 2 companies with same promoter are bidding for the tender in different states, is allowed or not. For example: Company A having same promoter as Company B Bids in Maharashtra Company B having same promoter as Company A Bids in Haryana. This may please be clarified as there was confusion over this in last tender and since this doesn't overlap area of interest as states are different, there seems to be no objection of common interest created for the bid. This be clarified & allowed clearly as due to huge QR requirement already companies are falling	A Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology can participate in the tender either individually or in Joint venture with system integrator. If the entities which chose to participate with the JV, they cannot participate individually or with different leader bidders for different clusters. They will participate as a single entity.
27	RfS	14.1	...Performance Guarantee for a value @ 3% of the amount equivalent to the 6% of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher (as per Annexure-E). ... Along with the first list of consent from beneficiaries in vendor's favor, vendor shall submit another PBG equivalent to differential value of order as per notice to proceed (NTP)	...a Performance Guarantee for a value @ 3% of the amount equivalent to the 6% of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher, subject to a maximum of 1000 numbers of SPWPS (as per Annexure-E). ...	As per Section 4, scheme is demand based and hence total number of beneficiaries allocated to a vendor is not fixed at the beginning. Historically, most SIAs only give a list of 500-1000 beneficiaries initially. There is a provision for the vendor to submit differential PBG in case his beneficiary selection exceeds 1000 SPWPS. Thus, SIA can ensure that the work allocated to the vendor never exceeds his PBG limits. This high EMD will block working capital which is detrimental to the implementation of the scheme	The referred clause remains unchanged.
28	RfS	21.2.iii	The price shall remain firm and fixed and shall be binding on the Selected Vendor irrespective of actual cost of execution of the Project. No escalation on the price will be granted for any reason whatsoever. The Selected Vendor shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever.	Price Variation need to be incorporated in the tender	Considering the high price variation in raw material especially after Covid, we request you to kindly insert Price escalation clause (+,-) in the tender documents, bidders can survive in due to high variations in raw material prices and govt. policies.	The referred clause remains unchanged.
29		Format 7.16	Price Schedule	Differential Prices should be asked for Poly - M5 Panels and for Mono - M10 Panels as both solar panel pricing and thereby Solar Water Pump System Pricing will be different.	This tender has rate validity & fixed rates for 2 years. The solar module technology is expected to shift from M5 Poly to M10 Mono solar cells and thereby availability of only M10 Mono Solar Panels in future. The prices of Poly and Mono are different. If bidder assumes Poly Panel rates today, and in near future, if only Mono Solar Panels are available, then the project will not be viable for the bidder to execute work. Since rates are fixed for next 2 years, it is requested to take different rates for Poly and Mono Solar Panels. So that companies can work out different pricing for both, which will be competitive rates.	The referred clause remains unchanged.
30	RfS	3.3 B	Only Indigenously manufactured solar panels with Indigenous solar cells and modules	We request for 50% of supplies to be DCR with Indigenous Cells and 50% to be Non-DCR Indigenous Modules.	DCR Cell Supplies are limited & it will help to expedite the project.	The referred clause remains unchanged.
31	Annexure-A	3.4.4	The pump and all external parts of motor used in submersible pump which are in contact with water, should be of stainless steel of grade 304 or higher as required. Further for submersible pumps used in coastal areas or bores with higher salinity, preferably, stainless steel of grade 316 or higher grade may be used.	The pump and all external corridor of the motor used in the submersible pump which are in contact with water, should be of pristine sword of grade 304 or advanced as needed (SS Grade 316) but in this case we will need to separate bidding or need separate prices for SS 316 So we request you to not recommend for grade 316. Please changed clause 3.4.4 for SS grade 304 only or We proposing SECI should also separate rates for SS316 grade pump.		Latest Specification issued by MNRE to be followed.

32	Annexure-A	3.4.5	As per IEC 61683, Total Harmonic Distortion (THD) for Voltage and Current should be less than 3 % at the Motor Terminal over the entire radiation profile and in order to achieve this measures such as use of the choke coil (du/dt Filter) etc. can be adopted.	As per our request for clause 3.2.2, It creates confusion related to the applicable clauses but also creates a need for third party testing for controllers of all ratings of pumps. This would need time as well as impose a meaningless cost burden on the manufacturers. Also, a standard should be a reference from which the quality control orders or implementation procedures may be drawn. However here it is reverse. An implementation procedure is being referenced in the 'standard' or the 'norm'.so our request you to please not include clause 3.2.2. Accordingly, to our request for clause 3.2.2, we don't need to include clause no 3.4.5. So, our request to your clause no 3.4.5 is unnecessary for this tender.		Latest Specification issued by MNRE to be followed.
33	Annexure-A	3.3.4	The minimum module efficiency should be minimum 19 percent and fill factor shall be more than 75 percent.	This clause are mean to say bidder has to consider only mono modules which are practicaly need separate testing for all pumps which are not possible in this last minimum time period so request to you add poly modules also.		Latest Specification issued by MNRE to be followed.
34	RIS	41.2	Manufacturer of Solar PV Module	Allow Manufacturer of Solar PV Module with BIS Certification	We are Manufacturers of solar modules and having BIS Certification. We also have done huge no of pumps across Pan India , Are we eligible to participate as Module Manufacturer and we will give authorization to use ALMN listed modules only in pumps installation.	Latest Specification issued by MNRE to be followed.
35	ANNEXURE-A	3.2.2	For IS 16221 (Part-2) certification of the SPV pump controller the latest quality control order released by MNRE regarding IS 16221 (Part-2) must be followed.	In this clause our purpose is, IS 16221 to be used only for testing of THD. Given applicable guidelines to the being test labs to measure THD while testing pumps and shouldn't need a separate and precious test. IS 16221 is applicable for on grid solar inverter where fix frequency output is there while off grid solar controller are operates at variable frequency. Implementation of this will increase cost and certification time will lead to delay in project execution. So we proposing remove this clause.		Latest Specification issued by MNRE to be followed.
36	ANNEXURE-A	3.4.5	As per IEC 61683, Total Harmonic Distortion (THD) for Voltage and Current should be less than 3 % at the Motor Terminal over the entire radiation profile and in order to achieve this measures such as use of the choke coil (du/dt Filter) etc. can be adopted.	This creates a need for third party testing for controllers of all ratings of pumps. This would require time as well as impose a meaningless cost burden on the manufacturers. Also, a standard should be a reference from which the quality control orders or implementation procedures may be drawn. we request you to please omit clause 3.4.5.		Latest Specification issued by MNRE to be followed.
37	ANNEXURE-A	3.3.4	The minimum module efficiency should be minimum 19 percent and fill factor shall be more than 75 percent.	This clause are mean to say bidder has to consider only mono modules which are practically need separate testing for all pumps for each manufacturer which will lead to more waiting time for pumps to get certified. this will lead to project execution delay. also there is supply constraint for the Mono panels with indigenous cell. Kindly add separate bidding column with Poly panels		Latest Specification issued by MNRE to be followed.
38	ANNEXURE-A	3.2.2	Specifications of Controller/Drive for Solar Water Pumping Systems-Point 4:- Isolator Switch should be between Solar panels and Controller.	Instead of isolator switch, MCB provision shall be also allowed. As MCB isolates the system as well as provides a short Circuit protection		Latest Specification issued by MNRE to be followed.
39	ANNEXURE-A	41.2.v	EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology	Can Consortium in between either of 2 manufactures (Pump/PV Panel/Controller) is allowed		A Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology can participate in the tender either individually or in Joint venture with system integrator. If the entities which chose to participate with the JV, they cannot participate individually or with different leader bidders for different clusters. They will participate as a single entity.
40	ANNEXURE-A	3.7.2	1) For SPDs IEC 63227 and its updated versions or amendments should be followed. 2) At the DC Input side of the controller, it should have protection from an External Surge Protection Device of Type-2 or higher (i.e.,Type-1) in accordance with the IEC 61643-31. 3) If the distance between the SPD and the Pump controller to be protected is greater than 10 m, then SPD according to IEC 63227 should be applied. 4) The rated voltage of SPDs on the DC side depends on the type of protective circuit and the magnitude of the maximum operating voltage of the PV modules.	We would like you keep it the same as the previous specification where Type-II SPD was a requirement. Requirement of Type-II itself covers the suitability of its application in the solar pumping environment.	Type II SPDs already serve the purpose and new IEC certifications may require several changes and time to test and get approvals from various laboratory. The rational behind moving away from Type II to IEC should be explained publically and debated before bringing it to Tender. Further, since our controllers resides just below solar panels and cable length between SPV and	Latest Specification issued by MNRE to be followed.

41	ANNEXURE-A	3.7.4	Total Harmonic Distortion (THD) of the AC output waveform of the inverter at the motor input of the motor-pump set shall be less than or equal to 10 % and further no individual harmonic shall exceed the limit of 6 %. For checking its compliance it should done as per IS 16221.	Total Harmonic Distortion (THD) of the AC output both (sinusoidal and non-sinusoidal) waveform of the inverter at the motor input of the motor-pump set shall be less than or equal to 10 % and further no individual harmonic shall exceed the limit of 6 %. For checking its compliance it should done as per IS 16221.	It is important to clarify that whether this clause is applicable to all types of motors or not - BLDC, PMSM and Induction. It could only happen if AC waveforms both types are mentioned in the clause.	Latest Specification issued by MNRE to be followed.
42	ANNEXURE-A	3.2.2	For IS 16221 (Part-2) certification of the SPV pump controller the latest quality control order released by MNRE regarding IS 16221 (Part-2) must be followed.	This sentence must be removed completely as lot of tests of IS 16221 is not applicable for off grid SPV inverter.	1. Complete IS16221 certification is a time intensive process, both from the development as well as certification standpoint. 2. For blanket applicability of this, the ministry should allocate due time for the industry to come up with this certificate and further all the tests under this certificate is not applicable for dedicated off grid inverters. Hence explaining testing agencies and figuring out a common process for the same will lead to further complications. Hence we strongly recommend to remove this clause and bring separate points of IS 16221 which MNRE feels it to be relevant for controllers like they have done for THD.	Latest Specification issued by MNRE to be followed.
43	ANNEXURE-A	3.3.4	The minimum module efficiency should be minimum 19 percent and fill factor shall be more than 75 percent.	This has been revised from the last clause of 16% to 19%. We propose to not make this mandatory	1. This can be served only with monoperc panels. 2. Voltage, stringing, module structure - everything would change because of this , new certifications will be required for every variant which will lead to high lead time to submit reports to the nodal agency. Further, controller needs to be redesigned leading to higher current electronic requirements which would be difficult to source within 2-3 months timeline. Hence, if government can allow both, industry will automatically evolve and shift towards the same. 3. Similar to AC and DC pump distinction, DCR and non-DCR, the industry should be provided with an option here so that project can be implemented fast.	Latest Specification issued by MNRE to be followed.
44	Annexure-D (Price bid format)_Revised and Annexure-D2 (Price bid format)				2 price bids are shared in the Revised Annexures, Kindly explain the purpose of 2 price bid annexures and confirm the final format to be enclosed in our bid	Please refer to the amended Clause 1.7 in the Amendment-01 of the RfS. Annexure D is to be submitted for DCR prices and Annexure D2 is to be submitted for non-DCR prices.
45	Amendment-01	41			Kindly confirm if the solar pv module experience is specific to the supply or installation of SWP installed plant capacity or any other on-grid or off-grid solar power plant experience could be showcased	Experience is specific to the supply or installation of Solar Photovoltaic Water Pumping System. Please refer clause 41.2 of the RfS.
46	Amendment-01	41			Kindly confirm if the EPC vendor's pump installed experience and JV's pump supplied experience can be cumulatively considered for technical eligibility?	Please refer to the Clause 41 of the RfS and the Amendments thereto. Only financial qualifying requirements can be fulfilled cumulatively by the consortium or Joint Ventures.
47	RfS	41.2	Technical QR	25% of total experience as required by the general bidder	the required quantity is very high it should be reduced to atleast by 50 % even for general bidder and please allow the MSME companies with 25% QR of the normal bidders to qualify for the technical and financial QR. There is only exemption in EMD & Tender fee to MSME. please give relaxation in eligibility criteria also	The referred clause remains unchanged.
48	RfS	42	Financial Eligibility Criteria	25% of the total ATO as required by the general bidder,	the required ATO is very high it should be reduced to atleast by 50 % even for general bidder and please allow the MSME companies with 25% QR of the normal bidders to qualify for the technical and financial QR. There is only exemption in EMD & Tender fee to MSME. please give relaxation in eligibility criteria also	The referred clause remains unchanged.
49	RfS	14.1	Performance Bank Guarantee (PBG)	Please keep it as per KUSUM phase 2		The referred clause remains unchanged.
50	RfS	16	Performance report for one week after commissioning based on the accurate data of the parameters received from RMS or data logger in case of internet unavailability.	kindly reduce the performance report by one day instead of a week		The referred clause remains unchanged.
51		3.5.4	Specification for solar photovoltaic water pumping system	Please keep it as per KUSUM phase 2		Latest Specification issued by MNRE to be followed.
52	RfS	21.b.iii	The price shall remain firm and fixed and shall be binding on the Selected Vendor irrespective of actual cost of execution of the Project. No escalation on the price will be granted for any reason whatsoever. The Selected Vendor shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever	Kindly add Price Escalation Clause as per the Ministry of power other tenders as the validity of tender is for 24 months		The referred clause remains unchanged.

53	RfS	42.8	In case the response to RfS is submitted by a Consortium, then the financial eligibility requirement to be met by each Member of the Consortium shall be computed in proportion to the equity commitment made by each member in the Project Company. For example, if two companies A and B form a Consortium with equity participation in 70:30 ratio and submit their bid for a capacity of 10 MW, then, total Net-Worth to be met by the Consortium is Rs. 90 Lakhs x 10 MW = Rs. 9 Crores. Minimum requirement of Net-Worth to be met by Member A would be Rs. 6.3 Crores and the one to be met by Member B would be Rs. 2.7 Crores. Similar methodology shall be followed for computation of other requirements	In Consortium the financial and technical QR should be cumulative instead of proportion to the equity		Already amended in Amendment-01 issued on 17.02.2023.
54	RfS	40.2	Bidding Consortium with one of the Companies as the Lead Member. Consortium shortlisted and selected based on this RfS has to necessarily form a Project Company and get it registered under the Companies Act, 2013, keeping the original shareholding of the Bidding Consortium unchanged. In case applications for multiple Projects have been made by a Consortium, separate Project Companies can be formed for each Project. For the avoidance of doubt, it is hereby clarified that the shareholding pattern of the Project Company shall be the identical to the shareholding pattern of the Consortium as indicated in the Consortium Agreement (Format 7.5).	Please keep it as per KUSUM phase 2		Already amended in Amendment-01 issued on 17.02.2023.
55	RfS	3.2.b	Selected vendors have to submit monthly consent of beneficiaries in their favor to SIA for which SIA's will be Notice to Proceed and for this, vendor shall complete the installation and commissioning of SPWPS within 120 days from date of issuance of NTP for general category states. However, for special category states/Hill States & UTs and Island UTs, Vendor shall complete the installation and commissioning of SPWPS within 150 days of issuance of such NTP.	Keep it 150 for non hill region and 180 for hill region and where the allocation is provided by SNA the duration of execution of project should be as per slab of number of quantity or monthly consent from vendors to be sought by SNA	As if heavy quantity is assigned to vendors at a single order extra time to be provided there should not be equal time to execution of 100 pumps and 1000 pumps in single NTP	The referred clause remains unchanged.
56	RfS	42.4	The Bidder may seek qualification on the basis of financial capability of its Affiliate(s) for the purpose of meeting the qualification requirements as per Clauses 40.1, 40.2 and 40.3 above. In case of the Bidder being a Bidding Consortium, any Member may seek qualification on the basis of financial capability of its Affiliate. In this case, a Bidder can use the credential of only a single affiliate to meet all the financial eligibility criteria. In such cases, the Bidder shall be required to submit Board Resolutions from the respective Affiliate, undertaking to contribute the required equity funding and Performance Bank Guarantees/POI in case the Bidder(s) fail to do so in accordance with the RfS. In case of non-availability of the Board Resolution as required above, a letter from the CEO/ Managing Director of the respective Affiliate, undertaking the above, shall be required to be submitted and the requisite Board Resolution from the Affiliate shall be required to be submitted.	Cumulative turnover of both the bidding partner should be allowed to qualify the mentioned state turn over required		Already amended in Amendment-01 issued on 17.02.2023.
57	Amendment-01	11	MSMEs Bidders registered as MSMEs (Micro, Small and Medium Enterprises) under NSIC/DIC/Udyog Aadhaar Only are exempted from submission of Bid Processing Fee & EMD. In this regard, the Bidder will have to furnish MSME Registration certificate issued by the appropriate authority (as applicable). Further, submission of MSME certificates issued in the name of Affiliate / Promoter/ Company will not be considered However, upon empanelment under this RfS, selected MSMEs must submit Performance Bank Guarantee as per clause 14 of section III of RfS.	As per the Govt of India Policy for MSEs wide notification No. 33004/99 23rd March 2012 and amended 9th November 2018, please refer to Page No.18 of the former, Point No. 3 Sub Points (1), (2), (3) & (4) for 25% procurement reservation for the product produced and services rendered of the total quantity of the tender which should be earmarked for MSEs registered with Udyam Aadhaar or NSIC, to maximize the participation of MSEs and hence faster implementation of Projects	For the product produced and services rendered of the Total quantity of the tender should be earmarked for MSEs as per Government of India Policy. Moreover the installation services part constitutes less than 5% of the total project and hence more than 95% is Supply part. As per the recent trend of past few months after the increase in the price of raw materials, big companies have been denying to work by not giving their consent to State Nodal Agencies whereas MSEs have been accepting the Work Orders and implementing the systems. For example - HAREDA issued 5194 Nos of pumps in the month of December 2022 but only MSEs gave their consent & executed those Work Orders and big companies denied to give their consent for implementation of the same due to increase in the price of raw materials	The Clause has been deleted. Please refer to the Amendment-02 of the RfS.

58	Annexure-A	3.3.4	The minimum module efficiency should be minimum 19 percent and fill factor shall be more than 75 percent.	We request you to kindly allow the old specifications also i.e. the minimum efficiency of the module should be 15% and fill factor above 70%.	We would like to bring to your notice that with this specification change you have entirely wiped out the poly crystalline module manufacturing industry which is around 75% of our country because the poly module can never be able to offer either 19% efficiency or 75% fill factor. Please have provision for both Poly and Mono Panels specifications until we have sufficient suppliers of Indigenous Mono Cells in India as right now we have only couple of Suppliers and both those consume their Mono Cells for their own Panels Production, thus severely limiting the availability of their Mono Cells in market for sale to other Panels Manufacturers.	Latest Specification issued by MNRE to be followed.
59	RfS	41.2	The bidder should be, either of the following: i. Manufacturer of Solar PV Module or ii. Manufacturer of Solar Pump or iii. Manufacturer of Solar Pump Controller using indigenous technology or iv. EPC/Sl of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology. 'Similar Works' means - Design, Supply, Erection, Testing and Commissioning of standalone (off-grid) solar PV based water pump sets. Experience required for the bidders to be counted for the past 7 years from the last date of bid submission shall be as per Table below.	We suggest the following in this regard for MSE Manufacturers of Solar Panels/Modules: 1.) If a Bidder submits LoA/Work Experience Certificates for supplying SPV Panels/Modules to some other firm/company who got those Work Orders from Govt. Agencies/Departments, then such Supply Work Experience should be considered as Work Experience Certificate. 2.) Please consider the Supply Experience of SPV Modules which have been supplied to other firms in all kinds of Government Solar Projects like Solar Home Systems, Solar Inverter Charger Systems, Off Grid & ON Grid Rooftop Systems (and not just Solar Water Pumping Systems). 3.) Such Bidders should be asked to submit the copies of Govt. Work Orders or Letter of Empanelment issued to other Firms which received the Supply of Panels from the Bidder for those Projects and the copies of Work Completion Certificates or Joint Commissioning Reports specifying the Panels/Modules of the	The specifications of the Solar Panels supplied to any Govt. Work Order is same as BIS certified solar panel is required with ALMM registration so there should not be any differentiation in considering such Supply Experience for any of the Solar Projects. Previous EESL SWP Tenders also considered the Supply Experience of Solar Panels/Modules by the Bidder to any other Company who got Govt. Work Orders or Letter of Empanelment for any Solar Projects like Solar Home Systems, Solar Inverter Charger Systems, Off Grid & ON Grid Rooftop Systems or Solar Water Pumping Systems	The referred clause remains unchanged.
60	New request	Request	Request	Request to reduce maximum QR for solar pumps to 500 per state instead of 1000, and also reduce requirement of emd and pbg statewide accordingly	Example- If a bidder has bid for 5 states and have to submit pbg of 80.1 lacs per state, then their bg limits of 80.1x5=400.5 lacs gets blocked even before start of work. This results in reduction of working capital (fund based or non fund based or both) with successful bidder and reduces capability of successful bidder in delivering high volumes in the programme	The referred clause remains unchanged.
61	RFS Section 1	41.2.iv	Similar Works' means - Design, Supply, Erection, Testing and Commissioning of standalone (off-grid) solar PV based water pump sets. Experience required for the bidders to be counted for the past 7 years from the last date of bid submission shall be as per Table below.	Experience of 3hp should be consider as single, 5hp should be consider 1.5 times, experience of 7.5hp and 10 hp should be consider as 3 times to arrive at experience of swps for calculation of QR.	Higher weightage should be given to experience of 7.5hp, 10 hp. Example if a bidder has worked in harayna his experience will be mostly for 7.5hp and 10 hp which involves more resources and should be considered accordingly compared to experience of 1 or 2 hp.	The referred clause remains unchanged.
62	New request	Request	Request	Request to include clause of release of EMD on submission of PBG and signing agreement with SIA.	Emd is not required by SECI on confirmation of signing of agreement with SIA and submission of PBG	Suitable amendments are being issued to the referred clause.
63	New request	Request to allow conversion of emd into PBG	Request to allow conversion of emd into PBG	We request to have provision of conversion of emd into PBG. We will be submitting separate emd for each state and will like to convert it to pbg for the respective state and add differential amount of PBG along with signing of agreement with state. With present clause we will need to submit pbg to state first and then can have our emd released from seci. As our BG limits are utilised for providing emd, we will like to use same limits to provide pbg to state. Seci can send L1 matching confirmation of successful bidder along with emd (to be converted to pbg) to SIA for collecting agreement and differential PBG	Suppose we are bidding for haryana state, then we will be submitting emd of 53.4 lacs to SECI. If we are successful bidder then we will need to submit pbg of 80.1 lacs to Hareda and then we will be able to claim our emd of 53.4 lacs from SECI. With this provision our emd of 53.4 lacs will be forwarded to hareda by seci along with our L1 matching letter and Hareda will collect additional 26.7 lacs pbg from us. This is standard practice adopted in tenders.	Not allowed under this RFS.
64	Amendment-01	point 18 of amendment,	Certified copies of annual audited accounts for any three financial years out of the last five financial years, i.e., 2021- 22, 2020-21, 2019-20, 2018-19, and 2017-18, and provisional audited accounts, along with certified copies of Balance Sheet, Profit & Loss Account, Schedules and Cash Flow Statement supported with bank statements as on the date at least 7 days prior to the due date of bid submission (if applicable), shall be required to be submitted.	Please clarify what should be submit for Cash Flow Statement supported with bank statements as on the date at least 7 days prior to the due date of bid submission. Do we need to submit our working capital arrangements from bank? Our audited balance sheet is sufficient to show equity, reserve and surplus and loan from director. For how many period should we submit bank statments,as our one month bank statment goes into 40-50 pages.		Suitable amendments are being issued to the referred clause.
65	Amendment-01	point 25 of amendment 01	Submission of Pass-phrases: In line with Clause 19.7 and Annexure-B, the Bidder shall be required to submit the PassPhrase to decrypt the relevant Bid-part is submitted into the 'Time Locked Electronic Key Box (EKB)'....	1. Request to elaborate as this is new to most of bidder. 2. should it be submitted offline or online on portal. Is EKB available on online portal		1. Pass Phrase is the phrase required to decrypt the bid submitted by the bidder. 2. The pass phrase to be submitted online on the ISN-ETS portal and in hard copy on the letterhead of the bidder to SECI.
66	Amendment-01	30.B.3	SIA reserves the right to recover from the bidder a sum equivalent to 0.5 % of the value of the delayed SPWPS installation or on the unexecuted portion of the work for each week of the delay and part thereof subject to a maximum of 10 % of the total value of the contract. The amount will be first recovered from the PBG amount and the balance will be adjusted by SIA in release of payment to the concerned vendor. Further, SIA may also blacklist the Empaneled firm for 5 years.	SIA reserves the right to recover from the bidder a sum equivalent to 0.25 % of the value of the delayed SPWPS installation or on the unexecuted portion of the work for each week of the delay and part thereof subject to a maximum of 5 % of the total value of the contract. The amount will be first recovered from the PBG amount and the balance will be adjusted by SIA in release of payment to the concerned vendor. Further, SIA may also blacklist the Empaneled firm for 5 years.		The referred clause remains unchanged.

67	Annexure-A	3.3.4	The minimum module efficiency should be minimum 19 percent and fill factor shall be more than 75 percent.	Poly solar panels cannot meet this specification, request to change this so that we can use dcr poly crystalline solar panels. Indian cell manufacturers, solar panels manufacturers are still not ready to supply in big quantity and this will lead to shortage of solar panels for the programme. Also designs of solar pumps including pv string configuration, controller and motor pump will change if only mono panels are allowed in tender. This will also lead to slowdown of project.		Latest Specification issued by MNRE to be followed.
68	Amendment-01	31	The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft, burglary, & damage, etc. during 5 years warranty period. The empaneled bidder shall file insurance claim and shall be responsible to bring the insurance claim to a final settlement. The farmer and the empaneled bidder shall be jointly responsible for collection and submission of documents for the processing of the insurance claim. The insurance policy taken for the individual farmer shall be handed over to the beneficiary under intimation to SIA at the time of processing of payment for the completed installations. The empaneled company shall do renewal of insurance certificate every year up to 5 years as per insurance clause.	All insurance claims are rejected by insurance company if insurance claim is not lodged within 48 hours of damage or loss. Please add a clause that farmer can get benefit of insurance only if the loss is intimated by farmer withing 48 hours to insurance company or empaneled agency. This can be communicated to farmer at time of survey in writing and before issual of feasibility by SIA	If the claim is rejected by insurance company under ground of late intimation of loss by farmer, then it is injustice to expect that empannelled agency should bear the cost and replace it or repair it. Farmer should be held responsible for timely intimation of loss.	The referred clause remains unchanged.
69	RFS Section 1	41.2.iv	EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology	EPC/SI of 'similar works' is allowed to participate individually or as consortium partner with manufacturer or financial partner.	This work is purely work of design, supply, intallation, testing, commissioning and maintainance of solar pumping system at laes of distributed locations and for this even though EPC is best equipped with experience and expertise epc is forced to participate as consortium or JV with manufacturer and in reality it should be reverse. Even manufacturer of a components of solar pump has expertise on manufacturing of only any one components (spvm/motor pump/pump controller) but epc has experience and expertise on design, integration and emc which is actually required to execute this tender. As there is clause that only ALMM approved manufacturer will be able to supply in this tender, quality of spvm is already assured. Also system configuration supplied should be as per test report from mnre approved test centre or NABL lab assures performance as per MNRE standard. Even in case of ground mounted solar plants of MW utility scale epc are allowed to participate without JV with any Mfr. Just as a infra company is allowed to construct dam or road without being in JV with cement mfr or brick mfr or concrete mfr, epc must be allowed to participate without jv with any mfr and should be allowed to have consortium between (epc and spvm) or (epc and financial partner). Due to current condition	The referred clause remains unchanged.
70	42.8		In case the response to RfS is submitted by a Consortium/Joint Venture, then the financial requirement is required to be met by the Consortium/Joint Venture members on an aggregate basis.	As In case of respose to RFS is submitted by a consortium then financial requirements is required to be met by consortium members on agregate basis; we need revised format 7.6 Financial requirement. Because you have not incorporate changes of amended clause of financial requirement in to Format 7.6. It is still as per original tender document	Request you to provide us revised format 7.6 Financial Requirement as per corrigendum.	Suitable amendments are being issued to Format 7.6.
71	General		"RfS Document for Selection of Vendors for a work contract to Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of Off Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-15 HP capacities in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component-B of PM-KUSUM scheme of MNRE"	AS this tender is now for 1 HP to 15 HP instead of 1 HP to 10 HP, can we mention 15 HP AC/DC in Capacity of Pumps Quoted for in Format 7.1 Covering Letter?		Suitable amendments are being issued to Format 7.1
72		Annexure E	For solar Pv Modules (Expreieinc in Kwp) @4800wp per pump for 5hp pump	Please clarify which needs to be submitted to support the experieince claim.		Refer clause 18.xvi of the amendment 2.
73		Annexure E	For solar Pv Modules (Expreieinc in Kwp) @4800wp per pump for 5hp pump	Please clarify whether the experience of supply or installation of module by spv manufacturer should be for government project or will private projects also be considered. Also clarify which needs to be submitted to support the experieince claim.		The projects completed under central or state government scheme/programme to be considered. Further, also refer clause 18.xvi of the amendment 2.
74		Annexure E	For solar Pv Modules (Expreieinc in Kwp) @4800wp per pump for 5hp pump	Please clarify whether the experience in other projects like solar street light, off grid solar power plants, grid tied solar plants will also be considered for solar pv module manufacturer		Please refer definition of the similar works in the RfS clause 41.2.
75	RfS	42.8	In case the response to RfS is submitted by a Consortium/Joint Venture, then the financial requirement is required to be met by the Consortium/Joint Venture members on an aggregate basis.	If a system integrator A with MAAT of 20 Cr is bidding in consortium with spvm manufacturer with MAAT OF 40 Cr then 60 Cr MAAT will be considered to check turnoover eligibility. Please clarify.		Allowed under this RfS.

76		Sr no 43 of Clarification 01	The technical Eligibility criteria to be considered for the above purpose will be the cumulative technical eligibility of the bidding company or consortium	If a system integrator A with experience of 1750 solar pump is bidding in consortium with spvm manufacturer with experience of 4800kw (converter to pumps it will be 1000 pumps considering 4800 wp per pump as mentioned in annexure E) of solar panels supply then total experience of consortium will be considered as cumulative of 2750 (total of 1750 and 1000) to check the technical qr of bid by consortium. Request to clarify.		The clause is self-explanatory
77	Amendment-01	3.1.c	New Clause: Test reports can be submitted with the bids. However, the bidders can also submit a self-certificate with the bids in lieu of test reports affirming that the test certificates for all the models for which the bids are submitted will be provided by the bidder before signing of agreement with the SIAs, failing which the bidder will be liable for penalties including encashment of EMD and/or blacklisting	Request to consider Test Report of any higher head in particular HP. The test reports of each models will be more for which testing is not feasible considering very few Labs/Testing Infrastructure available in India. Also request to allow minimum 60 days time to submit the test reports from the date of Empanelment	For Each category there will be 30 m / 50 m / 70 m / 100m and test reports for all models (head-wise) is not possible as this will become around minimum 40 Test Reports in 1 HP to 10 HP AC and DC Pumpset category. Each test fees costs around Rs.2.5 Lakh, so around Rs.1 Cr expenditure will be towards Testing only. Secondly, there are several bidders likely to participate and if each bidders initiates for head-wise Testing, then it will be huge huge rush at Testing Labs which cannot be finished in one year time also. Third, at present neither there is no enough numbers of Labs available nor testing infrastructure in India. Fourth, Testing are subject to weather condition available during the time, which may take long time. Fifth, Labs will earn more income than the bidders earning from executing the project. Hence Test reports of all models should not be mandatory. Consider only any higher head Test Reports in particular HP like earlier Tenders	Suitable amendments are being issued to the referred clause.
78	Amendment-01	Format 7.18	DECLARATION REGARDING THE DIFFERENT MODELS OF SOLAR WATER PUMPING SYSTEMS SPECIFIED IN THE MNRE SPECIFICATION FOR THE PARTICULAR CATEGORY/TYPE OF THE PUMPS	Request to consider Test Report of any higher head in particular HP. The test reports of each models will be more for which testing is not feasible considering very few Labs/Testing Infrastructure available in India. Also request to allow minimum 60 days time to submit the test reports from the date of Empanelment	For Each category there will be 30 m / 50 m / 70 m / 100m and test reports for all models (head-wise) is not possible as this will become around minimum 40 Test Reports in 1 HP to 10 HP AC and DC Pumpset category. Each test fees costs around Rs.2.5 Lakh, so around Rs.1 Cr expenditure will be towards Testing only. Secondly, there are several bidders likely to participate and if each bidders initiates for head-wise Testing, then it will be huge huge rush at Testing Labs which cannot be finished in one year time also. Third, at present neither there is no enough numbers of Labs available nor testing infrastructure in India. Fourth, Testing are subject to weather condition available during the time, which may take long time. Fifth, Labs will earn more income than the bidders earning from executing the project. Hence Test reports of all models should not be taken and considered only any higher head Test Reports in particular HP	The referred clause remains unchanged.
79	Amendment-01	16	Payment shall be made to vendor within 30 days after submission of three copies of invoices to Engineer-in charge, complete in all respect (showing description, quantity, unit rate and total number of systems). However, this is subject to the availability of the accurate performance data/parameter of SPWPS through RMS on State SEDM portal and central portal of PM-KUSUM.	Please keep the clause as per original RfS and not as per Amendment	The first stage payment should be paid as per original clause only. Linking the payment to the accurate performance data/parameter of SPWPS through RMS on State SEDM portal and central portal of PM-KUSUM will be time taking or some time the sites being in remote and rural areas there is always network issue. In the farmer's field very rarely network range gets available and hence accurate performance data/parameters may not be available some time, hence keeping payment linked with accurate data on portal will become loss to the bidders due to low/poor network range on field. Farmers also not taking care of the RMS/Controller and playing/malpractice with installed systems hence the performance data/accuracy may affect. So request to consider this practically.	Suitable amendments are being issued to the referred clause.
80	Amendment-01	21.1	No documents will be accepted after the due date and time of bid submission. Bank Guarantee against EMD needs to be submitted in both online and offline modes.	Please keep the clause as per original RfS and not as per Amendment	Submission of EMD BG / Tender Fees DD to be allowed to submit within 2 days after last date of online submission date.	The referred clause remains unchanged.
81	Amendment-01	31	Insurance: .....The empaneled bidder shall file insurance claim and shall be responsible to bring the insurance claim to a final settlement. The farmer and the empaneled bidder shall be jointly responsible for collection and submission of documents for the processing of the insurance claim.....	Please keep the clause as per original RfS and not as per Amendment	Please note that from the incident occurrence the farmer need to lodge the FIR within 24 hours and submit a case to Insurance company as per Insurance company norms, other wise the Insurance company will not entertain the case. Here would like to inform Farmers are not informing timely about the Incidence and hence Bidders should not be the responsible for filling claim and settlement of claims.	The referred clause remains unchanged.
82	RfS	47	Validity of discovered prices for each State/UT - 24 months	Request to consider the validity of discovered prices for 12 months only OR allow Price Escalation of 10% after every six months	24 months price validity is a challengeable considering the current market RM Trend going up from last few months and the same is expected to go up for future also. Considering the market volatility, please consider discovered price validity for 12 months only or allow Price Escalation of 10% after every six months	The referred clause remains unchanged.
83	Annexure-A (Technical Specifications)_Revised	3.6.4	Static MPPT efficiency of controller shall be equal or more than 98% during operation of 10 to 100% of rated STC PV power, and average MPPT tracking efficiency in the dynamic condition should be greater than 97 % with hot and cold profiles. To ascertain the above requirement, controller shall be tested as per the procedure laid down by MNRE for testing of USPC with respect to the water pumping load only.	Request to remove MPPT efficiency clause as it is only one of the element amongst 6 elements of overall efficiency and not even a true measure of controller performance. Besides the pump controller, unlike USPC is not a stand alone controller/ bought out item like a module.		Latest Specification issued by MNRE to be followed.

84	Annexure-A (Technical Specifications)_Revised	3.4.5	Total Harmonic Distortion (THD) of the AC output waveform of the inverter at the motor input of the motor-pump set shall be less than or equal to 10 % and further no individual harmonic shall exceed the limit of 6 %. For checking its compliance it should done as per IS 16221.	The THD amendment should be removed, as IS 16221 to be used only for testing of THD. Request to give appropriate guidelines to the existing test labs to measure THD while testing pumps and should not need a separate and expensive test.	Latest Specification issued by MNRE to be followed.	
85	Amendment-01	1.7	Solar PV capacity in kW for the pump capacity in HP will be allowed as per MNRE specifications under the scheme. It will be mandatory to use indigenously manufactured solar panels with indigenous solar cells and modules. In addition to the bids for SPWPS with indigenously manufactured solar cells, interested bidders can also submit their bids for SPWPS with non-indigenous solar cells as per Annexure-D2 (open) format. However, work for SPWPS with non-indigenous solar cells would be awarded only if the Government approves use of non-indigenous solar cells under Component-B of the PM-KUSUM Scheme. Further, for the purpose of price estimation under both the categories mentioned above, all other components including solar modules shall be considered as indigenous and in compliance to the provisions of the PM-KUSUM Guidelines and ALMM Guidelines as	Request to provide separate price submission format for both Mono Perc and Polycrystalline cells in module as cost wise Mono Perc prices will be higher than that of Polycrystalline PV Modules.	The referred clause remains unchanged.	
86	Amendment-01	31	In case of an incident covered under insurance, bidder must replace the lost/damaged part within 7 days from the date of intimation, failing which the rectification/replacement (keeping the same configuration in consideration) will be done by SIA at the risk and cost of system integrator, after rectification/ replacement the warranty clause will remain compliant as per tender conditions.	Request to give amendment as per EESL-II Tender. Insurance related repairs/replacements were subject to reporting by the farmer within 7 days and passing of the claim by the insurance companies.	The referred clause remains unchanged.	
87	Amendment-01	31	The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery. For delivery of goods at site, the insurance shall be obtained by the Contractor, for an amount not less than the Contract Price of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War risks and strikes. The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft, burglary, & damage, etc. during 5 years warranty period. The empaneled bidder shall file insurance claim and shall be responsible to bring the insurance claim to a final settlement. The farmer and the empaneled bidder shall be jointly responsible for collection and submission of documents for the processing of the insurance claim. The insurance policy taken for the individual farmer shall be handed over to the beneficiary under intimation to SIA at the time of Execution of Agreement for the associated.	The Bidder should be exempted in this clause. It is responsibility of the Insurance company. Bidder can help the Farmer to coordinate with insurance company	The referred clause remains unchanged.	
88	RfS	11	All MSMEs (Micro, Small and Medium Enterprises) notified as per clause 1.10.3 of GFR 2017 and as registered under NSIC/DIC/Udyog Aadhaar only are only exempted from submission of Bid Processing Fee and EMD. For claiming this exemption, at the time of bid submission, MSMEs must provide valid proof of their being registered as MSME. However, upon empanelment under this RfS, selected MSMEs must submit Performance Bank Guarantee as per clause 12 of section III of RfS.	As per Amendment to the Public Procurement Policy for Micro & Small Enterprises(MSEs) Order, 2012 with GOI Gazette Notification S.O. 5670 (E) dated 9 th November 2018, percentage of procurement of goods and services by Government Departments/CPSEs from MSEs from the present at least 20% to at least 25% of their Total Procurement.	The Clause has been deleted. Please refer to the Amendment-02 of the RfS.	
89	F.No. 41/3/2018-SPV Division	3.2.2 SPV Controller	For IS 16221 (Part 2) Certification of the SPV Pump Controller the latest quality control order released by MNRE regarding IS 16221 (Part 2) must be followed	This sentence must be removed entirely which is below table of the mentioned clause 3.2.2	The mentioned standard IS 16221 (Part 2) is not applicable even remotely to SPV Pump Controller. SPV Pump Controller specifications must be released by MNRE for the clarity of prospective bidders and Testing laboratories. Further SPV Pump Controller specifications must be based on Specifications laid down for Pump Controller in USPC Specifications, which must include Output and Input efficiency norms like THD (Total Harmonic Distortion) of the output signal and MPPT efficiency of above 98% for the Input efficiency.	Latest Specification issued by MNRE to be followed.
90	RfS	11	All MSMEs (Micro, Small and Medium Enterprises) notified as per clause 1.10.3 of GFR 2017 and as registered under NSIC/DIC/Udyog Aadhaar only are only exempted from submission of Bid Processing Fee and EMD. For claiming this exemption, at the time of bid submission, MSMEs must provide valid proof of their being registered as MSME. However, upon empanelment under this RfS, selected MSMEs must submit Performance Bank Guarantee as per clause 12 of section III of RfS.	Since the MSMEs are exempt from submission of EMD, they should not be allowed to submit price bids. MSMEs should only be offered the L1 prices quoted by general category bidders for price acceptance;	Previously, MSMEs without any significant experience or execution capacity have quoted highly aggressive prices and thereafter didn't perform. Since the MSMEs are exempt from submission of EMD, they should not be allowed to submit price bids. MSMEs should only be offered the prices quoted by general category bidders for acceptance. Price bids should be invited from general category bidders only who have more experience in this business and are likely to quote balanced bid prices;	The Clause has been deleted. Please refer to the Amendment-02 of the RfS.

91	RfS	36	Price basis of the price quoted shall be on F.O.R (Freight on Road) destination basis for site. Price mentioned in the quotation must be firm. Hence prices in Letter of Award shall be firm and not subject to escalation till the execution of the complete order and its subsequent amendments accepted by the bidder even though the completion / execution of the order may take longer time than the delivery period specified and accepted in the Letter of Award.	Inclusion of Price Variation clause for major material: Solar PV Modules, MMS, Motor-Pump Set and Controllers.	1. As per clause no. 47 (Validity of discovered prices for each State/UT) of SECTION 5, the validity of discovered prices for each state/UT is 24 months from the date of opening the price bids which is too much. It will not be easy for any bidder/ manufacturer to work on a fixed rate for such a long time. The PM-KUSUM Scheme will suffer again due to non-viability of the prices. Therefore, prices should be on variable basis. 2. The PM-KUSUM scheme has been twice disrupted due to exorbitant increase in the commodity prices in last 02-03 years thus making the projects completely unviable. Therefore, price variation should be applicable in this tender to account for price volatility in major material such as PV Modules, Steel and Copper prices.	The referred clause remains unchanged.
92	RfS	40.2	Bidding Consortium with one of the Companies as the Lead Member. Consortium shortlisted and selected based on this RfS has to necessarily form a Project Company and get it registered under the Companies Act, 2013, keeping the original shareholding of the Bidding Consortium unchanged. In case applications for multiple Projects have been made by a Consortium, separate Project Companies can be formed for each Project. For the avoidance of doubt, it is hereby clarified that the shareholding pattern of the Project Company shall be the identical to the shareholding pattern of the Consortium as indicated in the Consortium Agreement (Format 7.5).	This clause may kindly be deleted.	Since the lead member is responsible for submission of EMD, PBG, acceptance of LOA and project execution, the necessary requirement to form and register a project company may kindly be deleted to avoid unnecessary regulatory compliances for the consortium bidders. These conditions are relevant to RESCO mode projects and not the EPC projects.	Already amended in Amendment-01 issued on 17.02.2023.
93	RfS	40.8	Any consortium, if selected as Selected Vendor for the purpose of supply of power to SECI, shall incorporate a Project company with equity participation by the Members in line with consortium agreement (to be submitted along with the response to RfS) i.e., the Project Company incorporated shall have the same shareholding pattern as that indicated in the Consortium Agreement given at the time of submission of response to RfS.			Already amended in Amendment-01 issued on 17.02.2023.
94	RfS	42.8	In case the response to RfS is submitted by a Consortium, then the financial eligibility requirement to be met by each Member of the Consortium shall be computed in proportion to the equity commitment made by each member in the Project Company. For example, if two companies A and B form a Consortium with equity participation in 70:30 ratio and submit their bid for a capacity of 10 MW, then, total Net-Worth to be met by the Consortium is Rs. 90 Lakhs x 10 MW = Rs. 9 Crores. Minimum requirement of Net-Worth to be met by Member A would be Rs. 6.3 Crores and the one to be met by Member B would be Rs. 2.7 Crores. Similar methodology shall be followed for computation of other requirements.	In case the response to RfS is submitted by a Consortium, then the financial eligibility requirement shall be cumulatively met with by all the members of the Consortium. The figures for each of the partner of the consortium shall be added together to determine the bidder's compliance with the minimum qualification criteria.	In EPC projects, there are frequent scenarios wherein the Lead partner has the technical and management expertise in terms of project execution/field experience whereas the other partner has the financial strength who prefers to stay as the lagging partner due to lack of project experience. This is a logical norm followed by most of the Consortium bidders in turnkey EPC projects. Moreover, since all the members of Consortium are jointly and severally liable, the Consortium bidders may kindly be given the discretion regarding nominating the Lead Partner amongst themselves as per their suitability and field experience rather than equity participation.	Already amended in Amendment-01 issued on 17.02.2023.
95	RfS	13.5	In case, the SIA issues LoA to the Selected Vendor and if the Selected Vendor does not submit the Performance Bank Guarantee within the stipulated time period (i.e. 15 days from issuance of LoA);	In case, the SIA issues LoA to the Selected Vendor and if the Selected Vendor does not submit the Performance Bank Guarantee within the stipulated time period (i.e. 28 days from issuance of LoA)	PBG submission period: 15 days from issuance of LoA is Too short. It should be at least 28 days as in previous tender. Empanelled Vendors may need enhancement of credit facilities from the banks after award of LOA	The referred clause remains unchanged.
96	RfS	14.1	A Performance Guarantee for a value @ 3% of the amount equivalent to the 6% of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher (as per Annexure-E).		This clause should not be applicable in case of MSMEs. They have a cap of 25% and in states like Haryana already more than 10 MSMEs are empanelled. Kindly revert to the previous tender methodology – Bidder shall submit a bank guarantee (BG) of 3% of the amount equivalent to the 10% of the value of total state- wise allocation or 100 nos. of SPWPS, whichever is lower, to respective Implementing Agency's with the validity of 1 year to be rolled over every year for the first five years.	The referred clause remains unchanged.
97			It may be noted that Successful Bidders shall submit the Performance Guarantee according to the Format 7.3C with a validity period up to (& including) the date as on 24 months from placement of award by respective SIA.		Please revert to previous tender's one year validity requirement so that bidders especially MSMEs do not face upfront financial constraints.	The referred clause remains unchanged.
98	RfS	16	Performance report for one week after commissioning based on the accurate data of the parameters received from RMS or data logger in case of internet unavailability.	Performance report for one day after commissioning based on the accurate data of the parameters received from RMS or data logger in case of internet unavailability.	The period for performance report may kindly be reverted to one day (as followed in previous EESL tenders) as it is very difficult to ensure that the farmer continuously operates the pump for one week especially when it is not required and the fields are already flooded. Eg. During the monsoon season.	The referred clause remains unchanged.

99	RfS	18	b.Board Resolution from the Bidding Company committing 100% (One Hundred Percent) of the equity requirement for the Project/ Board Resolutions from each of the Consortium Members together in aggregate committing to 100% (One Hundred Percent) of equity requirement for the Project (in case of Bidding Consortium); and c.Board Resolutions from each of the Consortium Members and Lead member contributing such additional amount over and above the percentage limit (specified for the Lead Member and other member in the Consortium Agreement) to the extent becoming necessary towards the total equity share in the Project Company, obligatory on the part of the Consortium pursuant to the terms and conditions in the Consortium Agreement.	This clause may kindly be deleted.	These conditions are relevant to RESCO mode projects and not the EPC projects wherein short-term working capital is required. May kindly be deleted to avoid complexities for the bidding consortiums.	The referred clause remains unchanged.
100	RfS	35	Local representative of bidder should meet governing authorities of each block and should submit the minutes of meeting to SIA's on quarterly basis.	This clause may kindly be deleted.	It is not required and may kindly be deleted.	Already amended in Amendment-01 issued on 17.02.2023.
101	RfS	40.7	A Bidder which has been selected as Selected Vendor based on this RfS can also execute the Project through a Special Purpose Vehicle (SPV) i.e., a Project Company especially incorporated/acquired as a subsidiary Company of the Selected Vendor for setting up of the Project, with at least 51% shareholding in the SPV which has to be registered under the Indian Companies Act, 2013. Multiple SPVs may also be utilized for executing more than one Project.	This clause may kindly be deleted.	These conditions are relevant to RESCO mode projects and not the EPC projects. May kindly be deleted to avoid complexities for the bidding consortiums.	Already amended in Amendment-01 issued on 17.02.2023.
102	RfS	41.2	EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology.		1. It has been stated that the EPC/SI can form a JV with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology. But can a Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller form a JV amongst themselves? Please confirm. 2. For Solar PV Modules (Experience in kWp); We are assuming the required experience for Solar PV Modules manufacturer is for supply only (and not installation). Please confirm.	1. Not allowed under this RfS. 2. The required experience for Solar PV Modules manufacturer is for supply and installation of Solar PV modules for the Solar Water Pumping System..
103			The maintenance shall include replacement of any component irrespective of whether the defect was a manufacturing defect or due to wear and tear.	The maintenance shall include replacement of any component irrespective of whether the defect was a manufacturing defect or due to wear and tear. This condition is subject to the Defects Liability Clause of EESL tender: 10.2 of ITB and 27.2 of GCC which states that "the Implementing Partner shall not be responsible for the repair, replacement or making good of any defect or of any damage to the Facilities arising out of or resulting from any of the following causes: (a) Improper operation or maintenance of the Facilities by the beneficiary. (b) Operation of the Facilities outside specifications provided in the Contract." Therefore, if the beneficiary is found to be operating the pump improperly or outside the specifications of the contract such as surface pumps being found submerged in or exposed to water, the Implementing Partner shall not be responsible for the repair, replacement or making good of the contract defects.		The referred clause remains unchanged.
104	Annexure A USPC Controller	I	LCD screen provided on controller need to shows various applications which can be selected by keypad using up-down and enter key (page No: 63)	Request to eliminate this requirement		Latest Specification issued by MNRE to be followed.
105	RfS	47	All prices discovered under this tender will remain valid for 24 months from the date of opening the price bids, which will be announced by MNRE/SECI. Within this 24-month period, empanelled vendors have no right of refusal to complete the allocated work.	Price validity should be asked only for 6 months and there should be a clause of Price Escalation beyond that period of 6 months	It is not practically possible at all to give a price validity for 24 months because the rates of raw material and the components of Solar water pumping systems are not constant for such a long period of Time.	The referred clause remains unchanged.
106	Annexure A	3.7.2.1	At the DC Input side of the controller, it should have protection from an External Surge Protection Device of Type-2 or higher (i.e. Type-1) in accordance with the IEC 61643-31.	Type 2 Surge Protection Devices are meant for applications where there is grid surge voltage. In the current application there is no possibility of grid voltage surge. The risk of voltage surge in a stand alone pump is from a lightning strike only Hence Type 1 SPD is recommended. Most of the controllers will have an MOV on the PCB on the DC side in such cases need for SPD may be eliminated.		Latest Specification issued by MNRE to be followed.

107	Annexure A	3.8	It will be mandatory to use indigenously manufactured solar modules with indigenous mono/multi-crystalline silicon solar cells. Further, the motor-pump-set, controller and balance of system should also be manufactured indigenously. The vendor has to declare the list of imported components used in the solar water pumping system.	However under clause 3.34 min. Module Efficiency is mentioned as 19% which can not be obtained by Multicrystalline cells, it may be corrected as 16%		Latest Specification issued by MNRE to be followed.
108	Annexure A	3.3.1	individual PV modules used in the PV array, under STC, should be a minimum of 300 Wp, with adequate provision for measurement tolerances	Required more clarity on Poly (Multicrystalline) and Mono Panel		Latest Specification issued by MNRE to be followed.
109	Annexure A	3.4.5	As per IEC 61683, Total Harmonic Distortion (THD) for Voltage and Current should be less than 3 % at the Motor Terminal over the entire radiation profile and in order to achieve this measures such as use of the choke coil (du/dt Filter) etc. can be adopted.	We request you to please remove or amend this clause that if total cable length will increase more than 100 M please Clarification on DU DT filters will increase the project for for the department.		Latest Specification issued by MNRE to be followed.
110	Annexure A	2.1.b	For 10 Modules structure - minimum 165 OD with minimum thickness of 4 mm with base plate minimum 20 mm thickness if used and foundation hardware shall be as per IS 5624.	Diameter lesser than 165mm OD for base poles shall also be permitted for structures which are approved through IIT / IISc / NIT. & also Allowed 09 MMS which are Permitted Through IIT / IISc / NIT.		Latest Specification issued by MNRE to be followed.
111	Annexure A		LCD screen provided on controller need to shows various applications which can be selected by keypad using up-down and enter key	Request to eliminate this requirement.		Latest Specification issued by MNRE to be followed.
112	Annexure A	3.7.2	Surge Protection Device : At the DC Input side of the controller, it should have protection from an External Surge Protection Device of Type-2 or higher (i.e. Type-1) in accordance with the IEC 61643-	We request you to kindly allow internal MOV/SPD . It will help to save the cost of the system.		Latest Specification issued by MNRE to be followed.
113	Annexure A	3.2.2	Isolator Switch:- Should be between Solar panels and controller	We would request to keep it same as KUSUM-2 tender as circuit breaker as it would serve the purpose of protection. DC isolator cost is very high compared to DC circuit breaker. It will help to save the cost of the system.		Latest Specification issued by MNRE to be followed.
114	Annexure A	2.12	Square washer to be used for all the nut-bolts arrangement	We Request you to allowed Round washer since this is also a standard product.		Latest Specification issued by MNRE to be followed.
115	Annexure A	3.7.1.13	Motor shall have suitable provision for earthing to facilitate earthing of the motor as per IS 3043 at the time of installation. In case GI pipes are used for the purpose of earthing the motor, earthing connection may be made to the discharge pipe clamps. However, in case of HDPE/PVC pipes, a separate metallic cable from the motor to the control panel shall be provided and earthing given as if four-core cable is used, the fourth core not connected to the terminals can be used for earthing.	Since the motor, controller and modules are interconnected. The earth pit for these 2 equipment should be same. Please mention clearly that modules have to be earthed separately.		Latest Specification issued by MNRE to be followed.
116	Annexure A	3.7.1.11	Separate earthing conductor shall be provided for controller, pump, motor and SPV array etc. for its connection to the earthing pit and it should be continuous in nature for electrical conductivity. However, in no case, even for the earthing of light current equipment (for example, high voltage testing equipment), should the cross-sectional area of the earthing lead be less than 6 mm ² .	This clause mentions use of minimum 6mm² earthing cable however there is no clarity if the conductor is copper or Aluminium.		Latest Specification issued by MNRE to be followed.
117	Annexure A	3.7.1.19	The earth pits given with the SWPS {i.e. Earth pit(s) for the BoS system (other than LA) and Earth Pit for LA} should be made equipotential bonded to each other.	Please clarify if module to module earthing jumper and separate earthing is necessary. Else vendor will consider structural earthing as common to structure and modules with no jumpers.		Latest Specification issued by MNRE to be followed.
118	Annexure A	3.7.1.8	It is recommended for selection of type and installation of the earth electrode the provisions of the IS 3043 should be considered.	Please clarify if earthing electrode should be copper bonded or GI (If copper bonded then tender should specify 80 microns minimum).		Latest Specification issued by MNRE to be followed.
119	Annexure A	1.a.iv	Sensor Connectivity: RMS should have provision for at least two Analog and Digital inputs with 0.1% accuracy to address the requirement of local sensors connectivity if required by SIA/Consumer for applications such as irradiation, flow meter for water discharge, moisture sensor for micro-irrigation, etc.	Please clarify if this tender intends to cover sprinkler related applications. Since these applications require higher balance head to operate the sprinklers. For sprinkler related applications there is a requirement of at least 20m balance head to operate a group of sprinkler connections. Eg :if a 100m head pump is operated at 100m depth the balance pressure would be zero hence cannot be used for sprinkler applications. In this case pump should be installed at 80m and balance 20m pressure would be used to operate the sprinklers. Please mention that a balance of 20m shall be considered for sprinkler related applications.		Latest Specification issued by MNRE to be followed.

120	Annexure A	3.7.13	Motor shall have suitable provision for earthing to facilitate earthing of the motor as per IS 3043 at the time of installation. In case GI pipes are used for the purpose of earthing the motor, earthing connection may be made to the discharge pipe clamps. However, in case of HDPE/PVC pipes, a separate metallic cable from the motor to the control panel shall be provided and earthing given as if four-core cable is used, the fourth core not connected to the terminals can be used for earthing.	Requires clarification on 2 nos. earthing is sufficient for whole system or earthing quantity should be as per number of structures provided.		Latest Specification issued by MNRE to be followed.
121	Annexure A	3.5.4	Specifications of Solar PV Pumping Systems : Module Mounting Structures (MMS) are indicative of minimum standards and an Implementing Agency may specify higher standards which shall be certified by recognised structural engineering department of any IIT/ NIT or IISc	Module Mounting Structures (MMS) are indicative of minimum standards and an Implementing Agency Or Vendor or Structure design company may design higher standards which shall be certified by recognised structural engineering department of any IIT/ NIT or IISc		Latest Specification issued by MNRE to be followed.
122	Annexure A	3.3.2	As per IEC 61683, Total Harmonic Distortion (THD) for Terminal and Current should be less than 3 % at the Motor Terminal over the entire radiation profile and in order to achieve this measures such as use of the choke coil (du/dt Filter) etc. can be adopted	We request you to please remove or amend this clause that if total cable length will increase more than 100 m. Total Harmonic Distortion of Current & Voltage should be less than 5% on nominal voltage. THD of less than 5% may be allowed at motor terminals for healthy running. For heads above 100m du/dt filters should be made mandatory		Latest Specification issued by MNRE to be followed.
123	RfS	42.3	The Bidder shall demonstrate Working Capital or Line of Credit for the last Financial Year, 2021-22, as per the table below		No figures provided in table. Please provide the same.	Already amended in Amendment-01 issued on 17.02.2023.
124	RfS	45.7	Bidder has an option to choose out of the 34 State/UTs for the ones he/she wishes to quote for. Bidder has to mandatorily submit declaration for State/UTs it wishes to quote for (i.e., Format 7.1), subject to fulfillment of cumulative qualifying requirements of quoted State/UTs.		Please explain the cumulative qualifying requirements of quoted State/UTs.	Please refer to the Section 4 of the RfS and amendments thereto.
125	RfS	48	In case of a Consortium being selected as the Selected Vendor, the LoA shall be issued to the Lead Member of the Consortium.		Kindly issue the experience certificate in the name of member of Consortium as well	The referred clause remains unchanged.
126	RMS Specifications		Consumer Management		Not in RMS hardware scope, It belongs to the Portal/Cloud Platform where Consumer management, Asset management & Complaint Management can be handled, we will integrate the required data into the portal through rms.	Latest Specification issued by MNRE to be followed.
127	RMS Specifications		Sensor Connectivity: 2 DI and 2 AI		1. Type of Analog input required 4-20mA or 0-5V, specifications required. 2. To provide AI & DI's power supply, specifications are required. Additional costing than existing product.	Latest Specification issued by MNRE to be followed.
128	RMS Specifications		RMS Display		Is it really required, already there is a display on controller & RMS data is providing in online portal.	Latest Specification issued by MNRE to be followed.
129	RfS	Clause 11 and 13.1	2 % EMD to be submitted by general category bidders and MSME bidders are exempt from this EMD. On empanelment, 3% performance BG is to be paid. So General category bidders have to deploy 5% BG whereas MSME bidders only 3%	Total quantities of MSME bidders to be restricted to 25% of the total quantities as was the case in previous KUSUM-B tenders, since they are getting an advantage of bidding without any BG.	MSME's being small companies have restricted financial capability to execute orders and they get an advantage of bidding without EMD. So to create a level playing field between them and open category bidders, who are submitting hefty EMDs, it is essential that the quantities to be allocated to MSME bidders be restricted to 25% of the total quantities. These may be distributed evenly between all the MSME bidders in that respective state.	The referred clause remains unchanged.
130	Annexure-A Revised of Amendment No. 1	3.2.2	Sr. no. 4 of Table Isolator Switch	Kindly delete it.	The isolator switch is not required as it shall lead to Off the remote monitoring system which shall not give the current status of the pump.	Latest Specification issued by MNRE to be followed.
131	Annexure-A Revised of Amendment No. 1	3.2.2	For IS 16221 (Part-2) certification of the SPV pump controller the latest quality control order released by MNRE regarding IS 16221 (Part-2) must be followed.	For IS 16221 (Part-2) certification of the SPV pump controller the latest quality control order released by MNRE regarding IS 16221 (Part-2) must be followed and shall be applicable during the program implementation.	IS 16221 (Part-2) is considered and enlisted in CRS i.e. Compulsory Registration Scheme by BIS. Therefore, from quality control's point of view, the solar pump controller must have IS- 16221 (Part-2) BIS certificate. IS 16221 (Part-2) shall be mandatory from 01st July, 2023.	Latest Specification issued by MNRE to be followed.
132	Annexure-A Revised of Amendment No. 1	3.4.5	Total Harmonic Distortion (THD) of the AC output waveform of the inverter at the motor input of the motor-pump set shall be less than or equal to 10 % and further no individual harmonic shall exceed the limit of 6 %. For checking its compliance it should done as per IS 16221.	Total Harmonic Distortion (THD) of the AC output waveform of the inverter at the motor input of the motor-pump set shall be less than or equal to 10 % and further no individual harmonic shall exceed the limit of 6 %. OR the controller should be IS 16221 marked.	For the requirement to fulfil the THD compliances, The solar pump-motor set falls under the dedicated load as mentioned in Clause no. 4.7.5.5 of IS 16221 (Part-2). As per para 3 of 4.7.5.5, the controllers are always undergo for test with pump-motor sets for BIS certification to comply with applicable requirements. Hence, the controllers, which are IS 16221 (Part-2) marked , are not been required for any separate THD testing.	Latest Specification issued by MNRE to be followed.

133	Annexure-A Revised of Amendment No. 1	3.6.4	Static MPPT efficiency of controller shall be equal or more than 98% during operation of 10 to 100% of rated STC PV power, and average MPPT tracking efficiency in the dynamic condition should be greater than 97 % with hot and cold profiles. To ascertain the above requirement, controller shall be tested as per the procedure laid down by MNRE for testing of USPC with respect to the water pumping load only.	Static MPPT efficiency of controller shall be equal or more than 98% during operation of 10 to 100% of rated STC PV power, and average MPPT tracking efficiency in the dynamic condition should be greater than 97 % with hot and cold profiles. This efficiency shall be considered from the power at which the pumping system starts to deliver the water at duty (dynamic) head. To ascertain the above requirement, controller shall be tested as per the procedure laid down by MNRE for testing of USPC with respect to the water pumping load only.	The MPPT efficiency in controllers should be considered from the power at which the pumping system starts the water delivery at the dynamic (duty) head.	Latest Specification issued by MNRE to be followed.
134	Annexure-A Revised of Amendment No. 1	3.6.5	A DC switch as per IS/IEC 60947-1 & 2 suitable for switching dc power ON and OFF shall be provided in the SPV Pump Controller.	A DC. Switch as per IS/IEC 60947-3 OR DC. circuit breaker as per IS/IEC 60947-2 suitable for switching DC power ON and OFF shall be provided in the SPV pump controller.	Clause no. 4.6.4 of IS 17018 (Part-1):2022 has consider the DC Switch as per IS/IEC 60947-3 OR DC. Circuit breaker as per IS/IEC 60947-2 suitable for switching DC power ON and OFF in SPV Pump controller.	Latest Specification issued by MNRE to be followed.
135	Annexure-A Revised of Amendment No. 1	3.7.2	If the distance between the SPD and the Pump controller to be protected is greater than 10 m, then SPD according to IEC 63227 should be applied.	If the distance between the SPV Array and the Pump controller to be protected is greater than 10 m, then SPD according to IEC 63227 should be applied.	The external SPD for SPV System are not required,if distance between SPV array and controller/inverter is less than 10 mtr. Please refer the table at below weblink for more information also. https://isp_global/surge-protection-device-for-solar-application/	Latest Specification issued by MNRE to be followed.
136	Annexure-A Revised of Amendment No. 1	6.2	Solar Photo Voltaic Water Pumping Systems shall be guaranteed by the manufacturer against the defects in material and workmanship under normal use and service for a period of at least 60 months from the date of commissioning.	Solar Photo Voltaic Water Pumping Systems shall be warranted by the manufacturer against the defects in material and workmanship under normal use and service for a period of at least 60 months from the date of commissioning.	It is requested to replace the term "Guaranteed" by "Warranted".	Latest Specification issued by MNRE to be followed.
137	Annexure-A Revised of Amendment No. 1	7.1.1	Motor Pump-set j) Voltage Range (V) and;	Voltage (V)	The motors are design for rated voltage not for voltage range. The voltage range is marked on controllers only.	Latest Specification issued by MNRE to be followed.
138	Amentment no. 1	16	Note: Payment shall be made to vendor within 30 days after submission of.....		like the previous tender, it is requested that; if state portal/server is not made available completely then vendor's payment should released timely. As the RMS portal developmet is SIA's responsibility.	The referred clause remains unchanged.
139	Amentment no. 1	28	New Clause:.....		Please clarify that: 1) Is it required for all line items for which vendor shall be empanelled. 2) Is it require for all the states/Uts in which vendor is empanelled. 3) Request to consider this data within 15 working days as more no. of sheets will be required to prepare it. 4) To whom, this data is to be submitted; either MNRE or SIAs.	1. & 2. Format 7.17 to be submitted for the line item for the State/UT quoted by the bidder. 3. The refered clause remains unchanged. 4. The Format 7.17 to be submitted to SECI within the mentioned timeline.
140	Anneuxre-E Revised of Amendment no. 1		Regarding EMD amounts		It is requested to kindly mention the amount in full figure for more clarity to banks for BG creation. E.g. (1) for Maharashtra, it is 53.400/- in lacs that need to be mentioned as Rs. 5340000/- E.g. (2) For Manipur, it is mentioned as Rs. 1.335/- lacs, that should mentioned as Rs. 133500/- .	The clause is self-explanatory
141	Amendment no. 1		General Point		Since many clauses numbers are corrected in amendment for most of the formats, Hence it is required to kindly issue the revised format with corrected clause no. references.	Suitable amendments are being issued to the referred clause.
142	Amendment no. 1	Annexure D (Revised0 & Annexure D2	PRICE BID Formats		the Price bid should be asked to submit either on tender portal or in Excel Sheet format. The price bid is been asked in the form of scan copy on letter head of bidder. Since, if bidder has to quote for all the states then there are 1904 line items (excluding the prices for either water or oil filled). Then it shall be tedious to further evaluate.	The referred clause remains unchanged.
143	RFS	2.1	A Single Stage, Two-Envelope Bidding Procedure will be adopted and will proceed as detailed in the RfS Documents. Bidding will be conducted through the competitive bidding procedures as per the provisions of Sections 2 and 3 of the RfS.		It is requested to prepare the final checklist of documents required for bid submission as part of bid document. It shall be helpful to Bidders to submit the bid and as well as SECI to enable the evaluation easily.	Please refer to the Clause 18 of the RfS and amendments therto, if any.
144	RFS	3.1.b	Each pump should be marked with Toll Free No. of successful bidder (Toll Free No. shall be affix on controllers and shall be readable for 5 years) operating in English/Hindi and Regional language of respective state and specific pump number and same must have been captured by SIA's web-based application (as per instruction of SIA) at the time of installation at site. During the time of PDI of each component , test reports of Equipment's, warranty certificates, calibration certificates and any other certificates as specified in the guidelines and specification issued by MNRE should be provided by the bidder.	Each pumping system at every site should be marked with Toll Free No. of successful bidder (Toll Free No. shall be affix on controllers and shall be readable for 5 years) operating in English/Hindi and Regional language of respective state and specific pump number and same must have been captured by SIA's web-based application (as per instruction of SIA) at the time of installation at site. During the time of PDI, test report of ordered solar pumping system's test report, warranty certificates and structure certificate as specified in the guidelines and specification issued by MNRE should be provided by the bidder.	Toll free no. on pump shall not workable. Hence term pump is replaced with pumping system PDI also conducted as per test report of solar water pumping system's test report. There is no need to have components/equipment's test report during PDI including the calibration certificate. These certificates are been held and owned by test laboratories for testing of solar pumping system. In PDI, The inspection of the material is done according to test reports and specifications only. PDI & Performance tests both are different things.	The referred clause remains unchanged.

145	RFS	3.2b	Selected vendors have to submit monthly consent of beneficiaries in their favour to SIA for which SIA's will be Notice to Proceed and for this, vendor shall complete the installation and commissioning of SPWPS within 120 days from date of issuance of NTP for general category states. However, for special category states/Hill States & UTs and Island UTs, Vendor shall complete the installation and commissioning of SPWPS within 150 days of issuance of such NTP.		It is requested to consider that; 1) NTP shall be issued after deposition of farmer's share with SIA as considered in previous tenders also through various amendments. 2) The farmer's consent process/vendor selection process should be online either at the time of application or in later stage (where applications are already received). This shall avoid the multiple consent by farmers in offline mode to more than one vendor.	The referred clause remains unchanged.
146	RFS	3.2.c	Selected Vendor and SIA representative should conduct site survey and submit Progress report on fortnight basis as per the requirement of SIA via PM-KUSUM App released by MNRE.	The selected vendor shall conduct the site survey and submit the progress report on fortnight basis to SIA via PM-KUSUM App released by MNRE.	The site survey should be done by vendor after getting the NTP only. The final inspection of the installed system is done by vendor and SIA representative jointly.	The referred clause remains unchanged.
147	RFS	3.2.e	Vendors will have to submit installation reports as per given format on weekly basis and Monthly basis to MNRE and SIA.		1) Installation report format should be provided at tender stage only to have universal process and documentation. 2) Like the previous tenders (through amendments); The submission of installation reports to SIA must be in digital form either by Email OR at Web-portal though mobile application only.	The clause remains unchanged. Format will be provided by SIA.
148	RFS	3.2.f	Vendor will have to submit the completion reports of each district to SIA within one week from 100% completion of work as per allocation of each district.		Like the previous tender (though amendment); It is requested to consider the installation completion report digitally either by web portal or Email to SIAs as the collecting and forwarding the physical reports from the village level to district level and then to state level of SIAs is time consuming process.	The referred clause remains unchanged.
149	RFS	3.2.h	Vendor shall comply with all applicable regulatory and statutory norms. Vendor must obtain approval/ NOC from appropriate Govt body for implementing the project in each selected village.		Kindly delete this clause as; the solar pumps are getting installed at farmer's site not at any govt. property. The farmer's consent to own at its farmland is itself an NOC.	The referred clause remains unchanged.
150	RFS	3.2.j	Vendor should commission minimum pumps/ quarter as defined above at Clause 3.2b of Scope of work. Vendor must submit handing over certificates in the format prescribed by MNRE.		Kindly provide the handing over certificate format the time of bid process only as part of uniform documentation work among all the participating states.	The clause remains unchanged. Format will be provided by SIA.
151	RFS	3.2.l	Vendor should submit the prescribed certificate and photographs of each SPWPS installed which must show complete installation setup along with beneficiary pump number etc.	Vendor should submit the prescribed certificate and photographs of each SPWPS installed online only which must show complete installation setup along with beneficiary pump number etc.	It is requested to consider the installation report along with photographs in digital mode only (either through Email/web- portal/mobile application)	The referred clause remains unchanged.
152	RFS	3.4.a	Selected Vendor should keep necessary spare parts (minimum 2% of allotted quantity of each component of the complete system at the service centre) at each district and should ensure proper maintenance of SPWPS to 5 years from date of installation of each SPWPS . Vendor should also ensure to provide local training to local persons regarding proper maintenance of SPWPS. Vendor should submit bi-weekly installation report to SIA as per the prescribed format provided during the installation phase		Kindly allow the installation report submission to SIA digitally by Email/ at web-portal. Additionally, provide the format at the time of bidding only.	The referred clause remains unchanged.
153	RFS	3.4.b	Any complaint registered registered/service calls received should be attended at the earliest and the system should be repaired/restored/ replaced within 3 days from date of complaint received/informed to the vendor.	Any complaint registered registered/service calls received should be attended at the earliest and the system should be repaired/restored/ replaced within 3 working days from date of complaint received / informed to the vendor.		The referred clause remains unchanged.
154	RFS	3.4.g	Vendors will mandatorily provide CMC for a period of 5 years from the date of commissioning of the systems including insurance coverage for the installed systems against natural calamities and theft . CMC will include inspection by Vendor at least once in a quarter and submission of quarterly inspection report of the installed pumps as per prescribed format. Selected Vendor shall provide a copy of valid insurance certificate of SPWPS to the beneficiary and same shall be renewed every year.	Vendors will mandatorily provide CMC for a period of 5 years from the date of commissioning of the systems including insurance coverage for the installed systems against natural calamities and theft . Selected Vendor shall provide a copy of valid insurance certificate of SPWPS to the beneficiary and same shall be renewed every year. Insurance claim shall be proceeded by vendor based on	1) As RMS is already providing with each SWPS, hence it is requested to kindly eliminate quarterly inspection at site during the CMC period. The bidders are already providing their toll- free no. during the installation at controller through which farmers/beneficiaries can log their complains also. 2) Like the previous tenders (through amendment); we further suggest that: - 2.1) Complaint should be rectified within 03 working days, except those complaints which entail making the insurance claim. In such cases the complaints shall be rectified subject to passing of the insurance claim. 2.2) All the case of natural calamities or theft shall be informed to supplier within 07 days of such occurrences failing which insurance claim not be accepted.	The referred clause remains unchanged.
155	RFS	3.4.i	Vendor shall ensure that the local training, awareness and sensitization campaigns on usage of the SPWPS are conducted.	vendor shall ensure the training to the beneficiary owning the sola pump for it's easy operation. The awareness and sensitization campaigns on SPWPS shall be in scope of SIAs only as per the PM-KUSUM Scheme guidelines.	The local awareness program/ campaigning's must be in the scope of SIAs only.	The referred clause remains unchanged.

156	RFS	9	Commissioning of Projects Selected vendors must submit monthly consent of beneficiaries in their favours to SIA for which SIA will give notice to proceed and for this selected vendor shall complete the installation and commissioning of allocated SPWPS within 120 days from issuance of notice to proceed for general category state. However, for, special category states/Hill States/UTs/Island UTs, selected vendor shall complete the installation and Commissioning of allotted SPWPS within 150 days of issuance of notice to proceed.	Commissioning of Projects Selected vendors must submit bi-weekly consent of beneficiaries in their favours to SIA for which SIA will give notice to proceed after collecting the beneficiary share and for this selected vendor shall complete the installation and commissioning of allocated SPWPS within 120 days from issuance of notice to proceed for general category state. However, for, special category states/Hill States/UTs/Island UTs, selected vendor shall complete the installation and Commissioning of allotted SPWPS within 150 days of issuance of notice to proceed.	Since taking consent under market mode is a continuous process, Hence it is requested to kindly change the monthly submission of consent to bi-weekly submission in online-mode. It shall lead to speed up the implementation of the program The NTP shall be issued after the collection of beneficiary share by SIAs.	The referred clause remains unchanged.
157	RFS	11	All MSMEs (Micro, Small and Medium Enterprises) notified as per clause 1.10.3 of GFR 2017 and as registered under NSIC/DIC/Udyog Aadhaar only are only exempted from submission of Bid Processing Fee and EMD. For claiming this exemption, at the time of bid submission, MSMEs must provide valid proof of their being registered as MSME. However, upon empanelment under this RFS, selected MSMEs must submit Performance Bank Guarantee as per clause 12 of section III of RIS.	All MSMEs (Micro, Small and Medium Enterprises) notified as per clause 1.10.3 of GFR 2017 and as registered under NSIC/DIC/Udyog Aadhaar only are only exempted from submission of Bid Processing Fee and EMD. For claiming this exemption, at the time of bid submission, MSMEs must provide valid proof of their being registered as MSME. However, upon empanelment under this RFS, selected MSMEs must submit Performance Bank Guarantee as per clause 14 of section III of RIS.	1) Typo error: Clause 14 to be mentioned in place of clause 12. All the MSME bidders must be treated as general bidders for technical qualification into the tender while price bid of only general bidders must be considered that shall be matched by MSME bidders. 2) This RFS is issued under the Works contract category over which the MSME's purchase preference policy is not applicable.	The Clause has been deleted. Please refer to the Amendment-02 of the RIS.
158	RFS	15.1	The implementation work on ground should start within 15 days from the date of Notice to Proceed from SIA.	SIA shall issue the NTP after the collection of beneficiary share. The implementation work on ground should start within 15 days from the date of Notice to Proceed from SIA. NTP shall contain following minimum information for selected vendor: 1) Farmer Name, 2) Mobile No., 3) Place, 4) Pump capacity, type & category, 5) Dynamic Head (mtrs.), 6) Application No. (Or ID).	Like the previous tender (though amendment); The NTP should be issued by SIA to selected vendor after collecting the beneficiary share. Since NTPs shall being issued after the consent & site survey acceptance, hence every NTP must contain minimum following information: 1) Farmer Name, 2) Mobile No., 3) Place, 4) Pump capacity, type & category, 5) Dynamic Head (mtrs.), 6) Application No. (Or ID).	The referred clause remains unchanged.
159	RFS	21.2.II.b.ii	The above fixed price shall include all costs related to the Scope of Work as per the RIS and Obligations of the Successful Bidder/Selected Vendor. The Bidder shall quote for the entire facilities on a "single responsibility" basis such that the fixed price covers all the obligations in respect of Design, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance (05 years), inclusive of all taxes.	The above fixed price shall include all costs related to the Scope of Work as per the RIS and Obligations of the Successful Bidder/Selected Vendor. The Bidder shall quote for the entire facilities on a "single responsibility" basis such that the fixed price covers all the obligations in respect of Design, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance (05 years), exclusive of all taxes.	As per point I of b) of the financial bid (second envelope: The rate to be quoted in price bid shall be exclusive GST.	Suitable amendments are being issued to the referred clause.
160	RFS	21.2.II.b.iv	The fixed price for each line item shall be exclusive of all duties and taxes, insurance etc. The prices quoted by the firm shall be complete in all respect.	The fixed price for each line item shall be exclusive of all duties and taxes. The prices quoted by the firm shall be complete in all respect.	Insurance shall be considered in quoted rates. As the emanelled agency has to provide insurance also under the program.	The referred clause remains unchanged.
161	RFS	31	Insurance The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery. For delivery of goods at site, the insurance shall be obtained by the Contractor/selected Vendor, for an amount not less than the Contract Price of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War risks and strikes. The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft & burglary etc. during 5 years warranty period.	Insurance The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery. For delivery of goods at site, the insurance shall be obtained by the Contractor/ selected Vendor, for an amount not less than the Contract Price of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War risks and strikes. The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft & burglary during 5 years warranty period.	The term etc. is to be removed to have the clarity on the scope of insurance to be covered for SPWPS. Additionally, it is requested to consider following: - 1) for any case of insurance claim, the beneficiary shall inform the vendor within 7 working days along with FIR copy from local police station. 2) The pumps damaged due to sandy water shall not considered for insurance as well as manufacturing defect.	The referred clause remains unchanged.
162	RFS	24	Statutory Compliance/ Certification regarding Cyber Security Products A certificate as per format 7.15 is to be submitted by the bidders that the items offered meet the definition of domestically manufactured/produced Cyber Security Products as per MeitY notification vide File no. 1(10)/2017-CLES dt. 02.07.18. The above certificate shall be on Company's letterhead and signed by Statutory Auditor or Cost Auditor of the Company.		In the format at 7.15 at page no. 97; The format is not having the provision of signature by cost auditor along with UDIN no.	Suitable amendments are being issued to Format 7.15.

163	RFS	35	The complete Solar Photovoltaic Water Pumping System and display board / Name Plate (SIA's will provide the details) shall be warranted and maintained for 05 years from the date of installation. The maintenance service provided shall ensure proper functioning of the system as a whole. All preventive/ routine maintenance and breakdown/corrective maintenance required for ensuring maximum uptime shall have to be provided by the Contractor.	The complete Solar Photovoltaic Water Pumping System and display board / Name Plate (SIA's will provide the details) shall be warranted and maintained for 05 years from the date of installation. The maintenance service provided shall ensure proper functioning of the system as a whole. All preventive/ routine maintenance and breakdown/corrective maintenance required for ensuring maximum uptime shall have to be provided by the Contractor. any unauthorized changes done by the beneficiary will not cover in the warranty in warranty clause only manufacturing defects will be covered.	Any unauthorized changes or alteration to the installation will cease the warranty for the remaining period of CMC. This clause was considered in Phase-1 tender of PM-KUSUM scheme (through amendment.)	The referred clause remains unchanged.
164	RFS	39	Roles and Responsibilities of Implementation Agency.		It is requested to add followings points: 1) Ensure the timely payment to vendors as per the terms and condition of the RFS document 2) Compliance to Uniform formats and procedures as mentioned in RFS.	The referred clause remains unchanged.
165	RFS	46.1	For each line item (i.e., type of pump for each State/UT), the Bidder quoting the lowest price (L1 price) will be identified and shall be declared as the Selected Vendor. In case of multiple Bidders quoting the L1 price, all such Bidders ("L1 Bidders") will be declared as Selected Vendors.		It is requestd to allow the price bid submission by general bidders (Non-MSME Bidder) based on past performance in the previous tender of PM-KUSUM Scheme. As MSME bidders are not submitting the EMD, hence their price bid should also not be consider for rate discover. MSME bidder shall submit only technical bid and match the L1 price discovered from the Non-MSME Bidders.	The referred clause remains unchanged.
166	RFS	46.4 & 46.5	46.4 SIA reserves the right for the variation of allocated quantity State/UT wise. 46.5 Further, in case a Vendor is not able to supply quantity allocated to them as per scheduled timelines, SIA reserves the right to shift the part/full quantity to another Vendor, who has matched the price.		Since there is no quantity allocation criteria under market mode, there kindly delete this clause.	The referred clause remains unchanged.
167	RFS	47	Validity of discovered prices for each State/UT In order to allow States/SIA sufficient time to implement SPWPS based on the prices discovered under this tender , all prices discovered under this tender will remain valid for 24 months from the date of opening the price bids, which will be announced by MNRE/SECI. Within this 24-month period , empanelled vendors have no right of refusal to complete the allocated work.	As the current market is not stable as the prices of the raw material are increasing very fast and as per this clause the prices are valid for 24 months which is very difficult without any price variation clause as many bidders had already requested to MNRE in PM-KUSUM Phase- II Tender. so it is our request to please introduce a price variation clause in this tender to succeed the PM KUSUM scheme for farmers and achieve the target of 6.6 lakhs pumps	Since the Rate Contract is for 24 months, therefore It is requested to kindly introduce price variation clause into the RFS due to variation in unexpected price rise of raw material during the program implementation that may happened in future.	The referred clause remains unchanged.
168	RFS	49	Inspection and Audit by the Government/MNRE All materials / Equipments manufactured by the bidder/consortium of bidders against the Letter of Award shall be subject to inspection, check and/or test by the SIA/MNRE or his authorized representative at all stages and place, before, during and after the manufacture. All these tests shall be carried out in the as per technical specifications and bidder shall submit the relevant test reports at the time of bid submission to SECI . If upon delivery the material/equipment does not meet the specification, the materials /equipment shall be rejected and returned to the bidder for repairs / modification etc. or for replacement and SIA may also impose the penalty or/and blacklist the vendor. In such cases all expenses including the to-and-fro freight, repacking charges, any other costs etc. shall be to the account of the Vendor.		Since the tender has new specification over the existing specifications issued by MNRE in July-2019, hence test report of each quoted capacity as per July-2019 specifications should be asked from the bidder at the time of bid participation as part of technical qualification. Additionally, if bidder does not have any test report for any particular model then the test laboratory acknowledgement should be considered in tendering stage as per the specifications mentioned in RFS document.	Please refer to the Clause 3.1.c of the Amendment-01 issued on 17.02.2023.
169	RFS	Format 7.1 & Annexure-D	Table	It is requested to kindly clarify the followings: 1) Is it necessary for bidder to quote for all the capacity (1-10 HP) for participating state into the tender.? 2) Is it mandatory to quote for all the categories i.e. surface / submersible for quoting capacity of SPWPS.? 3) Whether the bidder has the right to bid for AC or DC type pumps OR both AC & DC type WPS rates quote is mandatory.?	Kindly provide point wise clarification to avoid the confusion. E.g. :- If bidder participate in Rajasthan state then shall be bidder has to quote rate for all the line items for Rajasthan state for 1 HP to 15 HP for AC & DC as well as Submersible & Surface Pumps.	1., 2. & 3. Bidder may bid for the line item with catrgory of the pump and the type of the pump in State/UT he wishes to.

170	RFS	Format 7.12	Format 7.12 DECLARATION FOR THE LOCAL CONTENT	In the given format at 7.12 the option of signing of a practicing cost accountant or practicing chartered accountant is not mentioned we request to please mention the same also mention the UDIN No. of the Auditor who is certifying the format.	As per the previous tenders of Kusum Scheme, The bidder must be Class-1 local supplier as per order issued by MNRE through order no. though ORDER no. F.NO. 283/22/2019-GRID SOLAR dated 09th February, 2021. and have to submit the certificate from statutory auditor on auditor's or bidder's letter head to meet order issued towards "Make-In-India" according to Manual for Procurement of Works updated and issued in June-2022 by Dept. of Expenditure, Min. of Finance, Govt. of India	Suitable amendments are being issued to the Format 7.12
171	RFS	Format 7.14	We are agreeing to accept that the test certificates are to be submitted to the Implementing Agency, reports as per MNRE technical specifications and testing procedures issued in 2019 and amendments thereof, will be submitted by us within 30 days of issuance of Letter of Empanelment by Implementing Agency. In failure of which our empanelment will stand cancelled, without any prior intimation. These certificates shall be submitted either in original form or attested copy by the issuing test lab.	We are agreeing to accept that the test certificates are to be submitted to the Implementing Agency, reports as per MNRE technical specifications and testing procedures issued in the tender document at Annexure-A and its amendment thereof shall be submitted by us within 45 days of issuance of Letter of Empanelment by Implementing Agency. In failure of which our empanelment will stand cancelled, without any prior intimation. These certificates shall be submitted as self-attested copy	1) As the specification are updated in this tender, hence it is requested to allow test report submission time within 45 days instead of 30. 2) test report of any model of solar pumping system is available which matches the performance requirement as per the new guideline then there should not be requirement of retesting of the same model of solar water pumping system 3) Please consider self attested copy of test reports rather than original copy or attested copy from lab. Because original copy cannot be submitted to all SIA at the same time and taking the attested copy of test report from issuing ab shall also be an time consuming process.	Suitable amendments are being issued to Format 7.14.
172	Annexure-A Technical Specification	3.2.2 SPV Controller	For IS 16221 (Part-2) certification of the SPV pump controller the latest quality control order released by MNRE regarding IS 16221 (Part-2) must be followed.	For IS 16221 (Part-2) certification of the SPV pump controller, the latest quality control order released by MNRE regarding IS 16221 (Part-2) must be followed. The supplied controller must have IS 16221 (Part-2) certification and the same is to be marked on each & every controller's name plate.	IS 16221 (Part-2) is considered and enlisted in CRS i.e. Compulsory Registration Scheme by BIS. Therefore, from quality control's point of view, the solar pump controller must have IS- 16221 (Part-2) BIS certificate.	Latest Specification issued by MNRE to be followed.
173	Annexure-A Technical Specification	3.2.2 SPV Controller specification Table	Isolator Switch: should be between solar panels and controllers		It is requested to kindly delete it because: DC isolaters are required only in power plant in case of very much high DC power. In case of SWPS, DC switch mentioned in controller's specification is sufficient as per IEC 60947-2	Latest Specification issued by MNRE to be followed.
174	Annexure-A Technical Specification	3.6.4	A DC switch as per IS/IEC 60947-1 suitable for switching dc power ON and OFF shall be provided in the SPV Pump Controller.	A DC switch as per IS/IEC 60947-3 suitable for switching dc power ON and OFF shall be provided in the SPV Pump Controller or separately.	DC switch as per IS/IEC 60947-3 or D.C. circuit breaker as per IS/IEC 60947-2 suitable for switching dc power ON and OFF shall be provided in the SPV Pump Controller or separately" as the same has also been considered and accepted by BIS in IS 17018.	Latest Specification issued by MNRE to be followed.
175	Annexure-A Technical Specification	3.4.4	The pump and all external parts of motor used in submersible pump which are in contact with water, should be of stainless steel of grade 304 or higher as required. Further for submersible pumps used in coastal areas or bores with higher salinity, preferably, stainless steel of grade 316 or higher grade may be used.	The pump and all external parts of motor used in submersible pump & casing used in shallow well (surface) pump which are in contact with water, should be of stainless steel of grade 304 or higher as required. Further for submersible pumps used in coastal areas or bores with higher salinity, preferably, stainless steel of grade 316 or higher grade may be used.	It is suggested that like the submersible pump, the pump section of surface pump which shall in direct contact of water, should be on stainless steel. Of SS-304 or higher as required.	Latest Specification issued by MNRE to be followed.
176	Annexure-A Technical Specification	3.5	The PV modules should be mounted on metallic structures of adequate strength and appropriate design, which can withstand load of modules and high wind velocities up to 150 km per hour. The raw material used and process for manufacturing of module mounting structure including welding of joints should conform to applicable IS 822. The module mounting structure should be hot dip galvanized according to IS 4759. Zinc content in working area of the hot dip galvanizing bath should not be less than 99.5% by mass.	3.5.1 The PV modules should be mounted on metallic structures of adequate strength and appropriate design, which can withstand load of modules and high wind velocities up to 150 km per hour. The raw material used and process for manufacturing of module mounting structure including welding of joints should conform to applicable IS 822. The module mounting structure should be hot dip galvanized according to IS 4759. Zinc content in working area of the hot dip galvanizing bath should not be less than 99.5% by mass. The supplied structure should have IS 4759 Certificate for hot dip galvanization with IS mark.	This is the only IS for marking on structures where output is also available as visual inspection. Rest IS are part of process of the structure manufacturing that can not be marked on it.	Latest Specification issued by MNRE to be followed.
177	Annexure-A Technical Specification	3.4.5	As per IEC 61683, Total Harmonic Distortion (THD) for Voltage and Current should be less than 3 % at the Motor Terminal over the entire radiation profile and in order to achieve this measures such as use of the choke coil (du/dt Filter) etc. can be adopted.	As per IEC 61683, Total Harmonic Distortion (THD) for Voltage and Current should be less than 3 % at the Motor Terminal over the entire radiation profile and in order to achieve this measures such as use of the choke coil (du/dt Filter) etc. can be adopted for dynamic head more than 100 mtr.	The application involving long connecting cables between the VFC/Controller's output and motor terminal, high voltage spikes gets generated. The magnitude of these voltages spikes may go up to double the DC bus voltage of VFD/Controller depending on the length of the cable. The high du/dt at the drive output is the primary reason for these voltage spikes. These high voltage spikes may lead to insulation failure in the connected motor or cable. This problem can be resolved using an appropriate du/dt filter at the output of the drive for all the dynamic heads more than 100 meters.	Latest Specification issued by MNRE to be followed.
178	Annexure-A Technical Specification	3.5.4	Details of Module Mounting Structure (MMS) for pumps of capacity IHP and above attached at Annexure-I. These are indicative of minimum standards and an Implementing Agency may specify higher standards which shall be certified by recognized structural engineering department of any IIT/NIT or IISC.	Details of Module Mounting Structure (MMS) for pumps of capacity IHP and above attached at Annexure-I These are indicative of minimum standards and a vendor may also supply the structures with design duly approved & certified by recognized engineering department of any IIT/NIT or IISC.	If implementing agency would provide the design detail then It shall be very difficult for the vendor to have the variety of structure for different states for the same capacity of solar water pumping system. Therefore, It should be same as present case of the PM-KUSUM program tenders.	Latest Specification issued by MNRE to be followed.

179	Annexure-A Technical Specification	3.6.2	The SPV Controller must have IP (65) protection or shall be housed in a cabinet having at least IP (65) protection.	The SPV Controller must have IP (65) protection or shall be housed in a cabinet having at least IP (65) protection. The IP 65 protection report in case of external cabinet must be issued with the controller used as per the capacity of SPWPS.	It is requested that; The solar pump controller must have IP65 certification as per applicable IEC, which further must be mentioned by test laboratory in the test report along with controller capacity by laboratories. If external enclosure is used then the IP65 protection test report must be consider with the controller only used for solar water pumping system.	Latest Specification issued by MNRE to be followed.
180	Annexure- A Technical Specification	3.7.2	Surge Protection Device	Kindly delete this clause.	IS Certification of the solar pump controller as per IS 16221 (PART-2) already covers the surge protection test which is a mandatory part of IS certification of the controller. Hence IS 16221(Part 2) certified controllers do not require any external SPDs.	Latest Specification issued by MNRE to be followed.
181	Annexure-A Technical Specification	6.2.2	Solar Photo Voltaic Water Pumping Systems shall be guaranteed by the manufacturer against the defects in material and workmanship under normal use and service for a period of at least 60 months from the date of commissioning.	Solar Photo Voltaic Water Pumping Systems shall be warranted by the manufacturer against the defects in material and workmanship under normal use and service for a period of at least 60 months from the date of commissioning. Any miss handling or the changes made post installations by the user/farmer to the SWPS shall lead to waive off the warranty period to be zero for remaining CMC period	It is requested to kindly replace the term guaranteed by term "warranted". And	Latest Specification issued by MNRE to be followed.
182	Annexure-A Technical Specification	7.1.1 Note	Note: -In addition, a metal name plate containing the above details shall be fixed on the module mounting structure for the information of user.	Note: -In addition, a metal name plate/ high quality water proof sticker containing the above details shall be fixed on the module mounting structure for the information of user.	As the high-quality waterproof sticker is an ongoing practice in inverters and controllers hence same can be used for Pumpsets name plate	The referred clause remains unchanged.
183	RFS	Format 7.3A	Format for Bank guarantee (As EMD)		As discussed with bank on the format, it is requested to kindly share the detail of the addressee (including designation) from SECI ; to whom BG is to be marked by Bank.	The EMD to issued in the Name of Solar Energy Corporation of India Limited.
184	RFS	Format 7.3A	Format for Bank guarantee (As EMD) Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only) and it shall remain in force until _____ [Date to be inserted on the basis of Clause 11 of this RFS].		NWC clause shall be added by bank as per Bank Guidelines for EMD as per discussion with banks.	The referred clause remains unchanged.
185	RFS	16 Stage 1	90 % of the value of month wise nos. of SPWPS installed at site based on: -	90 % of the value and 100% GST of the invoices submitted of month wise nos. of SPWPS installed at site based on: -	1) Since the GST for the billing cycle is to be paid in advance on monthly basis; hence it requested to kindly issue the 100% GST amount at stage-I; It was considered in previous tender of PM-KUSUM Scheme also. 2) If any SIA do the payment after the 30 days from the bill submission then 100% payment should be released to empanelled vendor by SIA.	The referred clause remains unchanged.
186	RFS	16 Stage 1	Payment terms: Stage-I		SIA must give the brief details of the various deductions like TDS/TCS/TDS on GST/Cess etc. with proper break-up for proper accounting of the bills.	The referred clause remains unchanged.
187	RFS	Format 7.6	Table for MAAT.		For individual financial year, The terms MAAT must be replaced with " Annual Turn Over "	Suitable amendments are being issued to the referred clause.
188	RFS	41.2	Technical Eligibility Criteria	All bidders must have experience of supply as well as installation and commissioning of SPWPS in any govt. scheme under Central/State Govt. or PSUs .	As per latest Manuals of procurement either for Goods/ Services/Works issued by Dept. of Expenditure issued in 2022. The bidder must have similar experience of scope of work mentioned in tender document. In this RFS; two types of experience is asked from bidders.	The referred clause remains unchanged.
189	RFS	21.2.iii	The price shall remain firm and fixed and shall be binding on the Selected Vendor irrespective of actual cost of execution of the Project. No escalation on the price will be granted for any reason whatsoever. The Selected Vendor shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever.	Price escalation: Seeing the market fluctuations the prices should be reviewed after every one month, using price variation formula.	Considering the high price variation in raw material especially after Covid, we request you to kindly insert Price variation clause in the tender documents, bidders can survive in due to high variations in raw material prices and govt. policies. Price Variation clause need to be added in bid otherwise we will have the same situation like phase-2 bid wherein due to the price rise work got delayed or stopped. Price Variation Clause may be taken into consideration as the prices of Modules & steel are always fluctuating and this rise in prices vendors face difficulties in providing the material at the same cost. What is the problem in implementing PV clause in solar when it is already adapted by power industry?	The referred clause remains unchanged.
190	RFS	35	Warranty and Maintenance	Improper usage or storage, wilful physical damage, unauthorized removal and reinstallation, connection or operation with the grid lines, water submergence of surface pumps shall not qualify for warranty claims.	Due to beneficiary negligent behaviour of farmer surface pumps are damaged. we as installers are forced to replace the system damaged free of cost for no fault of ours, so action is needed in this form.	The referred clause remains unchanged.
191	New clause added in Amendment	3.3.4	The minimum module efficiency should be minimum 19 percent and fill factor shall be more than 75 percent.	Now, instead of 300-340 Wp modules being used, modules of 500-540Wp will be used. This would need a re-configuration of the SPV array combination and totally change the voltage-current values		Latest Specification issued by MNRE to be followed.

192	RfS	31	Insurance - The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery. For delivery of goods at site, the insurance shall be obtained by the Contractor/selected Vendor, for an amount not less than the Contract Price of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War risks and strikes. The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft & burglary etc. during 5 years warranty period.	ADD - it shall be the responsibility of the beneficiary and SNA to submit documents required for making an insurance claim within the time frame specified in the insurance policy. Reinstatement of the solar pumping system or the missing parts shall be carried out by the Contractor within 15 days of acceptance of claims by the insurance company or 30 days from the date of submission and acceptance of documents by the insurance company.		The referred clause remains unchanged.
193	RfS	41.2 (iv)	Technical Eligibility Criteria: (As per mentioned Table) 1. For Solar Pumps/Controller (number of solar pumps installed/Controller installed or supplied). 2. For Solar PV Modules (Experience in kWp)	Whether both the experience required separately for technical eligibility or any one of them are sufficient to meet the Technical Eligibility Criteria. Also can we use similar experience in all states for participation of the same?		The bidder can use experience of either Solar Pumps or Controller or Solar PV Modules or all to meet the cumulative Technical eligibility criteria.
194	RfS	42.2	Minimum Average Annual Turnover: As per Table	Minimum Average Annual Turnover (MAAT) required as per table mentioned is too high. Hence kindly request you to reduce it by half.		The referred clause remains unchanged.
195	RfS	1.5	The Bidders will be free to avail fiscal incentives like Accelerated Depreciation, Concessional Customs and Excise Duties, Tax Holidays etc.	Kindly request you to elaborate the same.		The clause is self-explanatory
196	RfS	3.4(b)	Any complaint registered registered/service calls received should be attended at the earliest and the system should be repaired/restored/replaced within 3 days from date of complaint received/informed to the vendor.	We required at least 7 working days to attain the complaint considering the remote locations.		The referred clause remains unchanged.
197	RfS	40.2	Bidding Consortium with one of the Companies as the Lead Member. Consortium shortlisted and selected based on this RfS has to necessarily form a Project Company and get it registered under the Companies Act, 2013, keeping the original shareholding of the Bidding Consortium unchanged. In case applications for multiple Projects have been made by a Consortium, separate Project Companies can be formed for each Project. For the avoidance of doubt, it is hereby clarified that the shareholding pattern of the Project Company shall be the identical to the shareholding pattern of the Consortium as indicated in the Consortium Agreement (Format 7.5).	As per the reference clause forming company and handling so many documents is very complex. Hence kindly request you to consider the consortium Agreement for the same. Hence no company to be form.		Already amended in Amendment-01 issued on 17.02.2023.
198	RfS	47	In order to allow States/SIA sufficient time to implement SPWPS based on the prices discovered under this tender, all prices discovered under this tender will remain valid for 24 months from the date of opening the price bids	How can we predict the prices of quoted system upto 2 year considering the changes in cost of raw material. Hence request you to keep it for 12 Months only.		The referred clause remains unchanged.
199	RfS	14.2	PBG(s) shall be submitted by selected vendors to SIA within 15 days from issuance of letter of award/empanelment	Submission of PBG should be at least 30 Days due to processing delays from the respective bank.		The referred clause remains unchanged.
200	RfS	16	Performance report for one week after commissioning based on the accurate data of the parameters received from RMS or data logger in case of internet unavailability	Payment should be released after 1 days of Performance		The referred clause remains unchanged.
201	RfS	18.xvi.iv	Certified copies of annual audited accounts for the last three financial years out of 5 financial years and provisional audited accounts...as on the date atleast 7 days prior to the due date of submission (if applicable), shall be...	If the audited annual accounts for the three years are specified the need for provisional audited accounts as on date, that is 7 days prior to the due date of submission is not to be made mandatory and should be deleted from this clause	Since the financial eligibility criteria shall take into account only the audited figures of the specified 3 years, it would not be feasible for the bidders to secure provisional audited accounts 7 days prior to the date of closing of the bid. Most auditing firms in India cannot issue provisional audited statements in such short a time.	Suitable amendments are being issued to the referred clause.
202	RfS	31	Insurance clause	Add: It shall be the responsibility of the beneficiary and the SNA to submit documents required for making an insurance claim within the time frame specified in the insurance policy. Reinstatement of the Solar pumping system or the missing parts shall be carried out by the Contractor within 15 days of acceptance of claims by the insurance company or 30 days from the date of submission and acceptance of documents by the insurance company.	The ownership of the beneficiary towards submitting proper documents within the prescribed time frame should be made mandatory otherwise the contractor gets financially penalised in form of rejected insurance claims. Also SNA insist on immediate reinstatement even without the insurance surveys being carried out.	The referred clause remains unchanged.
203	RfS	35	Warranty and Maintenance clause	Add: Improper usage or storage, wilful physical damage, unauthorised removal and reinstallation, connection or operation with the grid lines, water submergence of surface pumps shall not qualify for warranty claims.	It is essential to quality that the warranty is only against manufacturing defects and subject to correct usage. There is a very significant quantum of pumps where there is wilful misuse or alternate use by the beneficiaries. It not only defeats the very purpose of the KUSUM programme but also is an unwarranted financial burden on the contractors.	The referred clause remains unchanged.

204	RfS	41.2.iv. table	Technical QR header of the table: For Solar pumps/Controller (number of solar pumps installed or supplied/Controller installed or supplied	Only relevant experience of installation of pumps and/or installation of off grid systems to be considered. Only sales/supplies of pumps or controllers or modules not a relevant experience for Qualification.	Since the eligibility criteria for experience and turnover has been significantly diluted, many bidders who do not have an experience of installation of a single off grid system/Solar pump will be able to participate just through supply of pumps/controllers. This may result in rogue bidding and/or lack of proper quality of installations and maintenance for next 5 year as they would not know the challenges involved in on-site maintenance for 5 years resulting in curtailment of the whole scheme. With the total number of installed pumps in last 5 years being more than 4 lacs, and hundreds of MW of off grid systems installations, it would not be difficult for atleast 100 bidders to quality even if this criteria of pump installations/off grid systems installations is adopted. Refer Annexure 1 (Rotomag suggestions) for supporting details	The clause is self-explanatory
205	OM dated 2-2-2023 issued by MNRE	2.2.2	SPV controller: " For IS16221 (part 2), certification of the SPV pump controller the latest quality control order released by MNRE regarding IS 16221 (part-2) must be followed"	To completely DELETE this statement "For IS16221 (part 2), certification of the SPV pump controller the latest quality control order released by MNRE regarding IS 16221 (part-2) must be followed"	This is a very ambiguous and loose use of IS 16221 as this standard pertains only to grid connected inverters and not applicable to variable frequency drive based pump controllers. Only reference of this IS16221 could be for the the relevant point of measurement of THD for AC waveform in Clause 3.4.5. Refer Annexure 2 (Rotomag Suggestions) for supporting details	Latest Specification issued by MNRE to be followed.
206	OM dated 2-2-2023 issued by MNRE	3.4.2.b	DC Motor (PMSM/BLDC/SRM)	The type of DC motors permitted to be made exactly same as IS 17018, that is: DC Motor (with brushes or brushless), PMSM/BLDC/SRM	DC motors with brushes are PMDC (Permanent Magnet DC motors) and very popular for Surface pumps. Almost 35000 such motors have been used till date including last 2 KUSUM phases. It would reduce the choice of the farmers if this category is removed without any reason. No complaint or adverse feedback has been received for these type of motors till date. The big advantage of these motors is that they are Pure DC motors and can operate even without a controller so when the controller is non-operational for any reason, this type of PMDC operated pump can still operate directly from a PV array. Refer Annexure 3 (Rotomag Suggestions) for supporting details	Latest Specification issued by MNRE to be followed.
207	OM dated 2-2-2023 issued by MNRE	3.6.4	MPPT efficiencies are specified	This clause is to be deleted completely	The overall efficiency of the system is defined in Clause 2.6 of this OM as Wire to water efficiency. The pump controller is not a stand alone controller but part of an integrated Solar pumping system where it is dedicated to the motor-pump set. It cannot be tested separately unlike a USPC which is supposed to be a stand alone controller and is supposed to operate any third party equipment as well as third party pumps. MPPT is just one small element of the overall wire to water efficiency so if other efficiencies which play a greater role in overall wire to water efficiencies, there is no need to keep a cut off minimum limit of MPPT (which is an algorithm) efficiency. This would also result in an unusual situation where a solar pumping system having 98% MPPT efficiency may have a lower over-all wire to water efficiency than another system having 95-95% MPPT efficiency. Also, the method of measurement of MPPT efficiency using the USPC testing method is not applicable as controllers of standard solar pumping system are dedicated controllers and can be tested only with the motor-pumpset for which it is dedicated. Refer Annexure 4 (Rotomag suggestions) for supporting details	Latest Specification issued by MNRE to be followed.
208	Amendment 01	3.1c	Test reports are to be submitted with the bids or prior to signing of the agreements with SIAs, failing which the bidders shall be black-listed	Test reports as per MNRE-2019 specifications are to be submitted with the bids or prior to signing of the agreements with SIAs. Test reports as per revised specifications, that is as per OM dated 2-2-2023 shall however be submitted by 30/9/2023. Till 30/9/2023 all systems to be supplied must comply with MNRE 19 specifications	The changes proposed in MNRE 23 specs, through OM dated 2-2-2023, particularly the THD and also 19% module efficiency, as well as other changes proposed would result in redesign of the controllers, and also the procurement of IGBTs and other controller chips would need atleast 6 months. It is also unclear how and which agency will carry out the testing as per the revised specifications. On one hand the sudden change in specs and the risk of black-listing if the testing is not done in about 2 months would cause a massive scramble for testing, and on other hand, the test agencies would be unclear about the methodology for testing for some time. Hence it would be prudent to extend the applicability of the revised MNRE specifications (after due corrections as proposed herein) by 6 months, that is till 30th Sept 2023. If this extension of revised MNRE specs is permitted till 30-9-2023, the industry will also be ready to make the transition to Mono Perc modules with efficiency of 19% or more.	Latest Specification issued by MNRE to be followed.
209	RfS	Format 7.5	5. Subject to the terms of this Agreement, the share of each Member of the Consortium in the issued equity share capital of the Vendor is/shall be in the following proportion: 6. In case of any breach of any equity investment commitment by any of the Consortium Members, the Lead Member shall be liable for the consequences thereof.	1.In case of Consortium kindly remove Percentage of equity investment commitment in Consortium Agreement.Only Lead member should commitment 100% equity share in case of Consortium.		The referred clause remains unchanged.

210	Amendment-01	1.7	Solar PV capacity in KW for the pump capacity in HP will be allowed as per MNRE specifications under the scheme. It will be mandatory to use indigenously manufactured solar panels with indigenous solar cells and modules. In addition to the bids for SPWPS with indigenously manufactured solar cells, interested bidders can also submit their bids for SPWPS with non-indigenous solar cells as per Annexure-D2 (open)format. However, work for SPWPS with non-indigenous solar cells would be awarded only if the Government approves use of non-indigenous solar cells under Component-B of the PM- KUSUM Scheme. Further, for the purpose of price estimation under both the categories mentioned above, all other components including solar modules shall be considered as indigenous and in compliance to the provisions of the PM-KUSUM Guidelines and ALMM Guidelines as amended from time to time and other applicable documents/ as amended by the Government in this regard. Further, the	The purpose of price bid with non indigenous solar cells is no clarified.	Request to remove the Annexure-D2 OR allow the execution of the Component B with Non-indigenous solar cells as the prices compare to DCR/indigenous solar cells are always at lower side if compared to Non indigenous solar cells	The clause is self-explanatory
211	Amendment-01	3.3.d	Systems installed under this programme should be follow OM-F.No.283/22/2019- GRID SOLAR of MNRE, Govt of India dated 09.02.2021.	No such OM Dated 9.2.2021 is found. However , OM-F.No.283/22/2019- GRID SOLAR Dated 23.09.2020 is found. Kindly clarify.	-	Order is available on the MNRE website.
212	RfS	3.2.h	Vendor shall comply with all applicable regulatory and statutory norms. Vendor must obtain approval/ NOC from appropriate Govt body for implementing the project in each selected village.	Vendors shall comply with regulatory & statutory norms.	Seeking approvals/ NOC from appropriate govt body as the program in being implemented by Ministry in coordination with respective State Nodal Agencies.	The referred clause remains unchanged.
213	RfS	4	The implementation of Scheme is demand based. However, the following shall be ensured before inclusion of a beneficiary under the Scheme: 1. Beneficiary should not have an electricity connection at the farm. 2. Installation of the new pumps not allowed in the notified areas issued by the Central Ground Water Board. 3. Priority to be given to small and marginal farmers 4. Preference be given to the farmers using Micro irrigation systems or covered under Micro irrigation schemes or who opt for micro irrigation system	The Selected beneficiary shall not be received any such benefit from govt through any other scheme for installation of solar water pumps	Multiple pump installation for same beneficiary results in conflict while submitting invoices, since the farmer should have received only one such benefit from the government.	The referred clause remains unchanged.
214	RfS	16	Payment Terms	SECI shall pre-define the list & format of the documents that need to be submitted vide online for claim of payment and ensure that these procedures are followed across all states without any deviation	This ensures uniformity and better sharing of information from Vendor to SIA and the ministry.	All the documents will be provided by SIA at the time of the issue of the Notice to Proceed.
215	RfS	16 Stage I	90 % of the value of month wise nos. of SPWPS installed at site based on:	The payemnt towards installation completed & inspected shall be paid with 10 working days from the date of submission of prescribed documents vide online	To ensure the better cash flow for vendors and success of the project SECI shall direct payment to vendors irrespective of the performance of other vendors	The referred clause remains unchanged.
216	RfS	16 Stage II	SIA has the right to seek any additional documents/certificates/information it deems fit prior to releaser of any payment.	100% payment towards pump supply & installation shall be made with 10 days from the submission of the documents in prescribed format online.	Release of balance 10% on completion of 30 days shall severely impact the vendors cashflow & also imposes huge documentation work by vendor & SIA	Already amended in Amendment-01 issued on 17.02.2023.
217	RfS	41.2	EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology.	EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology. The Consortium shall be restricted to 3 members with each consortium member meeting Technical & Financial Qualification Cummulatively	The large scope of work requires larger consortium	The referred clause remains unchanged.
218	RfS	22.1.iii	The price shall remain firm and fixed and shall be binding on the Selected Vendor irrespective of actual cost of execution of the Project. No escalation on the price will be granted for any reason whatsoever. The Selected Vendor shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever.	Two Price bid shall be permitted for use of Poly & Mono Cell modules separately. Since the project is for a 2 year period there should a price escalation at specified time interval and a pre-determined rate is required.	To Capture the price variance between poly & mono modules Two year timeline for this project exposes vendors to extreme price volatility in core componenets & raw materials. To encounter such rapid price escalation in at specified interval at specified rate is required	The referred clause remains unchanged.
219	RfS	31	Insurance The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery. For delivery of goods at site, the insurance shall be obtained by the Contractor/selected Vendor, for an amount not less than the Contract Price of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War risks and strikes. The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft & burglary etc. during 5 years warranty period	Beneficiary & SNA shall bear the responsibility in providing the required documents to file an insurance claim.		The referred clause remains unchanged.
220	Amendment 01	2	Wherever it is mentioned as 1-10 HP in RfS, it shall be read as 1-15 HP	SECI shall clarify the Design for MMS for Solar Water Pumps capacities higher than 10Hp	Prefer fixed structure for 10 HP and above	Latest Specification issued by MNRE to be followed.

221	RfS	41.2	EPC/Sl of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology	Can EPC Company not having technical qualification be Lead Bidder in JV with a pump / Module manufacturer meeting the technical qualification		Allowed under this RfS.
222	Annexure A	3.3.2	Test certificates: Modules supplied with the SPV water pumping systems shall have certificate as per IS 14286/IEC 61215 specifications or equivalent National or International Standards. Lab certified STC performance data supplied with the modules shall not be more than one year old.		1.)We have already tested the compatibility of our modules with SPWPS of other pump controller vendors and have the test certificates for the same for on going EESL tender(rfs: - EESL/ 06/ 2020-21/ KUSUM/ SWPS/ 1-10 HP/Off Grid/202101032). 2.)We propose that these certificates may be used in consideration for poly rather than new certification. 3.)However if mono to be considered then we will have new certification of test for SPWPS. SECI to clear, use of such certificate available with us.	Latest Specification issued by MNRE to be followed.
223	Annexure A	3.3.4	The minimum module efficiency should be minimum 19 percent and fill factor shall be more than 75 percent.		1.) Technically, poly modules cannot fulfil 19% efficiency. 2.) This would mean the use of next gen modules i.e monoperc 3.) In the price bid, you have asked us to bid separately for mono and poly. Please provide clarification on how this mismatch of efficiency can be addressed, which poly cannot achieve.	Latest Specification issued by MNRE to be followed.
224	RfS document	16 Stage 1	90 % of the value of month wise nos. of SPWPS installed at site based on: - Performance report for one week after commissioning based on the accurate data of the parameters received from RMS or data logger in case of internet unavailability.		1.) RMS is already linked with the 10% payment. 2.) However, 90% payment is also linked with RMS data. This is unfair to the vendors and we request that 90% payment be considered against dispatch OR/ against supply and installation. 3.)There is also no clarity on when the 90% payment will be given to the vendor after submission of required documents.	Suitable amendments are being issued to the referred clause.
225	Amendment-01	16	Payment shall be made to vendor within 30 days after submission of three copies of invoices to Engineer-in charge, complete in all respect (showing description, quantity, unit rate and total number of systems). However, this is subject to the availability of the accurate performance data/parameter of SPWPS through RMS on State SEDM portal and central portal of PM-KUSUM.	For states which do not have server readiness RMS data availability and communication should not be linked with payment.	Server readiness for some states is not complete. Hence for such states where server is not ready the RMS should not be linked with the payment terms.	The referred clause remains unchanged.
226	F. No. 41/3/2018-SPV Division- (Amendment-01 Kusum B PM KUSUM)	3.2.2	Controller Power Capacity to drive the Pump Controller Power Capacity should be at-least equal to Solar Panels Power Capacity (Wp), not Pump Capacity. Example: For 5HP pumps, the pump capacity will be 3750W as per MNRE Specs, the solar panel capacity will be at-least 4800Wp the controller capacity should match the solar panel capacity.	Controller capacity should match the pump capacity instead of PV panel capacity.	The MNRE models already have a built in DC overloading ratio of 1.2 to 1.3 over the pump capacity. This will ensure that the availability of the system will be enhanced. As long as the controller is designed to match the motor current demand there is no need to match the controller capacity to the PV capacity.	Latest Specification issued by MNRE to be followed.
227	F. No. 41/3/2018-SPV Division- (Amendment-01 Kusum B PM KUSUM)	Specifications of Controller/Drive for Solar Water Pumping Systems (Page 5/70)	For IS 16221 (Part-2) certification of the SPV pump controller the latest quality control order released by MNRE regarding IS 16221 (Part-2) must be followed.	Testing of controllers as per IS 16221 should be eliminated from the tender till such time that there are clear cut guidelines are available to the NABL labs for carrying out these test procedures.	The labs do not have clear guidelines on the procedure to be followed for testing of solar pump controller since this standard is primarily applicable for on grid inverters. Each lab seem to have its own understanding and interpretation of how to make the standard suitable for pump controllers. There seem to be a different opinion on weather BLDC controllers can be considered under this standard. There are at least 12 models of controllers to be tested and there are limited number of laboratories which are accredited by NABL for this testing procedure. Each controller will take up to 1 month for completing all the test procedures as per IS 16221 and these tests are also expensive compared to pump performance testing. This will add up to the product cost and increase the bid prices. THD limit for non-sinusoidal controller is defined as 40% as per IS 16221 standard however, tender calls for 3% THD at motor terminal. Clarity is required.	Latest Specification issued by MNRE to be followed.
228	F. No. 41/3/2018-SPV Division- (Amendment-01 Kusum B PM KUSUM)	3.4.5	Total Harmonic Distortion (THD) of the AC output waveform of the inverter at the motor input of the motor-pump set shall be less than or equal to 10 % and further no individual harmonic shall exceed the limit of 6 %. For checking its compliance it should done as per IS 16221.	THD limitation should be eliminated since we are not using the controllers on sensitive electronic equipment. Instead to cater to the motor heating issues the insulation class of the motors can be defined to class F. Currently the tender is silent on the insulation class of the motor s	> Obtaining 3% THD with nonlinear or inductive loads is not possible. > Harmonics reduction cannot be achieved using a choke coil alone instead LC filter can be used to achieve the desired THD. > Since we are not connecting any sensitive electronics like TV, computers etc. there is no requirement to limit harmonics to 10%. This will simply add cost burden into the product. > Instead it is recommended to provide choke coil to prevent spikes in higher head pumps preferably above 100m range.	Latest Specification issued by MNRE to be followed.
229	F. No. 41/3/2018-SPV Division- (Amendment-01 Kusum B PM KUSUM)	3.4.4	The pump and all external parts of motor used in submersible pump which are in contact with water, should be of stainless steel of grade 304 or higher as required. Further for submersible pumps used in coastal areas or bores with higher salinity, preferably, stainless steel of grade 316 or higher grade may be used.	Please specify the minimum salinity (in ppm) to be considered for bifurcation between SS304 and SS316. Ideally, this should be considered in terms of free chloride content (in ppm) in the saline water.	Cost difference SS 316 and SS 304 material is substantial and may lead increased bid cost. It is suggested to have these prices in separate bid.	Latest Specification issued by MNRE to be followed.

230	F. No. 41/3/2018-SPV Division- (Amendment-01 Kusum B PM KUSUM)	3.3.11	The RFID tag shall be placed on the SPV Modules inside the glass laminate	It is recommended to have outside RFID instead.	Modules with inside RFIDs have risk of back delamination and air entrapment.	Latest Specification issued by MNRE to be followed.
231	F. No. 41/3/2018-SPV Division- (Amendment-01 Kusum B PM KUSUM)	3.7.1.11	Separate earthing conductor shall be provided for controller, pump, motor and SPV array etc. for its connection to the earthing pit and it should be continuous in nature for electrical conductivity. However, in no case, even for the earthing of light current equipment (for example, high voltage testing equipment), should the cross-sectional area of the earthing lead be less than 6 mm ² .	This clause mentions use of minimum 6mm ² earthing cable however there is no clarity if the conductor is copper or Aluminium?		Latest Specification issued by MNRE to be followed.
232	F. No. 41/3/2018-SPV Division- (Amendment-01 Kusum B PM KUSUM)	A-1	1. Standard MMS of 4 Modules for 1 HP. 2. Standard MMS of 6 Modules for 2 HP. 3. Standard MMS of 10 Modules or Combination of standard MMS of 4 Modules and standard MMS 6 Modules for 3 HP. 4. Combination of two standard MMS of 8 Modules or combination of standard MMS of 10 Modules and standard MMS 6 Modules for 5 HP. 5. Combination of three standard MMS of 8 Modules or combination of two standard MMS of 10 Modules and one standard MMS 6 Modules for 7.5 HP.	Tender recommendations on MMS combinations are based on Poly modules however Mono modules shall also be considered. Standard MMS combinations for pumps with Mono PERC modules should be as follows : 1HP - 4MMS. 2HP- 4MMS. 3HP-10MMS or 4MMS+6MMS. 5HP- 10MMS or 6MMS+4MMS. 7.5HP-10MMS+4MMS or 8MMS+6MMS. 10 HP- 10MMS +8MMS or 9MMSx2 In addition to recommended standard MMS, IIT approved 9MMS structure shall also be permitted.	Module configurations based on mono modules shall also be allowed as module count is less for mono modules compared to poly. Necessary IIT approval shall be obtained for structures.	Latest Specification issued by MNRE to be followed.
233	F. No. 41/3/2018-SPV Division- (Amendment-01 Kusum B PM KUSUM)	A-2.1	Centre shaft used in structure shall be of : a) For 4, 6 and 8 Modules structure - minimum 139 OD with minimum thickness of 4 mm with base plate minimum 10 mm thickness if used and foundation hardware shall be as per IS 5624.	Diameter lesser than 139mm OD for base poles shall also be permitted for structures which are approved through IIT / IISc / NIT.	Center shaft with OD below 139mm shall also allowed for 4, 6 & 8 MMS structures after STAAD qualification and approval of the same from IIT / IISc / NIT.	Latest Specification issued by MNRE to be followed.
234	F. No. 41/3/2018-SPV Division- (Amendment-01 Kusum B PM KUSUM)	A-2.1	For 10 Modules structure - minimum 165 OD with minimum thickness of 4 mm with base plate minimum 20 mm thickness if used and foundation hardware shall be as per IS 5624.	Diameter lesser than 165mm OD for base poles shall also be permitted for structures which are approved through IIT / IISc / NIT.	Center shaft with OD below 165mm shall also allowed for 4, 6 & 8 MMS structures after STAAD qualification and approval of the same from IIT / IISc / NIT.	Latest Specification issued by MNRE to be followed.
235	F. No. 41/3/2018-SPV Division- (Amendment-01 Kusum B PM KUSUM)	A-2.3	Purlin Mounting Purlins used in the structure shall be made of Cold form steel section as per IS 1079 with minimum thickness of 2 mm.	IS 1079 is hot rolled structural material. Whereas for Cold Formed Steel the standard should be IS 811. Correction is required in the tender.	Sheet and strip material grade shall be as per IS 1079 and dimensions and section properties shall be as per IS 811 for purlins	Latest Specification issued by MNRE to be followed.
236	F. No. 41/3/2018-SPV Division- (Amendment-01 Kusum B PM KUSUM)	A-2.12	Square washer to be used for all the nut-bolts arrangement.	Round washer shall also be allowed since this is also a standard product.	Round washers shall also be allowed as in addition to square washers as it donot have shap corners safe handling at site .	Latest Specification issued by MNRE to be followed.
237	RfS	18.vi	Format for Financial Requirements as per Format 7.6 along with the certificate from practicing Chartered Accountant/ Statutory Auditors showing details of computation of the financial credentials of the Bidder.	As per Amendment - 01 (S.NO. 18 - # any three financial years out of last five financial years) Shall we change and modify the format as per revision and submit the same		Suitable amendments are being issued to the referred clause.
238	Annexure A	Annexure I - a. ii	Remote Connectivity: RMS of SWPS should be using GSM/GPRS/2G/3G/4G cellular connectivity.	What if the system is Operating in Remote areas where any network is not available - Shall Data be Manually Submitted by memory card?		The referred clause remains unchanged.
239	RfS	31	"All Risks" basis including War risks and strikes. The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft & burglary etc. during 5 years warranty period.	Insurance Companies works on Yearly recharge basis, Will it be acceptable that we provide 5 Years (with Each individual Year Renewal)		The referred clause remains unchanged.
240	RfS	41.2.iv	EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology.	If the lead member of consortium is Pump controller/ module manufacturer and they need only Financial Credentials and do not need support of any EPC/SI as Consortium member. They therefore be permitted to make consortium with non solar company as consortium member only for financial credentials.		Non-solar companies not allowed to participate
241	Amendment 01	31	In case of an incident covered under insurance, bidder must replace the lost/damaged part within 7 days from the date of intimation, failing which the rectification/replacement (keeping the same configuration in consideration) will be done by SIA at the risk and cost of system integrator, after rectification/ replacement the warranty clause will remain compliable as per tender conditions.	Insurance companies have given maximum time to report latest by 7 days of LODGING FIR the incidence occurrence. Hence This must be changed to 14 days replace lost / damaged part. Penalty may be imposed after this period.		The referred clause remains unchanged.

242	EMD AND TENDER FEES EXEMPTION NOT GIVEN	As Per ETS Portal	ETS PORTAL WEBSITE	In online mode, under the bid submission section the only EMD paid option is showing on the website but there is no exemption option is showing for MSMEs/NSIC bidders.		Please refer to Amendment-02 to the RfS.
243				Similarly, In online mode, under the bid submission section the only Tender bid processing Fee option is showing on the website in (offline mode) but there is no exemption option is showing for MSMEs/NSIC bidders.		Please refer to Amendment-02 to the RfS.
244	ISN-ETS Portal			In online mode, submission of bids under financial part section 2 we have facing issues in base bid , there only two option is available (i.e 1- VGF and 2 - Price on FOR basis than next tab is "cumulative bid capacity as quoted in the covering letter (MW)" Kindly fix that issues or clarify		Suitable amendments are being issued to Electronic form.
245	ISN-ETS Portal			Similarly In online mode, submission of bids under financial part section 3 we have facing issues i.e. "total number of States/UT for which price bid has been submitted" Kindly confirm total no of states fill or total financial price fill"		Suitable amendments are being issued to Electronic form.
246	RfS	ANNEXURE B	The bidder shall make sure that the Pass-Phrase to decrypt the relevant Bid-Part is submitted to SECI in a sealed envelop before the start date and time of the tender opening	Kindly confirm that the Pass_phrase to decrypt the relevant Bid-Part is submitted to SECI in a company letter head or not.		The pass-phrase to decrypt the relevant bid-part to be submitted to SECI on Letter head.
247	RfS	31	Insurance: The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery. For delivery of goods at site, the insurance shall be obtained by the Contractor, for an amount not less than the Contract Price of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War risks and strikes. The Comprehensive insurance of Solar Photo Voltaic Water Pumping System shall be provided for natural calamities, theft, burglary, & damage, etc. during 5 years warranty period. The empaneled bidder shall file insurance claim and shall be responsible to bring the insurance claim to a final settlement. The farmer and the empaneled bidder shall be jointly responsible for collection and submission of documents for the processing of the insurance claim. The insurance policy taken for the individual farmer shall be held in trust by the beneficiary under intimation to the beneficiary. Warranty and Maintenance: The complete Solar Photovoltaic Water Pumping System and display board / Name Plate (SIA's will provide the details) shall be warranted and maintained for 05 years from the date of installation. The maintenance service provided shall ensure proper functioning of the system as a whole. All preventive/routine maintenance and breakdown/corrective maintenance required for ensuring maximum uptime shall have to be provided by the Contractor. Successful bidder, on whom letter of award is placed, is to ensure all safety guidelines, rules and regulations, labour laws etc. Successful bidder indemnifies SIA for any accident, injury met by its labour, employee or any other person working for him. Any compensation sought by its labour, employee or any other person working for him shall be paid by successful bidder as per settlement as per	The Bidder should be exempted in this clause. It is responsibility of the Insurance company. Bidder can help the Farmer to coordinate with insurance company. In case of any damage bidder will replace material after approval of insurance company. In case of Theft, bidder will re-supply material after sanction from Insurance company.		The referred clause remains unchanged.
248	RfS	35	Warranty and Maintenance: The complete Solar Photovoltaic Water Pumping System and display board / Name Plate (SIA's will provide the details) shall be warranted and maintained for 05 years from the date of installation. The maintenance service provided shall ensure proper functioning of the system as a whole. All preventive/routine maintenance and breakdown/corrective maintenance required for ensuring maximum uptime shall have to be provided by the Contractor. Successful bidder, on whom letter of award is placed, is to ensure all safety guidelines, rules and regulations, labour laws etc. Successful bidder indemnifies SIA for any accident, injury met by its labour, employee or any other person working for him. Any compensation sought by its labour, employee or any other person working for him shall be paid by successful bidder as per settlement as per	Under warranty clause farmer's responsibility must be fixed. E.g. a. Farmer would ensure borewell must be sand free . b. There should not be any misuse of water pump etc.		The referred clause remains unchanged.
249	Amendment 01	42.3	MAAT TURNOVER	Kindly provide relaxation in Minimum Annual Average Turnover, so that manufactureres can participate in maximum states .	Most of the manufactureres are MSME's, in order to have participation in maximum states, request you to relax MAAT in states with higher quantity .	The referred clause remains unchanged.
250	RFS	21.1	Cumulative Capacity of the projects applied for _ Nos No. of Projects Bid for _ Nos	As per Clause 21.1 of RFS, Cumulative Capacity of the projects applied for is to be filled in Nos. But during tender upload on portal, it is shown that Cumulative Capacity of the projects applied for _ MW. How we submit cumulative capacity in terms of MW, as tender document only provided number of SPWPS state wise, it does not provide in MW. Kindly resolve.	As per Clause 21.1 of RFS, Cumulative Capacity of the projects applied for is to be filled in Nos. But during tender upload on portal, it is shown that Cumulative Capacity of the projects applied for _ MW. How we submit cumulative capacity in terms of MW, as tender document only provided number of SPWPS state wise, it does not provide in MW. Kindly resolve.	Already amended in Amendment-01 issued on 17.02.2023.
251	RFS and Ammendment	42.8	In case the response to RfS is submitted by a Consortium/Joint Venture, then the financial requirement is required to be met by the Consortium/Joint Venture members on an aggregate basis.	Clause 42.8 is revised as per amendment, but format 7.6 (financial requirement) is not revised. It is requested that this format must be revised as per amendment.	Clause 42.8 is revised as per amendment, but format 7.6 (financial requirement) is not revised. It is requested that this format must be revised as per amendment.	Suitable amendments are being issued to the referred clause.

252	RfS	3.1.a	The Selected vendor shall be responsible for design, supply, installation and commissioning of SPWPS along with 5 years of repair and maintenance. To ensure timely maintenance of SPWPS, apart from training a local person and making available necessary spare parts & tools in each district, to ensure timely maintenance of the systems the vendor shall have one authorized service center in each operational district and a helpline in local language in each operational State. Helpline number shall be indicated on the pump/ controller at suitable location easily visible to the user.	Service Centre be required only where installation are above 500 Nos covering 50 km radius of all district from Service Centre		The referred clause remains unchanged.
253	RfS	31	Insurance	It will be the responsibility of Beneficiary and SNA to provide the documents for insurance claim within specified time frame in insurance policy. Reinstallation of damaged or stolen part shall be carried out by the SI within 15 days from the receipt of payment from insurance company or 30 days from the date of submission and acceptance of documents by the insurance company.		The referred clause remains unchanged.
254	Amendment-01	16	Payment shall be made to vendor within 30 days after submission of three copies of invoices to Engineer-in charge, complete in all respect (showing description, quantity, unit rate and total number of systems). However, this is subject to the availability of the accurate performance data/ parameter of SPWPS through RMS on State SEDM portal and central portal of PM-KUSUM.	90% payment be released immediately after installation & balance 10% after integration on SEDM Portal. In case infrastructure delay is there from SIA or MNRE, interest @ bank rates to be paid from SIA. Also BG Demand should be raised only when all necessary infrastructure is in place otherwise LOI should not be released till the same is in order. As there is no assurity to release 100% payment for lack of RMS integration portal.	In previous bid some state were not having their portal ready and there they were asking to work without RMS. As per MNRE payments will be released after RMS synchronization than if it is not done the funds will be stucked. UP & Orissa are prime examples of the same.	The referred clause remains unchanged.
255			No clause for Separate pricing for Poly and Mono Modules	Consider twin pricing for poly and mono separately (just like AC & DC Systems) There is a difference of a minimum Rs.5-6 per watt (which creates a 8% difference in overall price of system) If price while bidding is considered for Poly & we are forced to use Mono, it means we have to take into effect a straight loss of minimum 8-9% on the entire cost of system. Till Poly is available it can be worked out and after that Mono but change in pricing should be applicable. Twin Pricing should be proposed for all capacities.	This may please be implemented for ease of operations for change in technology be effected.	The referred clause remains unchanged.
256		3.1.a	The Selected vendor shall be responsible for design, supply, installation and commissioning of SPWPS along with 5 years of repair and maintenance. To ensure timely maintenance of SPWPS, apart from training a local person and making available necessary spare parts & tools in each district, to ensure timely maintenance of the systems the vendor shall have one authorized service center in each operational district and a helpline in local language in each operational State. Helpline number shall be indicated on the pump/ controller at suitable location easily visible to the user.	The Selected vendor shall be responsible for design, supply, installation and commissioning of SPWPS along with 5 years of repair and maintenance. To ensure timely maintenance of SPWPS, apart from training a local person and making available necessary spare parts & tools in each district, to ensure timely maintenance of the systems <u>the vendor shall have one authorized service center for every 300 pumps installed in a state</u> . Helpline number shall be indicated on the pump/ controller at suitable location easily visible to the user.	as the quantity per district may be very some times which will make the establishment of service centre unviable. So we request you to kindly make the establishment of each service centre for every 300 pumps and not every district.	The referred clause remains unchanged.
257		New caluse added in the amendment F. No. 41/3/2018-SPV Division 3.3.4	The minimum module efficiency should be minimum 19 percent and fill factor shall be more than 75 percent.	please replace this clause with the old clause of MNRE 2019 specifications. Infact the OM F. No. 41/3/2018-SPV Division should not be implemented in this tender	as the output water quantity mentioned in the F. No. 41/3/2018-SPV Division for any model of pump is not increasing compared to 2019 specification, with the increase of the efficiency of the module, this increase really does not have any impact on the performance of the pumping system. Moreover, this increase in the efficiency of the module will completely eliminate the usage of poly solar cells which were used in solar pumps for the last decade. this modification will force the suppliers to use only Mono PERC cells in the solar panels which will increase the cost of the system to unreasonable cost without giving any extra water to the farmer. This will actually be of no use to the farmer or to the industry. So it should be removed completely.	Latest Specification issued by MNRE to be followed.

258	Annexure-A Revised of Amendment No. 1	13 Use of other brand of Solar Modules page no. 59 (page no. 61 of pdf file)	.....newly proposed model of SPV Module are not inferior to the SPV Module with which the SPV pumping system was tested..... Solar Array Maximum voltage Vmpp with other brand module shall be within $\pm 2\%$ of earlier module.	Newly proposed model of SPV module are to be as sufficient as that the total array power should not be less than minimum array SPV power requirement as mentioned in technical specification of SPWPS irrespective of the individual module capacity/rating. Solar Array Maximum voltage Vmpp with other brand module shall be within $\pm 10\%$ of earlier module.	Since in the new specification, the modules with minimum 19% efficiencies are to be used. The controllers are already designed to work over the wider voltage ranges of MPPT keeping the view of voltage ranges (Vmp) of PV modules. These MPPT voltage ranges along with efficiencies are also validated during the pump testing of SPWPS as per the Clause no. 3.6.4 of the main specifications of SPWPS. For e.g. Case 1) :- consider 5 HP SPWPS with 4800 Wp. if an SPWPS is tested with 550 Wp module then 9 PV modules are require with total Vmp of 377.55V. Case 2) :- Consider 5 HP SPWPS with 4800 Wp. if an SPWPS is tested with 500 Wp module then 10 PV modules are require with total Vmp of 415.5V Now , There is an change of 8.74% change in Vmp for the above cases while the number of modules used of same brand also equivalents to same array power capacity. The shall be made with other brands of PV module for the defined	Latest Specification issued by MNRE to be followed.
259	RFS	Format 7.3A	In Para 1: hereby agrees unequivocally, irrevocably and unconditionally to pay to SECI at [Insert Name of the Place from the address of SECI] forthwith without demur on demand in writing from SECI or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees	In Para 1: hereby agrees unequivocally, irrevocably and unconditionally to pay to SECI at [Insert Name of the Place from the address of SECI] withing 03 working days without demur on demand in writing from SECI or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees	The term " forthwith " should be replaced with the term " 03 working days " as suggested by bank.	The referred clause remains unchanged.
260	RFS	Format 7.3C	As per the terms of the RfS, the _____ [Insert name & address of Bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to SIA at _____ [Insert Name of the Place from the address of the SIA] forthwith on demand in writing from SIA or any Officer authorised by it in this behalf, any amount up to and not exceeding Indian Rupees _____ [Total Value] only, on behalf of M/s _____ [Insert name of the selected Vendor].	As per the terms of the RfS, the _____ [Insert name & address of Bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to SIA at _____ [Insert Name of the Place from the address of the SIA] withing 03 working days on demand in writing from SIA or any Officer authorised by it in this behalf, any amount up to and not exceeding Indian Rupees _____ [Total Value] only, on behalf of M/s _____ [Insert name of the selected Vendor].	The term " forthwith " should be replaced with the term " 03 working days " as suggested by bank.	The referred clause remains unchanged.
261	RFS	Format 7.3C	The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to SIA and may be assigned, in whole or in part, (whether absolutely or by way of security) by SIA to any entity to whom SIA is entitled to assign its rights and obligations.	Kindly delete this clause.	SIA can not handover the PBG to any other entity as these financial instruments are issued to SIAs only by bank.	Already amended in Amendment-01 issued on 17.02.2023.
262	RFS	14.1	Further, SIA reserves the right to encash the existing CPG, in case the vendors doesn't renew/extend the existing PBG at-least 30 days in advance	Further, SIA reserves the right to encash the existing CPG, in case the vendors doesn't renew/extend the existing PBG at-least 07 days in advance	30 days advance time is very high considering the high value of BG amount for PBG.. It shall also lead to have difficulty in working capital management for project mangement.	The referred clause remains unchanged.
263	RfS	40.2	Bidding Consortium with one of the Companies as the Lead Member. Consortium shortlisted and selected based on this RfS has to necessarily form a Project Company and get it registered under the Companies Act, 2013, keeping the original shareholding of the Bidding Consortium unchanged. In case applications for multiple Projects have been made by a Consortium, separate Project Companies can be formed for each Project. For the avoidance of doubt, it is hereby clarified that the shareholding pattern of the Project Company shall be the identical to the shareholding pattern of the Consortium as indicated in the Consortium Agreement (Format 7.5).	This clause shall be removed as the formation of such separate entity is a time consuming procedure which impacts the project schedule.		Already amended in Amendment-01 issued on 17.02.2023.
264	RfS	41	Similar Works' means - Design, Supply, Erection, Testing and Commissioning of standalone (off-grid) solar PV based water pump sets. Experience required for the bidders to be counted for the past 7 years from the last date of bid submission	As per the table for minimum experience required Supply of Solar SPV Panels is also considered along with the supply of Solar Pumps & Controller supplied or installed. a. It needs to be clarified that if the Solar modules are supplied under various other projects other than Water pumps will be considered or not? b. We have completed various projects in Solar industry and utilized other make solar panels also in our projects so this supply in the project will be considered or not? c. Whether the supply of Solar Pumps/Controller/Solar panels should be in Government projects only or supply in the Private projects and to the EPC contractors is valid. d. We have executed solar grid connected power plant owned by ourselves so will it be considered in our experience?		Please refer to Amendment-02 to the RfS. All issues raised have been discussed in previous queries
265	RfS	41	Similar Works' means - Design, Supply, Erection, Testing and Commissioning of standalone (off-grid) solar PV based water pump sets. Experience required for the bidders to be counted for the past 7 years from the last date of bid submission.	If we had submitted our bid for 5 different states fulfilling the minimum criteria as mentioned in the RfS but in some unwanted circumstances if some part of the experience considered invalid by SECI then our bid for the remaining valid experience in the participated states will be accepted or not?		The valid experience will be considered for the evaluation.

266	RfS	41	The bidder should be, either of the following: i. Manufacturer of Solar PV Module or ii. Manufacturer of Solar Pump or iii. Manufacturer of Solar Pump Controller using indigenous technology.	As a proof of manufacturer what shall be submitted because in RFS at page no. 21 xvi. Attachments it is mentioned that Memorandum of Association, Article of Association of the Bidder needs to be attached along with the bid. The bidder should also highlight the relevant provision which highlights the objects relating to Power/ Energy/ Renewable Energy/ Solar Water Pumping Station/Solar Power plant development/Manufacturer of pump-sets, solar panels and controllers. ➤ In case, there is no mention of the above provisions in the MoA/ AoA of the Bidder, the same has to be amended and submitted, if the bidder is selected as Selected Vendor.		Already amended in Amendment-01 issued on 17.02.2023.
267	RfS	41	The bidder should be, either of the following: i. Manufacturer of Solar PV Module or ii. Manufacturer of Solar Pump or iii. Manufacturer of Solar Pump Controller using indigenous technology or iv. EPC/SI of 'similar works' in Joint venture with Solar PV Module Manufacturer or Solar Pump Manufacturer or Manufacturer of Solar Pump Controller using indigenous technology.	1. It should be clarified that, In case we are submitting our bid in Consortium then the each member will have separate experience of supply and installation of different products. 2. So the experience of that all different items from each member will be considered or we have to select only single item out of the Pump, Controller & Solar Panels.		1. Please refer to the Clause 45.7 of thr RfS. 2. The bidder can use experience of either Solar Pumps or Controller or Solar PV Modules or any combination of these to meet the cumulative Technical eligibility criteria.

Note: All the queries received from various prospective bidders have been scrutinized and have been tried to be answered comprehensively. In case of any query not published here or the same not being addressed through the Amendments, it shall be construed in such cases, tender conditions shall prevail.

SOLAR ENERGY CORPORATION OF INDIA LIMITED**NEW DELHI**

Ref No. SECI/C&P/MI/13/0010/2022-23/Amendment-02

Dated 16-03-2023

Amendment-02 to the RfS Document for Selection of Vendors for a work contract to Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of Off Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-15 HP capacities in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component-B of PM-KUSUM scheme of MNRE			
RfS No. SECI/C&P/MI/00/0010/2022-23 dated 31.12.2022			
S. No.	Clause/Article No.	Existing Clause/Article	Amended Clause/Article
Amendments in the RfS document			
1.	3.1 b	Each pump should be marked with Toll Free No. of successful bidder (Toll Free No. shall be affix on controllers and shall be readable for 5 years) operating in English/Hindi and Regional language of respective state and specific pump number and same must have been captured by SIA's web-based application (as per instruction of SIA) at the time of installation at site. During the time of PDI of each component, test reports of equipments, warranty certificates, calibration certificates and any other certificates as specified in the guidelines and specification issued by MNRE should be provided by the bidder.	Each pumping system should be marked with Toll Free No. of the installer (Toll Free No. shall be affix on controllers and shall be readable for 5 years) operating in English and Hindi or Regional language of respective state and specific pump number and same must have been captured by SIA's web-based application (as per instruction of SIA) at the time of installation at site. During the time of PDI, test report of ordered solar pumping system's test report, warranty certificates and structure certificate as specified in the guidelines and specification issued by MNRE should be provided by the bidder.
2.	3.1 c	Test reports can be submitted with the bids. However, the bidders can also submit a self-certificate with the bids in lieu of test reports affirming that the test certificates for all the models for which the bids are submitted will be provided by the bidder before signing of agreement with the SIAs, failing which the bidder will be liable for penalties including encashment of EMD and/ or blacklisting.	Test reports can be submitted with the bids. However, the bidders can also submit a self-certificate in the format provided by MNRE with the bids in lieu of test reports for all the models for which the bids are submitted. In case of self-certificate, the bidder will have to submit test reports by 31.07.2023 or at the time of signing of Agreement with SIA, whichever is later. In case of failure of to submit test reports, the empanelment may be cancelled by SECI/MNRE.
3.	3.2 e	Vendors will have to submit installation reports as per given format on weekly basis and Monthly basis to MNRE and SIA.	Vendors will have to submit installation reports as per given format on weekly basis and Monthly basis to MNRE and SIA. These reports can be also submitted through e-mail.

4.	3.2 f	Vendor will have to submit the completion reports of each district to SIA within one week from 100% completion of work as per allocation of each district.	Vendor will have to submit the completion reports of each district to SIA within one week from 100% completion of work as per allocation of each district. These reports can be also submitted through e-mail.
5.	3.2.1	Vendor should submit the prescribed certificate and photographs of each SPWPS installed which must show complete installation setup along with beneficiary pump number etc.	Vendor should submit the prescribed certificate and photographs of each SPWPS installed which must show complete installation setup along with beneficiary pump number etc. These reports can be also submitted through email/web- portal/mobile application.
6.	3.4 a	Addendum to the Clause: Reports can be also submitted through e-mail and the format will be provided by SIA at the time of the issuance of the Notice to Proceed.	
7.	4.5	New Clause: The Selected beneficiary shall not have received any similar benefit from the State or the Central Government.	
8.	11	.....MSME Bidders registered as MSMEs (Micro, Small and Medium Enterprises) under NSIC/DIC/Udyog Aadhaar Only are exempted from submission of Bid Processing Fee & EMD. In this regard, the Bidder will have to furnish MSME Registration certificate issued by the appropriate authority (as applicable). Further, submission of MSME certificates issued in the name of Affiliate /Promoter/Company will not be considered However, upon empanelment under this RfS, selected MSMEs must submit Performance Bank Guarantee as per clause 14 of section III of RfS.	Not Used/Deleted.
9.	13.7	New Clause: The BG(s) against EMD submitted by bidders for state(s)/UT(s) where the bidder is not empaneled shall be returned within 15 days of publication of empanelment.	
10.	16	Note: Payment shall be made to vendor within 30 days after submission of three copies of invoices to Engineer-in charge, complete in all respect (showing description, quantity, unit rate and total number of systems). However, this is subject to the availability of the accurate performance data/parameter of SPWPS	Note: Payment shall be made to vendor within 30 days after submission of three copies of invoices to Engineer-in charge, complete in all respect along with 90 days accurate performance data of SPWPS through RMS on State SEDM portal and central portal of PM-KUSUM.

		through RMS on State SEDM portal and central portal of PM-KUSUM.	
11.	18.xvi.iv	Certified copies of annual audited accounts for any three financial years out of the last five financial years, i.e., 2021-22, 2020-21, 2019-20, 2018-19, and 2017-18, and provisional audited accounts, along with certified copies of Balance Sheet, Profit & Loss Account, Schedules and Cash Flow Statement supported with bank statements as on the date at least 7 days prior to the due date of bid submission (if applicable), shall be required to be submitted.	Certified copies of annual audited accounts for any three financial years out of the last five financial years, i.e., 2021-22, 2020-21, 2019-20, 2018-19, and 2017-18, along with certified copies of Balance Sheet, Profit & Loss Account, Schedules and Cash Flow Statement, shall be required to be submitted.
12.	18.xvi Attachment	<p>Addendum to the Clause:</p> <p>vi. In case of LLP as bidder or member of a consortium, an LLP registration certificate issued by registrar of companies shall also be submitted.</p> <p>vii. In addition, PAN Card and GST registration certificate shall also be submitted.</p> <p>viii. In support of technical QR criteria, work order copies/Invoices and Completion Certificates shall also be submitted.</p> <p>ix. Bidders must submit following documentary evidence that components/SPWPS systems will be manufactured indigenously</p> <ol style="list-style-type: none"> Declaration as per format 7.12. List and pictures of manufacturing and testing facilities. Undertaking that if details provided by bidders are in deviation with provisions of PM-KUSUM Scheme, which may lead to disqualification of bidder. At the time of payment post installation of systems, Vendors must submit copy of excise invoice(s) of the manufacturing unit(s) of Solar PV Module, Pumps, and Controllers. 	
13	21.2.I.a	<p>....</p> <p><u>Technical Bid(First Envelope)</u></p> <p>..</p> <p>a. Formats - 7.1, 7.2 (if applicable), 7.3 A/7.3 B, 7.4, 7.5 (if applicable), 7.6, 7.7, 7.8/7.8A and 7.9, 7.11, 7.12, 7.13, 7.14, 7.15 as elaborated in Clause 16 of the RfS.</p>	<p>....</p> <p><u>Technical Bid(First Envelope)</u></p> <p>..</p> <p>a. Formats - 7.1, 7.2 (if applicable), 7.3 A/7.3 B, 7.4, 7.5 (if applicable), 7.6, 7.7, 7.8/7.8A and 7.9, 7.11, 7.12, 7.13, 7.14, 7.15, 7.18 and 7.19 as elaborated in Clause 16 of the RfS.</p>
14	21.2.II.a	<p>....</p> <p><u>Financial Bid(Second Envelope)</u></p> <p>(a) Bidders shall submit the single Financial Bid containing the scanned copy of following document(s):</p> <ol style="list-style-type: none"> Covering letter as per Format 7.10 of the RfS Duly signed and stamped strictly as per price bid Format 7.16 of the RfS. 	<p>....</p> <p><u>Financial Bid(Second Envelope)</u></p> <p>(a) Bidders shall submit the single Financial Bid containing the scanned copy of following document(s):</p> <ol style="list-style-type: none"> Covering letter as per Format 7.10 of the RfS. Duly signed and stamped strictly as per price bid Format 7.17 of the RfS.

15.	21.2.II.b.ii	The above fixed price shall include all costs related to the Scope of Work as per the RfS and Obligations of the Successful Bidder/Selected Vendor. The Bidder shall quote for the entire facilities on a “single responsibility” basis such that the fixed price covers all the obligations in respect of Design, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance (05 years), inclusive of all taxes.	The above fixed price shall include all costs related to the Scope of Work as per the RfS and Obligations of the Successful Bidder/Selected Vendor. The Bidder shall quote for the entire facilities on a “single responsibility” basis such that the fixed price covers all the obligations in respect of Design, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance (05 years), exclusive of taxes/GST.
16.	33	In case of any delay in the execution of the order or delay in maintenance beyond the stipulated time schedule decided including any extension permitted in writing, SIA’s reserves the right to recover from the bidder a sum equivalent to 0.5 % of the value of the delayed SPWPS installation or on the unexecuted portion of the work for each week of the delay and part thereof subject to a maximum of 3 % of the total value of the contract.....	In case of any delay in the execution of the order or delay in maintenance beyond the stipulated time schedule decided including any extension permitted in writing, SIA’s reserves the right to recover from the bidder a sum equivalent to 0.5 % of the value of the delayed SPWPS installation or on the unexecuted portion of the work for each week of the delay and part thereof subject to a maximum of 10 % of the total value of the contract.....
17	38.A	<p>New Clause:</p> <p>Abnormally Low Bids</p> <p>i. An Abnormally Low Bid is one where the Bid price, in combination with other elements of the Bid, appears so low that it raises material concerns as to the capability of the Bidder to perform the Contract for the offered Bid Price.</p> <p>ii. In the event of identification of a potentially Abnormally Low Bid, SECI shall seek written clarifications from the Bidder, including detailed price analyses of its Bid price in correlation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the bidding document.</p> <p>iii. After evaluation of the price analyses, in the event that SECI determines that the Bidder has failed to demonstrate its capability to deliver the contract for the offered tender price, SECI shall reject the Bid.</p>	
18.	40.1	For avoidance of doubt, it is clarified that the fully owned subsidiary Company as mentioned in Clauses 40.3 and 40.6 above should be an immediate subsidiary of the bidder, without any intermediaries involved. The following illustrations	The Bidder shall be a Company or a Limited Liability Partnership as defined.
19.	40.10	Not Used	Registered Proprietorship firms (Governed by the Indian Partnership Act, 1932 or equivalent law/act of respective state) are also allowed as the manufacture of modules, pumps, and controllers or as

			a System Integrator (SI) to participate under this RfS.
20.	41.2.v.2	Both members should be a registered as an MSE to claim the benefits provided to the MSE	Not Used/ Deleted
21.	41.2.v.16	In case a group of MSMEs registered with NSIC (under single point registration scheme) form a Joint Venture under NSIC, the Consortium needs to provide an authorization letter from NSIC accepting the terms and conditions of tender (except for those terms and conditions in which NSIC consortia are given special status as per Government of India Policy for the Government Purchase Programme) and also provide details of Consortium members, their manufacturing capacities, the share-out of quantities with schedule of supplies as per SECI tender schedule. Further, NSIC consortium mandatorily submit their service tax, pan card and other relevant documents.	Not Used/ Deleted
22.	46.3	... Note: In all cases, matching of Prices will be on individual line items (for a particular State/UT) within the price bid table on total landed cost (including GST) for complete scope of work.	Note: In all cases, matching of Prices will be on individual line items (for a particular State/UT) within the price bid table on total cost (on F.O.R basis, exclusive of GST) for complete scope of work.
23.	Price Bid Schedule (Annexure-D)	(To be submitted on the Letter Head of the Bidder/ Lead Member of Consortium) The excel file annexed as Annexure-D of the RfS shall be used for entering the price bid. Signed and scanned copy of the same will be required to be uploaded on the portal)	The excel file annexed as Annexure-D1 and Annexure-D2 of the RfS shall be used for entering the price bid. Duly Signed and scanned copy of the same will be required to be uploaded on the portal). Additionally, The filled-out Excel file(s) must also be submitted in envelope-2 of the online bid portal. NOTE: In case of discrepancies between excel and scanned price bid(s), prices mentioned in excel files of Annexure-D1 and D2 shall prevail.

SAMPLE FORMS & FORMATS FOR BID SUBMISSION

The following formats are required to be submitted as part of the RfS. These formats are designed to demonstrate the Bidder's compliance with the Qualification Requirements set forth in Section 4 and other submission requirements specified in the RfS.

Format 7.1

COVERING LETTER

(The Covering Letter should be submitted on the Letter Head of the Bidding Company/ Lead Member of Consortium)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidding Company/ Lead Member of Consortium)*

Tel.#: _____

Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. dated for(Insert title of the RfS)

Dear Sir/ Madam,

We, the undersigned *[Insert name of the 'Bidder']* having read, examined and understood in detail the RfS including Qualification Requirements in particular, hereby submit our response to RfS.

We confirm that in response to the aforesaid RfS, neither we nor any of our Ultimate Parent Company/ Parent Company/ Affiliate/ Group Company has submitted response to RfS other than this response to RfS, directly or indirectly, in response to the aforesaid RfS (as mentioned in Format 7.8 under Disclosure) **OR** We confirm that in the response to the aforesaid RfS, we have a Group Company who owns more than 10% but less than 26% in the bidding company as well as other companies who may participate in this RfS, and accordingly, we have submitted requisite undertaking as per Format 7.8A in this regard {strike out whichever not applicable}.

We are submitting our response to the RfS as:

Type of Bidder	Applicability (Yes/No)
Pump/ Pump set Manufacturer	
Solar PV Module Manufacturer	
Solar Pump Controller Manufacturer	
Joint Venture	

In case of Joint Venture:

Lead Bidder	Non-Lead Bidder
EPC/ Pump Manufacturer/ Solar PV Module Manufacturer/ Solar Pump Controller Manufacturer	EPC/ Pump Manufacturer/ Solar PV Module Manufacturer/ Solar Pump Controller Manufacturer

We are submitting application for the installation of SPWPS(s) in following State/UTs: -

S. No	State/UT	Participation (Yes/No) (No/Blank cell will be assumed as No only)	Capacity of Pumps Quoted for (Such as 1HP AC/DC, 2HP AC/DC, 3HP AC/DC, 5HP AC/DC, 7.5 HP AC/DC, 10 HP AC/DC, 12.5 HP AC/DC, & 15 HP AC/DC)
1	Andaman & Nicobar		
2	Andhra Pradesh		
3	Arunachal Pradesh		
4	Assam		
5	Bihar		
6	Chhattisgarh		
7	Delhi		
8	Goa		
9	Gujarat		
10	Haryana		
11	Himachal Pradesh		
12	Jammu & Kashmir		
13	Jharkhand		
14	Karnataka		
15	Kerala		
16	Ladakh		
17	Lakshadweep		
18	Madhya Pradesh		
19	Maharashtra		
20	Manipur		
21	Meghalaya		
22	Mizoram		
23	Nagaland		

24	Odisha		
25	Puducherry		
26	Punjab		
27	Rajasthan		
28	Sikkim		
29	Tamil Nadu		
30	Telangana		
31	Tripura		
32	Uttarakhand		
33	Uttar Pradesh		
34	West Bengal		

1. We give our unconditional acceptance to the RfS, dated [Insert date in dd/mm/yyyy], issued by SECI. In token of our acceptance to the RfS along with the amendments and clarifications issued by SECI, the same have been digitally signed by us and enclosed with the response to RfS. Further, we confirm that the SPWPS shall be installed within the deadline as per panel provisions of scheme guidelines and RfS.

2. Earnest Money Deposit (EMD): - (Please read Clause 13 carefully before filling)

We have enclosed EMD of INR (Insert Amount), in the form of Bank Guarantee/Payment on Order Instrument (POI) no. [Insert bank guarantee/Payment on Order Instrument number] dated [Insert date of bank guarantee/POI] as per Format 7.3A/7.3B from [Insert name of bank providing bank guarantee/POI] and valid up to.....in terms of Clause 13 of this RfS. (Strike off whichever is not applicable)

3. We hereby declare that in the event our bid get selected and we are not able to submit Bank Guarantee of the requisite value(s) towards PBG, within due time as mentioned in Clauses 13 & 14 of this RfS, SECI shall have the right to encash the EMD/PBG submitted by us and return the balance amount (if any) for the value of EMD pertaining to unsuccessful capacity.

4. We have submitted our response to RfS strictly as per Section 7 (Sample Forms and Formats) of this RfS, without any deviations, conditions and without mentioning any assumptions or notes in the said Formats.

5. Acceptance: -

We hereby unconditionally and irrevocably agree and accept that the decision made by SECI in respect of any matter regarding or arising out of the RfS shall be binding on us. We hereby expressly waive and withdraw any deviations and all claims in respect of this process.

We also unconditionally and irrevocably agree and accept that the decision made by SECI in respect of award of SPWPS in line with the provisions of the RfS, shall be binding on us.

6. Familiarity with Relevant Indian Laws & Regulations: -
We confirm that we have studied the provisions of the relevant Indian Laws and Regulations as required to enable us to submit this response to RfS, in the event of our selection as Selected Vendor.
7. Not Used
8. We are submitting our response to the RfS with formats duly signed as desired by you in the RfS online for your consideration.
9. It is confirmed that our response to the RfS is consistent with all the requirements of submission as stated in the RfS, including all clarifications and amendments and subsequent communications from SECI.
10. The information submitted in our response to the RfS is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our response to the RfS.
11. We confirm that all the terms and conditions of our Bid are valid up to _____ (*Insert date in dd/mm/yyyy*) for acceptance [i.e., a period up to the date as on 12 months from the last date of submission of response to RfS].

12. Contact Person

Details of the representative to be contacted by SECI are furnished as under:

Name :

Designation :

Company :

Address :

Phone Nos. :

Mobile Nos. :

Fax Nos. :

E-mail address:

Alternate Contact Person

Details of the representative to be contacted by SECI are furnished as under:

Name :

Designation :

Company :

Address :

Phone Nos. :

Mobile Nos. :

Fax Nos. :

E-mail address:

13. We have neither made any statement nor provided any information in this Bid, which to the best of our knowledge is materially inaccurate or misleading. Further, all the confirmations, declarations and representations made in our Bid are true and accurate. In case this is found to be incorrect after our selection as Selected Vendor, we agree that the same would be treated as our event of default.

Dated the _____ day of _____, 20....

Thanking you,
We remain,
Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/
Board Resolution/ Declaration.

FORMAT FOR POWER OF ATTORNEY*(Applicable Only in case of Consortiums)**(To be provided by each of the other members of the Consortium in favor of the Lead Member)
(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)*

KNOW ALL MEN BY THESE PRESENTS THAT M/s..... having its registered office at,, and M/s having its registered office at, (Insert names and registered offices of all Members of the Consortium) the Members of Consortium have formed a Bidding Consortium named (Insert name of the Consortium if finalized) (hereinafter called the ‘Consortium’) vide Consortium Agreement dated..... and having agreed to appoint M/s.....as the Lead Member of the said Consortium do hereby constitute, nominate and appoint M/s.....a company incorporated under the laws ofand having its Registered/ Head Office atas our duly constituted lawful Attorney (hereinafter called as Lead Member) to exercise all or any of the powers for and on behalf of the Consortium in regard to submission of the response to RfS No.....

We also authorize the said Lead Member to undertake the following acts:

- i) To submit on behalf of Consortium Members response to RfS.
- ii) To do any other act or submit any information and document related to the above response to RfS Bid.

It is expressly understood that in the event of the Consortium being selected as Selected Vendor, this Power of Attorney shall remain valid, binding and irrevocable until 05 years from installation.

We as the Member of the Consortium agree and undertake to ratify and confirm all whatsoever the said Attorney/ Lead Member has done on behalf of the Consortium Members pursuant to this Power of Attorney and the same shall bind us and deemed to have been done by us.

IN WITNESS WHEREOF M/s, as the Member of the Consortium have executed these presents on this..... day ofunder the Common Seal of our company.

For and on behalf of Consortium Member

M/s.....

----- (Signature of person authorized by the board)

(Name

Designation

Place:

Date:)

Accepted

(Signature, Name, Designation and Address
of the person authorized by the board of the Lead Member)

Attested

(Signature of the executant)

(Signature & stamp of Notary of the place of execution)

Place: -----

Date: -----

Lead Member in the Consortium shall have the controlling shareholding in the Company as defined in Section-6, Definition of Terms of the RfS.

FORMAT FOR BANK GUARANTEE TOWARDS EARNEST MONEY DEPOSIT (EMD)*(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)*

Reference:

List No.:

Date:

In consideration of the _____ [*Insert name of the Bidder*] (hereinafter referred to as 'Bidder') submitting the response to RfS inter alia for _____ [*Insert title of the RfS*] for State/UTs declared in Format 7.1, in response to the RfS No. _____ dated _____ issued by Solar Energy Corporation of India Limited (hereinafter referred to as SECI) and SECI considering such response to the RfS of [*Insert the name of the Bidder*] as per the terms of the RfS, the _____ [*Insert name & address of bank*] hereby agrees unequivocally, irrevocably and unconditionally to pay to SECI at [*Insert Name of the Place from the address of SECI*] forthwith without demur on demand in writing from SECI or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees _____ [*Insert amount not less than that derived on the basis of 2 % of amount equivalent to the 6 % of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher, subject to a maximum of 1000 pumps*], only, on behalf of M/s _____ [*Insert name of the Bidder*].

This guarantee shall be valid and binding on this Bank up to and including _____ [*insert date of validity in accordance with Clause 13 of this RfS*] and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ only). Our Guarantee shall remain in force until _____ [*insert date of validity in accordance with Clause 13 of this RfS*]. SECI shall be entitled to invoke this Guarantee till _____ [*insert date of validity in accordance with Clause 13 of this RfS*].

The Guarantor Bank hereby agrees and acknowledges that the SECI shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by SECI, made in any format, raised at the above-mentioned address of the Guarantor Bank, in order to make the said payment to SECI.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by _____ [*Insert name of the Bidder*] and/ or any other person. The Guarantor Bank shall not require SECI to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against SECI in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at New Delhi shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly SECI shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Bidder, to make any claim against or any demand on the Bidder or to give any notice to the Bidder or to enforce any security held by SECI or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

This BANK GUARANTEE shall be effective only when the Bank Guarantee issuance message is transmitted by the issuing Bank through SFMS to IDFC First Bank and a confirmation in this regard is received by SECI.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only) and it shall remain in force until _____ [*Date to be inserted on the basis of Clause 13 of this RfS*].

We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if SECI serves upon us a written claim or demand.

Signature: _____

Name: _____

Power of Attorney No.: _____

For

_____ [*Insert Name and Address of the Bank*] _____

Contact Details of the Bank:

E-mail ID of the Bank:

Banker's Stamp and Full Address.

Dated this ____ day of ____, 20__

**FORMAT OF PAYMENT ON ORDER INSTRUMENT TO BE ISSUED BY
IREDA/REC/PFC (IN LIEU OF BG TOWARDS EMD)**

No.

Date

SECI,

Registered

Reg: M/s _____(insert name of the Bidder) – Issuance of Payment on Order Instrument for an amount of Rs. _____

Dear Sir,

1. It is to be noted that M/s. _____(*insert name of the POI issuing Agency*) ('IREDA/REC/PFC') has sanctioned a non-fund based limit loan of Rs. _____ (Rupees _____ only) to M/s _____ under the loan Agreement executed on _____ to execute Renewable Energy Projects.
2. At the request of M/s _____, on behalf of _____ (insert name of the Bidder), this Payment on Order Instrument (POI) for an amount of Rs. _____ (Rupees _____ (in words)). This Payment on Order Instrument comes into force immediately.
3. In consideration of the _____ [*Insert name of the Bidder*] (hereinafter referred to as 'Bidder') submitting the response to RfS inter alia for _____ [*Insert title of the RfS*] for the State/UTs declared in Format 7.1, in response to the RfS No. _____ dated _____ issued by Solar Energy Corporation of India Limited (hereinafter referred to as SECI) and SECI considering such response to the RfS of[*Insert the name of the Bidder*] as per the terms of the RfS, the _____ [*Insert name & address of IREDA/PFC/REC*] hereby agrees unequivocally, irrevocably and unconditionally to pay to SECI at [*Insert Name of the Place from the address of SECI*] forthwith without demur on demand in writing from SECI or any Officer authorized by it in this behalf, any amount up to and not exceeding Rupees _____ [*Insert amount not less than that derived on the basis of 2 % of amount equivalent to the 6 % of the value of total state-wise allocation or 25 numbers of SPWPS, whichever is higher, subject to a maximum of 1000 pumps*], only, on behalf of M/s _____ [*Insert name of the Bidder*].
4. In consideration of the above facts, IREDA/REC/PFC, having its registered office at _____, agrees to make payment for the sum of Rs. _____ lakhs (in words.....) to SECI on the following conditions: -
 - (a) IREDA/REC/PFC agrees to make payment of the above said amount unconditionally, without demur and without protest within a period of _____ days of receipt of request from SECI within the validity period of this letter as specified herein;
 - (b) The commitment of IREDA/REC/PFC, under this Payment of Order Instrument will have the same effect as that of the commitment under the Bank Guarantee issued by any Public Sector Bank and shall be enforceable in the same manner as in the case of a Bank

- Guarantee issued by a Bank and the same shall be irrevocable and shall be honored irrespective of any agreement or its breach between IREDA/REC/PFC or its constituents notwithstanding any dispute that may be raised by the against SECI;
- (c) The liability of IREDA/REC/PFC continues to be valid and binding on IREDA/REC/PFC and shall not be terminated, impaired and discharged, by virtue of change in its constitution and specific liability under letter of undertaking shall be binding on its successors or assignors.
 - (d) The liability of IREDA/REC/PFC shall continue to be valid and binding on IREDA/REC/PFC and shall not be terminated/ impaired/ discharged by any extension of time or variation and alternation made given or agreed with or without knowledge or consent of the parties (SECI and Bidding Party), subject to the however to the maximum extent of amount stated herein and IREDA/REC/PFC is not liable to any interest or costs etc.;
 - (e) This Payment on Order Instrument can be invoked either partially or fully, till the date of validity.
 - (f) IREDA/REC/PFC agrees that it shall not require any proof in addition to the written demand by SECI made in any format within the validity period. IREDA/REC/PFC shall not require SECI to justify the invocation of the POI against the Selected Vendor, to make any claim against or any demand against the SPV/Vendor or to give any notice to the SPV/Vendor;
 - (g) The POI shall be the primary obligation of IREDA/REC/PFC and SECI shall not be obliged before enforcing the POI to take any action in any court or arbitral proceedings against the Selected Vendor;
 - (h) Neither SECI is required to justify the invocation of this POI nor shall IREDA/REC/PFC have any recourse against SECI in respect of the payment made under letter of undertaking;
5. Notwithstanding anything contrary contained anywhere in this POI or in any other documents, this POI is and shall remain valid up to _____ and IREDA/REC/PFC shall make payment thereunder only if a written demand or request is raised within the said date and to the maximum extent of Rs. and IREDA/REC/PFC shall in no case, be liable for any interest, costs, charges and expenses and IREDA's/REC's/PFC's liability in no case will exceed more than the above amount stipulated.
 6. In pursuance of the above, IREDA/REC/PFC and SECI have signed an Umbrella Agreement dated ____ setting out the terms and conditions for issue of letter of undertaking by IREDA/REC/PFC to SECI and the said terms and conditions shall be read as a part of this letter of undertaking issued for the project of the project of PP mentioned above.

Thanking you,

Yours faithfully
For and on behalf of
M/s. _____
(Name of the POI issuing agency).

()

General Manager (TS)

Copy to: -

M/s. __PP_____

_____ As per their request

()

General Manager (TS)

FORMAT FOR PERFORMANCE BANK GUARANTEE (PBG)*(To be submitted Separately for each Project)**(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)*

Reference:

Bank Guarantee No.:

Date:

In consideration of the _____ [*Insert name of the Bidder*] (hereinafter referred to as 'selected Vendor') submitting the response to RfS inter alia for [*Insert title of the RfS*] for the State/UTs declared in Format 7.1, in response to the RfS dated..... issued by Solar Energy Corporation of India Limited (hereinafter referred to as SECI) and SECI considering such response to the RfS of[*Insert name of the Bidder*] (which expression shall unless repugnant to the context or meaning thereof include its executers, administrators, successors and assignees) issuing Letter of Award No. _____ to _____ (*Insert Name of selected Vendor*) as per terms of RfS, M/s _____ {a Special Purpose Vehicle (SPV) formed for this purpose}, if applicable].

As per the terms of the RfS, the _____ [*Insert name & address of Bank*] hereby agrees unequivocally, irrevocably and unconditionally to pay to SIA at _____ [*Insert Name of the Place from the address of the SIA*] forthwith on demand in writing from SIA or any Officer authorised by it in this behalf, any amount up to and not exceeding Indian Rupees _____ [Total Value] only, on behalf of M/s _____ [*Insert name of the selected Vendor*].

This guarantee shall be valid and binding on this Bank up to and including and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only).

Our Guarantee shall remain in force until..... SIA shall be entitled to invoke this Guarantee till

The Guarantor Bank hereby agrees and acknowledges that SIA shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by SIA, made in any format, raised at the above-mentioned address of the Guarantor Bank, to make the said payment to SIA.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by _____ [*Insert name of the selected Vendor*] and/ or any other person. The Guarantor Bank shall not require SIA to justify the invocation of this

BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against SIA in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at _____ shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly SIA shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the selected Vendor, to make any claim against or any demand on the selected Vendor or to give any notice to the selected Vendor or to enforce any security held by SIA or to exercise, levy or enforce any distress, diligence or other process against the selected Vendor.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only) and it shall remain in force until We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if SIA serves upon us a written claim or demand.

Signature: _____

Name: _____

Power of Attorney No.: _____

For

_____ [Insert Name and Address of the Bank] _____

Contact Details of the Bank:

E-mail ID of the Bank:

Banker's Stamp and Full Address.

Dated this ____ day of _____, 20__

Witness:

1.

Signature
Name and Address

2.

Signature
Name and Address

Notes:

1. The Stamp Paper should be in the name of the Executing Bank and of appropriate value.
2. The Performance Bank Guarantee shall be executed by any of the Scheduled Commercial Banks as listed on the website of Reserve Bank of India (RBI) and amended as on the date of issuance of Bank Guarantee. Bank Guarantee issued by foreign branch of a Scheduled Commercial Bank is to be endorsed by the Indian branch of the same bank or State Bank of India (SBI).

FORMAT FOR BOARD RESOLUTIONS

The Board, after discussion, at the duly convened Meeting on [Insert date], with the consent of all the Directors present and in compliance of the provisions of the Companies Act, 1956 or Companies Act 2013, as applicable, passed the following Resolution:

1. RESOLVED THAT Mr./ Ms....., be and is hereby authorized to do on our behalf, all such acts, deeds and things necessary in connection with or incidental to our response to RfS vide RfS No. _____ for _____ (insert title of the RfS), including signing and submission of all documents and providing information/ response to RfS to Solar Energy Corporation of India Limited (SECI), representing us in all matters before SECI, and generally dealing with SECI in all matters in connection with our bid for the said Project. *(To be provided by the Bidding Company or the Lead Member of the Consortium)*

2. FURTHER RESOLVED THAT pursuant to the provisions of the Companies Act, 1956 or Companies Act, 2013, as applicable and compliance thereof and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded to invest total equity in the Project. *(To be provided by the Bidding Company)*

[Note: In the event the Bidder is a Bidding Consortium, in place of the above resolution at Sl. No. 2, the following resolutions are to be provided]

FURTHER RESOLVED THAT pursuant to the provisions of the Companies Act, 1956 or Companies Act, 2013, as applicable and compliance thereof and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded to invest (----%) equity [Insert the % equity commitment as specified in Consortium Agreement] in the Project. *(To be provided by each Member of the Bidding Consortium including Lead Member such that total equity is 100%)*

FURTHER RESOLVED THAT approval of the Board be and is hereby accorded to participate in consortium with M/s ----- [Insert the name of other Members in the Consortium] and Mr/ Ms....., be and is hereby authorized to execute the Consortium Agreement. *(To be provided by each Member of the Bidding Consortium including Lead Member)*

And

FURTHER RESOLVED THAT approval of the Board be and is hereby accorded to contribute such additional amount over and above the percentage limit (specified for the Lead Member in the Consortium Agreement) to the extent becoming necessary towards the total equity share in the Project Company, obligatory on the part of the Consortium pursuant to the terms and conditions contained in the Consortium Agreement dated executed by the Consortium as per the provisions of the RfS. *[To be passed by the Lead Member of the Bidding Consortium]*

3. NOT USED

Certified True Copy

(Signature, Name and Stamp of Company Secretary)

Notes:

- 1) This certified true copy should be submitted on the letterhead of the Company, signed by the Company Secretary/ Director.
- 2) The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution.
- 3) This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act, 1956 or Companies Act, 2013 as applicable may be suitably modified to refer to the law applicable to the entity submitting the resolution. However, in such case, the foreign entity shall submit an unqualified opinion issued by the legal counsel of such foreign entity, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing Company and the authorizations granted therein are true and valid.

FORMAT FOR CONSORTIUM AGREEMENT

(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)

THIS Consortium Agreement (“Agreement”) executed on this ___ Day of _____ Two Thousand ___ between M/s _____ [Insert name of Lead Member] a Company incorporated under the laws of _____ and having its Registered Office at _____ (hereinafter called the “**Member-1**”, which expression shall include its successors, executors and permitted assigns) and M/s _____ a Company incorporated under the laws of _____ and having its Registered Office at _____ (hereinafter called the “**Member-2**”, which expression shall include its successors, executors and permitted assigns), [The Bidding Consortium should list the details of all the Consortium Members] for the purpose of submitting response to RfS and execution of Power Purchase Agreement (in case of award), against RfS No. _____ dated _____ issued by Solar Energy Corporation of India Limited (SECI) a Company incorporated under the Companies Act, 2013, and having its Registered Office at 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi - 110023

WHEREAS, each Member individually shall be referred to as the “Member” and all of the Members shall be collectively referred to as the “Members” in this Agreement.

WHEREAS SIA desires to install SPWPS under RfS for _____ (insert title of the RfS);

WHEREAS, SECI had invited response to RfS vide its Request for Selection (RfS) dated _____

WHEREAS the RfS stipulates that in case response to RfS is being submitted by a Bidding Consortium, the Members of the Consortium will have to submit a legally enforceable Consortium Agreement in a format specified by SECI wherein the Consortium Members have to commit equity investment of a specific percentage for the SPWPS.

NOW THEREFORE, THIS AGREEMENT WITNESSTH AS UNDER:

In consideration of the above premises and agreements all the Members in this Bidding Consortium do hereby mutually agree as follows:

1. We, the Members of the Consortium and Members to the Agreement do hereby unequivocally agree that Member-1 (M/s _____), shall act as the Lead Member as defined in the RfS for self and agent for and on behalf of Member-2, and to submit the response to the RfS.
2. The Lead Member is hereby authorized by the Members of the Consortium and Members to the Agreement to bind the Consortium and receive instructions for and on their behalf.
3. Notwithstanding anything contrary contained in this Agreement, the Lead Member shall always be liable for the equity investment obligations of all the Consortium Members i.e., for both its own liability as well as the liability of other Members.
4. The Lead Member shall be liable and responsible for ensuring the individual and collective commitment of each of the Members of the Consortium in discharging all of their respective

equity obligations. Each Member further undertakes to be individually liable for the performance of its part of the obligations without in any way limiting the scope of collective liability envisaged in this Agreement.

5. Subject to the terms of this Agreement, the share of each Member of the Consortium in the issued equity share capital of the Vendor is/shall be in the following proportion:

Name	Percentage
Member 1	---
Member 2	---
Total	100%

6. In case of any breach of any equity investment commitment by any of the Consortium Members, the Lead Member shall be liable for the consequences thereof.
7. Except as specified in the Agreement, it is agreed that sharing of responsibilities as aforesaid and equity investment obligations thereto shall not in any way be a limitation of responsibility of the Lead Member under these presents.
8. It is further specifically agreed that the financial liability for equity contribution of the Lead Member shall not be limited in any way so as to restrict or limit its liabilities. The Lead Member shall be liable irrespective of its scope of work or financial commitments.
9. This Agreement shall be construed and interpreted in accordance with the Laws of India and courts at New Delhi alone shall have the exclusive jurisdiction in all matters relating thereto and arising thereunder.
10. It is hereby further agreed that in case of being selected as the Selected Vendor, the Members do hereby agree that they shall furnish the Performance Guarantee in favour of SIA in terms of the RfS.
11. It is further expressly agreed that the Agreement shall be irrevocable and shall form an integral part of the Contract Agreement and shall remain valid until the expiration or early termination of the Contract Agreement in terms thereof, unless expressly agreed to the contrary by SECI.
12. The Lead Member is authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Members respectively from time to time in the response to RfS.
13. It is hereby expressly understood between the Members that no Member at any given point of time, may assign or delegate its rights, duties or obligations under the Contract Agreement except with prior written consent of SECI.
14. This Agreement
- a) has been duly executed and delivered on behalf of each Member hereto and constitutes the legal, valid, binding and enforceable obligation of each such Member;
 - b) sets forth the entire understanding of the Members hereto with respect to the subject matter hereof; and

c) may not be amended or modified except in writing signed by each of the Members and with prior written consent of SECI.

15. All the terms used in capitals in this Agreement but not defined herein shall have the meaning as per the RfS.

IN WITNESS WHEREOF, the Members have, through their authorized representatives, executed these present on the Day, Month and Year first mentioned above.

For M/s----- [Member 1]

(Signature, Name & Designation of the person authorized vide Board Resolution Dated _____)

Witnesses:

1) Signature-----

2) Signature -----

Name:

Name:

Address:

Address:

For M/s-----[Member 2]

(Signature, Name & Designation of the person authorized vide Board Resolution Dated _____)

Witnesses:

1) Signature -----

2) Signature -----

Name:

Name:

Address:

Address:

Signature and stamp of Notary of the place of execution

FORMAT FOR FINANCIAL REQUIREMENT*(This should be submitted on the Letter Head of the Bidding Company/ Lead Member of Consortium)*

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidding Company/ Lead Member of Consortium)*

Tel.#: _____

Fax#: _____

E-mail address# _____

To**Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023**

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We certify that the Bidding Company/Member in a Bidding Consortium is meeting the financial eligibility requirements as per the provisions of the RfS. Accordingly, the Bidder, with the support of its Affiliates, (strike out if not applicable) is fulfilling the minimum Net Worth criteria, by demonstrating a Net Worth of Rs..... Cr. (..... in words) as on the last date of Financial Year 2021-22.

This Net Worth has been calculated in accordance with instructions provided in Clause 42.1 of the RfS.

Exhibit (i): Applicable in case of Bidding Company

For the above calculations, we have considered the Net Worth by Bidding Company and/ or its Affiliate(s) as per following details:

Name of Bidding Company	Name of Affiliate(s) whose net worth is to be considered	Relationship with Bidding Company*	Net Worth (in Rs. Crore)
Company 1			
Total			

**The column for "Relationship with Bidding Company" is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/ chartered accountant is required to be attached with the format.*

Exhibit (ii): Applicable in case of Bidding Consortium**(To be filled by each Member in a Bidding Consortium separately)****Name of Member:** *[Insert name of the Member]*

For the above calculations, we have considered Net Worth by Member in Bidding Consortium and/ or its Affiliate(s) per following details:

Name of Consortium Member Company	Name of Affiliate(s) whose net worth is to be considered	Relationship with Bidding Company* (If any)	Net Worth (in Rs. Crore)	Equity Commitment (in %age) in Bidding Consortium
Company 1				
Company 2				
Total				

** The column for "Relationship with Bidding Company" is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/chartered accountant is required to be attached with the format*

Further, we certify that the Bidding Company/ Member in the Bidding Consortium, with the support of its Affiliates, (strike out if not applicable) is fulfilling the Minimum Average Annual Turnover Criteria, by demonstrating a MAAT of INR _____ (_____ in words) for the three Financial Years, namely _____, _____ and _____.

Exhibit (i): Applicable in case of Bidding Company

For the above calculations, we have considered the MAAT by Bidding Company and/ or its Affiliate(s) as per following details:

Name of Bidding Company	Name of Affiliate(s) whose AT is to be considered	Relationship with Bidding Company*	AT (in Rs. Crore) FY 2017-18	AT (in Rs. Crore) FY 2018-19	AT (in Rs. Crore) FY 2019-20	AT (in Rs. Crore) FY 2020-21	AT (in Rs. Crore) FY 2021-22
Company 1							
Total							

**The column for "Relationship with Bidding Company" is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/chartered accountant is required to be attached with the format.*

Exhibit (ii): Applicable in case of Bidding Consortium**(To be filled by each Member in a Bidding Consortium separately)**

Name of Member: *[Insert name of the Member]*

For the above calculations, we have considered MAAT by Member in Bidding Consortium and/ or its Affiliate(s) as per following details:

Name of Consortium Member Company	Name of Affiliate(s) whose AT is to be considered	Relationship with Bidding Company* (If Any)	AT (in Rs. Crore) FY 2017-18	AT (in Rs. Crore) FY 2018-19	AT (in Rs. Crore) FY 2019-20	AT (in Rs. Crore) FY 2020-21	AT (in Rs. Crore) FY 2021-22	Equity Commitment (in %age) in Bidding Consortium
Company 1								
Company 2								
Total								

* The column for "Relationship with Bidding Company" is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/chartered accountant is required to be attached with the format

Further, we certify that the Bidding Company/ Member in the Bidding Consortium, with the support of its Affiliates, (strike out if not applicable) is fulfilling the Profitability Criteria, by demonstrating a Profitability of INR _____ (_____ in words) for the two Financial Years, namely _____ and _____.

Exhibit (i): Applicable in case of Bidding Company

For the above calculations, we have considered the Profitability by Bidding Company and/ or its Affiliate(s) as per following details:

Name of Bidding Company	Name of Affiliate(s) whose PBDIT is to be considered	Relationship with Bidding Company *	PBDIT (in Rs. Crore) FY 2017-18	PBDIT (in Rs. Crore) FY 2018-19	PBDIT (in Rs. Crore) FY 2019-20	PBDIT (in Rs. Crore) FY 2020-21	PBDIT (in Rs. Crore) FY 2021-22
Company 1							
Total							

**The column for “Relationship with Bidding Company” is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/chartered accountant is required to be attached with the format.*

Exhibit (ii): Applicable in case of Bidding Consortium

(To be filled by each Member in a Bidding Consortium separately)

Name of Member: [Insert name of the Member]

For the above calculations, we have considered Profitability by Member in Bidding Consortium and/or its Affiliate(s) as per following details:

Name of Consortium Member Company	Name of Affiliate(s) whose PBDIT# is to be considered	Relationship with Bidding Company* (If Any)	PBDIT (in Rs. Crore) FY 2017-18	PBDIT (in Rs. Crore) FY 2018-19	PBDIT (in Rs. Crore) FY 2019-20	PBDIT (in Rs. Crore) FY 2020-21	PBDIT (in Rs. Crore) FY 2021-22	Equity Commitment (in %age) in Bidding Consortium
Company 1								
Company 2								
Total								

** The column for “Relationship with Bidding Company” is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/chartered accountant is required to be attached with the format*

PBDIT: Profit before Depreciation Interest and Taxes

(Signature & Name of the Authorized Signatory)

(Signature and Stamp of CA)

Membership No.

Regn. No. of the CA’s Firm:

UDIN:

Date:

Note: (i) Along with the above format, in a separate sheet on the letterhead of the Chartered Accountant’s Firm, provide details of computation of Net Worth and Annual Turnover duly certified by the Chartered Accountant.

(ii) Certified copies of Balance sheet, Profit & Loss Account, Schedules and Cash Flow Statements are to be enclosed in complete form along with all the Notes to Accounts.

UNDERTAKING

(To be submitted on the letterhead of the Bidder)

We, hereby provide this undertaking to Solar Energy Corporation of India Limited, in respect to our response to RfS vide RfS No. _____ dated _____, that M/s _____ (insert name of the Bidder), or any of its Affiliates is not a willful defaulter to any lender, and that there is no major litigation pending or threatened against M/s _____ (insert name of the Bidder) or any of its Affiliates which are of a nature that could cast a doubt on the ability or the suitability of the Bidder to undertake the Project.

(Name and Signature of the Authorized Signatory)

FORMAT FOR DISCLOSURE

(To be submitted on the Letter Head of the Bidding Company/ Each Member of Consortium)

DISCLOSURE

Ref. No. _____

Date: _____

From: _____ (*Insert name and address of Bidding Company/ Lead Member of Consortium*)

Tel. #:

Fax #:

E-mail address#

To

Solar Energy Corporation of India Limited

6th Floor, Plate-B, NBCC Office Block Tower-2,

East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____

Dear Sir/ Madam,

We hereby declare and confirm that only we are participating in the RfS Selection process for the RfS No. _____ dated _____ and that our Parent, Affiliate or Ultimate Parent or any Group Company with which we have direct or indirect relationship are not separately participating in this selection process.

We further declare that the above statement is true & correct. We undertake that if at any stage it is found to be incorrect, in addition to actions applicable under the RfS including but not limited to cancellation of our response to this RfS and LoA, we, i.e. M/s _____ (enter name of the bidding company/member in a consortium), including our Parent, Ultimate Parent, and our Affiliates shall be suspended/debarred from participating in any of the upcoming tenders issued by SECI for a period of 2 years from the date of default as notified by SECI.

We also understand that the above is in addition to the penal consequences that may follow from the relevant laws for the time being in force.

We further declare that we have read the provisions of Clause 40.4 of the RfS, and are complying with the requirements as per the referred OM dated 23.07.2020 except Sl.11 of the OM, including subsequent amendments and clarifications thereto. Accordingly, we are also enclosing necessary certificates (Annexure to this format) in support of the above compliance under the RfS. We understand that in case of us being selected under this RfS, any of the above certificates is found false, SECI shall take appropriate action as deemed necessary.

We further declare that we are fully aware of the binding provisions of the ALMM Order and the Lists(s) thereunder, while quoting the price in RfS for _____ (Enter the name of the RfS).

We further understand that the List-I (Solar PV Modules) of ALMM Order, Annexure-I of the OM, issued by MNRE on 10th March, 2021 will be updated by MNRE from time to time. We also understand that the Modules to be procured for this project, shall be from the List-I of the ALMM Order applicable on the date of invoicing of such modules.

We also further understand and accept that we shall be liable for penal action, including but not limited to blacklisting and invocation of Performance Bank Guarantee, if we are found not complying with the provisions of ALMM Order, including those mentioned above.

Dated the _____ day of _____, 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/
Board Resolution/ Declaration.

FORMAT FOR DISCLOSURE

(To be submitted on the Letter Head of the Bidding Company/ Each Member of Consortium)

(To be submitted by all such bidders in which a common Company/companies directly/indirectly own(s) more than 10% but less than 26% shareholding)

DISCLOSURE

Ref.No. _____

Date: _____

From: _____ (Insert name and address of Bidding Company/ Lead Member of Consortium)

Tel.#: Fax#:

E-mail address#

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated ____ for _____.

Dear Sir/ Madam,

We hereby declare and confirm that in terms of the definitions of the RfS, M/s _____ (enter name of the common shareholder) is our Group Company, and has a direct/indirect shareholding of less than 26% in the bidding company. M/s _____ (enter name of the common shareholder) also holds directly/indirectly less than 26% shareholding in other Companies which may participate in this RfS, i.e., RfS No. _____.

We undertake that M/s _____ (enter name of the above common shareholder) is not a party to the decision-making process for submission of response to this RfS by M/s _____ (enter name of the bidding company/member in the consortium). We further undertake that while undertaking any action as part of our response to RfS, we are not complicit with other such bidders participating in this RfS, in which M/s _____ (enter name of the common shareholder) has less than 26% direct/indirect shareholding, if any.

We further declare that the above statement is true & correct. We undertake that if at any stage it is found to be incorrect, in addition to actions applicable under the RfS including but not limited to cancellation of our response to this RfS and LoA, we, i.e. M/s _____ (enter name of the bidding company/member in a consortium), including our Parent, Ultimate Parent, and our Affiliates shall be suspended/debarred from participating in any of the upcoming tenders issued by SECI for a period of 2 years from the date of default as notified by SECI.

We also understand that the above is in addition to the penal consequences that may follow from the relevant laws for the time being in force.

We further declare that we have read the provisions of Clause 40 of the RfS, and are complying with the requirements as per the referred OM dated 23.07.2020 except Sl. 11 of the OM, including subsequent amendments and clarifications thereto. Accordingly, we are also enclosing necessary certificates (Annexure to this format) in support of the above compliance under the RfS. We understand that in case of us being selected under this RfS, any of the above certificates is found false, SECI shall take appropriate action as deemed necessary.

We further declare that we are fully aware of the binding provisions of the ALMM Order and the Lists(s) thereunder, while quoting the price in RfS for _____ (Enter the name of the RfS).

We further understand that the List-I (Solar PV Modules) of ALMM Order, Annexure-I of the OM, issued by MNRE on 10th March, 2021 will be updated by MNRE from time to time. We also understand that the Modules to be procured for this project, shall be from the List-I of the ALMM Order applicable on the date of invoicing of such modules.

We also further understand and accept that we shall be liable for penal action, including but not limited to blacklisting and invocation of Performance Bank Guarantee, if we are found not complying with the provisions of ALMM Order, including those mentioned above.

Dated the _____ day of _____, 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/
Board Resolution/ Declaration.

DECLARATION**RESTRICTION ON PROCUREMENT FROM CERTAIN COUNTRIES:
MoF OM No 6/18/2019-PPD dated 23.07.2020**

(To be submitted on the Letter Head of the Bidding Company/ Each Member of Consortium)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidding Company/Member of Consortium)*

Tel.#: Fax#:

E-mail address#

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to the RfS No dated

Dear Sir/ Madam,

This is with reference to attached order No. OM no. 6/18/2019-PPD dated 23rd July 2020 issued by Department of Expenditure, MoF, Govt of India.

We are hereby submitting the following declaration in this regard:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. Where applicable, evidence of valid registration by the Competent Authority shall be attached]."

We further declare that the above statement is true & correct. We are aware that if at any stage it is found to be incorrect, our response to the tender will be rejected.

Dated the _____ day of _____, 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Signatory.

Enclosure: OM dated 23.07.2020, as referred above

(This format is for reference purpose only. The scanned version of the format, duly signed by SECI's authorized signatory, is available on the ETS portal as addendum to the RfS. Bidders are required to submit signed and scanned copy of the document available on ETS portal)

INTEGRITY PACT

Between

Solar Energy Corporation of India

having its Registered Office at 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai
Nagar, New Delhi-110023, India

hereinafter referred to as

"SECI",

and

[Insert the name of the Sole Bidder/all members of the of Joint Venture/Consortium]

having its Registered Office at _____

(Insert full Address/Lead member address in case of Joint Venture/Consortium)

and

[Insert the name of all members of the Joint Venture/Consortium, as applicable]

having its Registered Office at _____

(Insert full Address/ Lead member address in case of Joint Venture/Consortium)

hereinafter referred to as

"The Bidder/Contractor"

Preamble

SECI intends to award, under laid-down organisational procedures, contract(s) for _____ *[Insert the name of the tender/package]* _____ Package and NIT Number _____ SECI values full compliance with all *[Insert Specification Number of the package]* relevant laws and regulations, and the principles of economical use of resources, and of fairness and transparency in its relations with its Bidders/ Contractors.

In order to achieve these goals, SECI and the above-named Bidder/Contractor enter into this agreement called '**Integrity Pact**' which will form an integral part of the bid.

It is hereby agreed by and between the parties as under:

Section I - Commitments of SECI

- (1) SECI commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - a) No employee of SECI, personally or through family members, will in connection with the tender, or the execution of the contract, demand, take a promise for or accept, for him/herself or third person, any material or other benefit which he/she is not legally entitled to.
 - b) SECI will, during the tender process treat all Bidder(s) with equity and fairness. SECI will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - (c) SECI will exclude from evaluation of Bids its such employee(s) who has any personal interest in the Companies/Agencies participating in the Bidding/Tendering process
- (2) If Managing Director obtains information on the conduct of any employee of SECI which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a substantive suspicion in this regard, he will inform its Chief Vigilance Officer and in addition can initiate disciplinary actions under its Rules.

Section II - Commitments of the Bidder/Contractor

- (1) The Bidder/Contractor commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution:
 - a) The Bidder/Contractor will not, directly or through any other person or firm, offer, promise or give to SECI, or to any of SECI's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange an advantage during the tender process or the execution of the contract.
 - b) The Bidder/Contractor shall not enter into any agreement/ arrangement/ understanding/ action in concert, whether or not the same is formal or in writing with other Bidders/Contractors. This applies in particular to agreements pertaining to prices, territorial or geographical allocations of market, specifications, certifications, subsidiary contracts, submission or non-submission of bids, bid rigging or other actions restricting competitiveness or leading to cartelization in the bidding process or amounting to any other violation under the Competition Laws for the time being in force.
 - c) The Bidder/Contractor will not commit any criminal offence under the relevant Anti-corruption Laws of India; further, the Bidder/Contractor will not use for illegitimate purposes or for purposes of restrictive competition or personal gain, or pass on to others, any information provided by SECI as part of the business relationship, regarding plans, technical proposals and business details, including information

contained or transmitted electronically.

- d) Bidders will not pass any information provided by Principal as part of business relationship to others and not to commit any offence under PC/ IPC Act
 - e) The Bidder/Contractor of Indian Nationality shall furnish the name and address of the foreign principals, if any, involved directly or indirectly in the Bidding.
 - f) The Bidder/Contractor will, when presenting his bid, disclose any and all payments he has made, or committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and/or with the execution of the contract.
 - g) The Bidder/Contractor will not misrepresent facts or furnish false/forged documents/information in order to influence the bidding process or the execution of the contract to the detriment of SECI.
- (2) The Bidder/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section III- Disqualification from tender process and exclusion from future contracts

- (1) If the Bidder, before contract award, has committed a serious transgression through a violation of Section II or in any other form such as to put his reliability or credibility as Bidder into question, SECI may disqualify the Bidder from the tender process or terminate the contract, if already signed, for such reason.
- (2) If the Bidder/Contractor has committed a serious transgression through a violation of Section II such as to put his reliability or credibility into question, SECI may after following due procedures also exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder/Contractor and the amount of the damage. The exclusion will be imposed for a minimum of 12 months and maximum of 36 months.
- (3) If the Bidder/Contractor can prove that he has restored/recouped the damage caused by him and has installed a suitable corruption prevention system, SECI may revoke the exclusion prematurely. However, decision of SECI in this regard shall be final and binding on the bidder/Contractor.

Section IV - Liability for violation of Integrity Pact

- (1) If SECI has disqualified the Bidder from the tender process prior to the award under Section III, SECI may forfeit the applicable Bid Security/Earnest Money Deposit under the Bid.
- (2) If SECI has terminated the contract under Section III, SECI may forfeit the Contract Performance Security of this contract besides resorting to other remedies under the contract.

Section V- Previous Transgression

- (1) The Bidder shall declare in his Bid that no previous transgressions occurred in the last 3 years with any other Public Sector Undertaking or Government Department that could justify his

exclusion from the tender process.

- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section VI - Equal treatment to all Bidders / Contractors

- (1) SECI will enter into agreements with identical conditions as this one with all Bidders.
- (2) SECI will disqualify from the tender process any bidder who does not sign this Pact or violate its provisions.

Section VII - Punitive Action against violating Bidders / Contractors

If SECI obtains knowledge of conduct of a Bidder or a Contractor or his subcontractor or of an employee or a representative or an associate of a Bidder or Contractor or his Subcontractor which constitutes corruption, or if SECI has substantive suspicion in this regard, SECI will inform the Chief Vigilance Officer (CVO).

Nothing mentioned hereinabove may deem to restrict the right of SECI, in case of a suspected violation of Section II, Clause (1) (b) by the Bidders/ contractors to initiate necessary action under the Competition Laws for the time being in force.

(* Section VIII - Independent External Monitor/Monitors

- (1) SECI has appointed a panel of Independent External Monitors (IEMs) for this Pact with the approval of Central Vigilance Commission (CVC), Government of India, details of which has been indicated in the tender document.
- (2) The IEM is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement. He has right of access to all project documentation. The IEM may examine any complaint received by him and submit a report to Managing Director, SECI, at the earliest. He may also submit a report directly to the CVO and the CVC, in case of suspicion of serious irregularities attracting the provisions of the PC Act. However, for ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter shall be referred to the full panel of IEMs, who would examine the records, conduct the investigations and submit report to Managing Director, SECI, giving joint findings.
- (3) The IEM is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Managing Director, SECI.
- (4) The Bidder(s)/Contractor(s) accepts that the IEM has the right to access without restriction to all documentation of SECI related to this contract including that provided by the Contractor/Bidder. The Bidder/Contractor will also grant the IEM, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his documentation. The same is applicable to Subcontractors. The IEM is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality.
- (5) SECI will provide to the IEM information as sought by him which could have an impact on the contractual relations between SECI and the Bidder/Contractor related to this contract.

- (6) As soon as the IEM notices, or believes to notice, a violation of this agreement, he will so inform the Managing Director, SECI and request the Managing Director, SECI to discontinue or take corrective action, or to take other relevant action. The IEM can in this regard submit non-binding recommendations. Beyond this, the IEM has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action. However, the IEM shall give an opportunity to SECI and the Bidder/Contractor, as deemed fit, to present its case before making its recommendations to SECI.
- (7) The IEM will submit a written report to the Managing Director, SECI within 8 to 10 weeks from the date of reference or intimation to him by SECI and, should the occasion arise, submit proposals for correcting problematic situations.
- (8) If the IEM has reported to the Managing Director, SECI, a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Managing Director, SECI has not, within the reasonable time taken visible action to proceed against such offence or reported it to the CVO, the Monitor may also transmit this information directly to the CVC, Government of India.
- (9) The word 'IEM' would include both singular and plural.
- (*) *This Section shall be applicable for only those packages wherein the IEMs have been identified in Section – I: Invitation for Bids and/or Clause ITB ... in Section – III: Bid Data Sheets of Conditions of Contract, Section-3 of the RfS.*
- (10) A bidder/Contractor signing the IP shall not approach the Courts while representing the matters to IEMs and he will await till their decision in the matter.

Section IX - Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor after the closure of the contract and for all other Bidder's six month after the contract has been awarded.

Section X - Other Provisions

- (1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the establishment of SECI.
- (2) Changes and supplements as well as termination notices need to be made in writing.
- (3) If the Contractor is a partnership firm or a consortium or Joint Venture, this agreement must be signed by all partners, consortium members and Joint Venture partners.
- (4) Nothing in this agreement shall affect the rights of the parties available under the General Conditions of Contract (GCC) and Special Conditions of Contract (SCC) which are part of the Bidding Document.
- (5) Views expressed or suggestions/submissions made by the parties and the recommendations of the CVO/IEM[#] in respect of the violation of this agreement, shall not be relied on or introduced as evidence in the arbitral or judicial proceedings (arising out of the arbitral proceedings) by the parties in connection with the disputes/differences arising out of the subject contract.

CVO shall be applicable for packages wherein IEM are not identified in the bidding document IEM shall be applicable for packages wherein IEM are identified in the bidding document.

- (6) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(Signature) _____

(Signature) _____

(For & On behalf of SECI)

**(For & On behalf of Bidder/ Partner(s) of
Joint Venture/Consortium/ Contractor)**

(Office Seal)

(Office Seal)

Name: _____

Name: _____

Designation: _____

Designation: _____

Witness 1 : _____

Witness 1 : _____

(Name & Address) _____

(Name & Address) _____

Witness 2 : _____

Witness 2 : _____

(Name & Address) _____

(Name & Address) _____

FORMAT FOR SUBMISSION OF FINANCIAL BID

(The Covering Letter should be submitted on the Letter Head of the Bidding Company/ Lead Member of Consortium)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidding Company/ Lead Member of Consortium)*

Tel. #:

Fax #:

E-mail address#

To

Solar Energy Corporation of India Limited

6th Floor, Plate-B, NBCC Office Block Tower-2,

East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

I/ We, _____ (Insert Name of the Bidder) enclose herewith the Price Bid/Financial Proposal for selection of my/our firm, in line with the Price Bid Schedule enclosed herewith.

I/We have applied for SPWPS to be set up in State/UTs _____ (insert State/UT nos.) under this RfS.

I/We agree that this offer shall remain valid for a period upto the date as on 12 months from the due date of submission of the response to RfS and such further period as may be mutually agreed upon.

Dated the _____ day of _____, 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

Notes:

1. *For each line item (i.e., type of pump for each State/UT), there can be only one price applied for by the Bidder. If the bidder quotes two prices or combination thereof for the line item, then the bid shall be considered as non-responsive.*
2. *If the bidder submits the financial bid in the Electronic Form at ETS portal not in line with the instructions mentioned therein, then the bid shall be considered as non-responsive.*
3. *Price requirement shall be quoted as a fixed amount in Indian Rupees only. Conditional proposal shall be summarily rejected.*
4. *In the event of any discrepancy between the values entered in figures and in words, the values entered in words shall be considered.*
5. *Price should be in Indian Rupee up to two decimal places only.*

**DECLARATION REGARDING BANNING, LIQUIDATION, COURT RECEIVERSHIP
ETC.**

(To be submitted on the Letter Head of the Bidder)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder)*

Tel.#: _____ Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We hereby confirm that we are not on Banning List by SECI or Public Sector Project Management due to poor performance or Corrupt/ Fraudulent/ Collusive/ Coercive Practices or any other reason or banned by Government department/ Public Sector on due date of submission of bid.

Further, we confirm that neither we nor our allied agency(ies) are on banning list of SECI or the Ministry of New & Renewable Energy.

We also confirm that we are not under any liquidation, court receivership or similar proceedings or bankruptcy.

In case it comes to the notice of SECI that we have given wrong declaration in this regard, the same shall be dealt as Fraudulent Practices and we shall be banned by SECI for a period which shall be decided by SECI on case-to-case basis, subject to minimum period of banning being 06 months from the date of issuance of banning order.

Further, we also confirm that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to SECI by us.

(Name and Signature of the Authorized Signatory)

DECLARATION FOR THE LOCAL CONTENT*(To be submitted on the Letter Head of the Bidder)*

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder)*

Tel. #:

Fax #:

E-mail address#

To

Solar Energy Corporation of India Limited

6th Floor, Plate-B, NBCC Office Block Tower-2,

East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We declare that we will be using indigenously manufactured solar panels with indigenous solar cells and modules. Further, we are agreeing to accept and follow Guidelines for the implementation of PM-KUSUM scheme issued by MNRE on 22-07-2019 and its subsequent amendment(s).

Further, we hereby undertake that I/We certify that we/our Collaborator/JV Partner are/is are not being under debar list/undergoing debarment period on account of breach of the code of integrity under Rule 175(1)(i)(h) of the General Financial Rules for giving false declarations of local content.

List of imported components used in the manufacturing of solar water pumping system:

S. No.	Item Imported

(Name and Signature of the Authorized Signatory)

Signature of Supplier with Stamp

UDIN.....

Format 7.13**DECLARATION FOR USING SAME MAKE OF EQUIPMENTS AS PER THE TEST
CERTIFICATE***(To be submitted on the Letter Head of the Bidder)*

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder)*

Tel. #:

Fax #:

E-mail address#

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We are agreeing to accept that the same make of solar panels, pumps, VFD/inverter/controller for which the test report is to be submitted to the Implementing agency, as per MNRE solar pump testing procedure 2019 and amendments thereof, will be supplied by us.

In case, if some different make of solar panels, pumps, VFD/inverter/controller will be supplied during the implementation or AMC period, we will submit the test report for that particular make component(s). We also agree that such test reports shall be issued by the National Institute of Solar Energy and any other lab accredited by NABL for testing of solar PV water pumping system as per MNRE specifications and testing procedure.

(Name and Signature of the Authorized Signatory)

**DECLARATION FOR SUBMITTING THE TEST CERTIFICATE AS PER MNRE
TECHNICAL SPECIFICATIONS FOR SOLAR WATER PUMPSETS ISSUED IN 2019**

(To be submitted on the Letter Head of the Bidder)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder)*

Tel. #:

Fax #:

E-mail address#

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi – 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We are agreeing to accept that the test certificates are to be submitted to the Implementing Agency, reports as per MNRE technical specifications and testing procedures issued in 2019 and amendments thereof, will be submitted by us by 31.07.2023 or before issue of LoA, whichever is later. In failure of which our empanelment will stand cancelled, without any prior intimation. These certificates shall be submitted either in original form or attested copy by the issuing test lab.

(Name and Signature of the Authorized Signatory)

CERTIFICATE REGARDING COMPLIANCE OF MeitY NOTIFICATION VIDE FILE**NO. 1(10)/2017-CLES dt. 02.07.18***(To be submitted on the Letter Head of the Bidder)*

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder)*

Tel.#: _____ Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

This is to certify that the products/items being offered/ quoted against RfS No. dated by M/s meet the definition of domestically manufactured/ produced Cyber Security Products as per Para 4 of MeitY notification vide File no. 1(10)/2017-CLES dt. 02.07.18 and the bidder shall strictly abide by all provisions of the subject notification.

Thanking you,

Yours faithfully,

Signature (Statutory Auditor or Cost Auditor)

.....

Printed Name.....

UDIN.....

Seal.....

FORMAT FOR SUBMISSION OF PRICE BID

Not used/Deleted

PRELIMINARY ESTIMATE OF COST OF SPWPS*(To be submitted along with the Price bid only during bid submission)*

S. No.	Particulars	Estimated Cost (In Lakhs INR) (exclusive of GST)
1.	System Cost	
	<i>i. Module</i>	
	<i>ii. Pump</i>	
	<i>iii. Controller</i>	
	<i>iv. Module Mounting Structure (MMS)</i>	
	<i>v. Balance of System (BoS)</i>	
2.	Transportation Cost	
3.	Installation Cost	
4.	5-year EMC Cost	
5.	5-year Insurance Cost	
6.	Others (if any)	

Dated the _____ day of _____, 20....

Thanking you,
 We remain,
 Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/
 Board Resolution/ Declaration.

DECLARATION REGARDING THE DIFFERENT MODELS OF SOLAR WATER PUMPING SYSTEMS SPECIFIED IN THE MNRE SPECIFICATION FOR THE PARTICULAR CATEGORY/TYPE OF THE PUMPS

(To be provided on the letter head of the bidder)

Ref No. _____

Date: _____

From: _____ (Insert name and address of Bidding Company/ Lead Member of Consortium)

Tel.#: _____

Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Vide this declaration this is to certify that that M/s..... (Name of the Bidder) has all the models(*e.g. Model-5, Model-6 & Model-7, it is mentioned w.r.t. 5HP-AC-Submersible pump*) of the Solar Water Pumping System as specified in the table, category/type-wise of the pumps (5HP-AC-Submersible) as per the MNRE specifications published vide 41/03/2018-SPV Division dated 02.02.2023, for which the firm is participating in the bid for the various state(s) and will furnish the required **test reports** and details of the models specified: Shut Off-Head (meters), Dynamic-Head (meters), Water output (Liters per day), No. of stages in the model, diameter of each stage of the respective model, Diameter of the discharge pipe (in inches) to MNRE and the concerned SIA at the time of signing of agreement with SIA for supply of such pumps.

Table

The details of the different models which are to be supplied by the firm:

S. No.	Type/Category of the pump	Model No. as per MNRE Specification, to be supplied by the firm

I,, on behalf of M/s..... (Name of the Bidder) am aware, without any doubt, that any deviation of the above information with the information provided to SIA/MNRE at the time of signing of agreement would invite penalties such as forfeiture of EMD by SIA and/or blacklisting of firm for the period of 5 years from the date of the issue of the Notice for the blacklisting.

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/
Board Resolution/ Declaration.

SELF-CERTIFICATE IN LIEU OF TEST CERTIFICATE(S) FOR SOLAR WATER PUMPING SYSTEMS*(To be provided on the letter head of the bidder)***REFER TO THE NIT/BID DOCUMENT NO.:** _____

From:

M/s _____

I,, on behalf of M/s..... (Name of the bidder) certify that M/s..... (Name of the bidder) who are currently not having test certificate(s) as per Solar Water Pumping System specifications published by MNRE vide 41/03/2018-SPV Division dated 13.03.2023 for the solar pump model(s) as specified in the table below, will submit the required test certificate(s) as per the above-mentioned specification to the concerned State Implementing Agency latest by 31.07.2023.

In event of failure to submit the required test certificate(s) for the specified model(s) by 31.07.2023, I am aware, without any doubt, that the empanelment of M/s..... (Name of the bidder) under the referred tender will stand cancelled and EMD deposited by the firm would be forfeited.

Table

The details of the different model(s) for which test certificate(s) is/are not currently available with the bidder and same will be submitted by 31.07.2023:

S. No.	Type/ Category of the pump	Model No. as per MNRE Specification, to be supplied by the firm

Signature of supplier with stamp

Name of Authorized Signatory and Designation: -

SOLAR ENERGY CORPORATION OF INDIA LIMITED

NEW DELHI

Ref No. SECI/C&P/MI/13/0010/2022-23/Clarification-03

Dated 21-03-2023

Clarification-03 to the RfS Document for Selection of Vendors for a work contract to Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of Off Grid Solar Photovoltaic Water Pumping Systems (SPWPS) of 1-15 HP capacities in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under Component-B of PM-KUSUM scheme of MNRE			
RfS No. SECI/C&P/MI/00/0010/2022-23 dated 31.12.2022			
S. No.	Clause/Article No.	Existing Clause/Article	Clarification/amendment to Clause/Article
Amendments in the RfS document			
	21.1	No documents will be accepted after the due date and time of bid submission. Bank Guarantee against EMD needs to be submitted in both online and offline modes.....	No documents will be accepted after the due date and time of bid submission. Bank Guarantee(s) against EMD needs to be submitted in both online and offline modes. The bidders will be required to submit the bank guarantee/POI against EMD and DDs/Pay Orders (if applicable) against the bid processing fee, either in person or through post, at the office of SECI on or before the closing date of bid submission. Note: In all cases, the Bank Guarantee/POI against EMD along with DDs/Pay order, shall be issued on or before the bid submission deadline. These instruments issued after the expiry of the deadline will be summarily rejected....
	16	Note: Payment shall be made to vendor within 30 days after submission of three copies of invoices to Engineer-in charge, complete in all respect along with 90 days accurate performance data of SPWPS through RMS on State SEDM portal and central portal of PM-KUSUM.	Stage-II: Balance 10% on completion of one month from date of completion certificate Payment shall be made to vendor within 30 days after submission of three copies of invoices to Engineer-in charge, complete in all respect along with 90 days accurate performance data of SPWPS through RMS on State SEDM portal and central portal of PM-KUSUM.
	Price Bid Schedule (Annexure-D1 & D2)	The excel file annexed as Annexure-D1 and Annexure-D2 of the RfS shall be used for entering the price bid. Duly Signed and scanned copy of the same will be required to be uploaded on the portal).	The excel file annexed as Annexure-D1 and Annexure-D2 of the RfS shall be used for entering the price bid. Duly Signed and scanned copy of the same will be required to be uploaded on the portal).

		<p>Additionally, The filled-out Excel file(s) must also be submitted in envelope-2 of the online bid portal.</p> <p>NOTE: In case of discrepancies between excel and scanned price bid(s), prices mentioned in excel files of Annexure-D1 and D2 shall prevail.</p>	<p>Additionally, The filled-out Excel file(s) must also be submitted in envelope-2 of the online bid portal.</p> <p>NOTE: In case of discrepancies between excel and scanned price bid(s), prices mentioned in excel files of Annexure-D1 and D2 shall prevail.</p> <p>For ease of submission of signed and scanned copy of price bid(s), Bidders can only delete the respective state columns in price bid formats (i.e. Annexure-D1 and D2) where bids are not quoted for.</p> <p>However, No alteration shall be made in filled-out excel files mandatory to be provided along with signed and scanned price bids in envelope-2.</p>
18.xvi Attachment	<p>....</p> <p>viii. In support of technical QR criteria, work order copies/Invoices and Completion Certificates shall also be submitted.</p> <p>....</p>	<p>....</p> <p>viii. In support of technical QR criteria, work order copies/Invoices and Completion Certificates shall also be submitted.</p> <p>In the case of PV Module Manufacturers, completion certificates must be provided on the letterhead of the buyer to whom the modules have been supplied. The buyer/client must state that the modules are used exclusively for solar water pumping applications.</p> <p>.....</p>	
	<p>...</p> <p>Technical Bid(First Envelope) ..</p> <p>a. Formats - 7.1, 7.2 (if applicable), 7.3 A/7.3 B, 7.4, 7.5 (if applicable), 7.6, 7.7, 7.8/7.8A and 7.9, 7.11, 7.12, 7.13, 7.14, 7.15, 7.18 and 7.19 as elaborated in Clause 16 of the RfS.</p>	<p>...</p> <p>Technical Bid(First Envelope) ..</p> <p>a. Formats - 7.1, 7.2 (if applicable), 7.3 A/7.3 B, 7.4, 7.5 (if applicable), 7.6, 7.7, 7.8/7.8A and 7.9, 7.11, 7.12, 7.13, 7.14, 7.15, 7.18 and 7.19 as elaborated in Clause 18 of the RfS.</p>	
21.2.II.a	<p>.....</p> <p>ii. Duly signed and stamped strictly as per price bid Format 7.17 of the RfS.</p>	<p>ii. Deleted/Not Used.</p>	
40.10	<p>Registered Proprietorship firms (Governed by the Indian Partnership Act, 1932 or equivalent law/act of respective state) are also allowed as the manufacture of modules, pumps, and controllers or as Page 5 of 52 a System Integrator (SI) to participate under this RfS.</p>	<p>Registered Partnership/Proprietorship firms (Governed by the Indian Partnership Act, 1932 or equivalent law/act of respective state) are also allowed as the manufacture of modules, pumps, and controllers or as a System Integrator (SI) to participate under this RfS.</p>	

REVISED SAMPLE FORMS & FORMATS FOR BID SUBMISSION

Format 7.5

FORMAT FOR CONSORTIUM AGREEMENT

(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)

THIS Consortium Agreement (“Agreement”) executed on this ___ Day of _____ Two Thousand _____ between M/s _____ [Insert name of Lead Member] a Company incorporated under the laws of _____ and having its Registered Office at _____ (hereinafter called the “**Member-1**”, which expression shall include its successors, executors and permitted assigns) and M/s _____ a Company incorporated under the laws of _____ and having its Registered Office at _____ (hereinafter called the “**Member-2**”, which expression shall include its successors, executors and permitted assigns), [The Bidding Consortium should list the details of all the Consortium Members] for the purpose of submitting response to RfS and **execution of contact agreement with SIA** (in case of award), against RfS No. _____ dated _____ issued by Solar Energy Corporation of India Limited (SECI) a Company incorporated under the Companies Act, 2013, and having its Registered Office at 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi - 110023

WHEREAS, each Member individually shall be referred to as the “Member” and all of the Members shall be collectively referred to as the “Members” in this Agreement.

WHEREAS SIA desires to install SPWPS under RfS for _____ (insert title of the RfS);

WHEREAS, SECI had invited response to RfS vide its Request for Selection (RfS) dated _____

WHEREAS the RfS stipulates that in case response to RfS is being submitted by a Bidding Consortium, the Members of the Consortium will have to submit a legally enforceable Consortium Agreement in a format specified by SECI wherein the Consortium Members have to commit equity investment of a specific percentage for the SPWPS.

NOW THEREFORE, THIS AGREEMENT WITNESSTH AS UNDER:

In consideration of the above premises and agreements all the Members in this Bidding Consortium do hereby mutually agree as follows:

1. We, the Members of the Consortium and Members to the Agreement do hereby unequivocally agree that Member-1 (M/s _____), shall act as the Lead Member as defined in the RfS for self and agent for and on behalf of Member-2, and to submit the response to the RfS.
2. The Lead Member is hereby authorized by the Members of the Consortium and Members to the Agreement to bind the Consortium and receive instructions for and on their behalf.

3. Notwithstanding anything contrary contained in this Agreement, the Lead Member shall always be liable for the equity investment obligations of all the Consortium Members i.e., for both its own liability as well as the liability of other Members.
4. The Lead Member shall be liable and responsible for ensuring the individual and collective commitment of each of the Members of the Consortium in discharging all of their respective equity obligations. Each Member further undertakes to be individually liable for the performance of its part of the obligations without in any way limiting the scope of collective liability envisaged in this Agreement.
5. Subject to the terms of this Agreement, the share of each Member of the Consortium **will be as under**

Name	Percentage
Member 1	---
Member 2	---
Total	100%

6. In case of any breach of any equity investment commitment by any of the Consortium Members, the Lead Member shall be liable for the consequences thereof.
7. Except as specified in the Agreement, it is agreed that sharing of responsibilities as aforesaid and equity investment obligations thereto shall not in any way be a limitation of responsibility of the Lead Member under these presents.
8. It is further specifically agreed that the financial liability for equity contribution of the Lead Member shall not be limited in any way so as to restrict or limit its liabilities. The Lead Member shall be liable irrespective of its scope of work or financial commitments.
9. This Agreement shall be construed and interpreted in accordance with the Laws of India and courts at New Delhi alone shall have the exclusive jurisdiction in all matters relating thereto and arising thereunder.
10. It is hereby further agreed that in case of being selected as the Selected Vendor, the Members do hereby agree that they shall furnish the Performance Guarantee in favour of SIA in terms of the RfS.
11. It is further expressly agreed that the Agreement shall be irrevocable and shall form an integral part of the Contract Agreement and shall remain valid until the expiration or early termination of the Contract Agreement in terms thereof, unless expressly agreed to the contrary by SECI.
12. The Lead Member is authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Members respectively from time to time in the response to RfS.

- 13. It is hereby expressly understood between the Members that no Member at any given point of time, may assign or delegate its rights, duties or obligations under the Contract Agreement except with prior written consent of SECI.
- 14. This Agreement
 - a) has been duly executed and delivered on behalf of each Member hereto and constitutes the legal, valid, binding and enforceable obligation of each such Member;
 - b) sets forth the entire understanding of the Members hereto with respect to the subject matter hereof; and
 - c) may not be amended or modified except in writing signed by each of the Members and with prior written consent of SECI.
- 15. All the terms used in capitals in this Agreement but not defined herein shall have the meaning as per the RfS.

IN WITNESS WHEREOF, the Members have, through their authorized representatives, executed these present on the Day, Month and Year first mentioned above.

For M/s----- [Member 1]

(Signature, Name & Designation of the person authorized vide Board Resolution Dated _____)

Witnesses:

1) Signature-----

2) Signature -----

Name:

Name:

Address:

Address:

For M/s-----[Member 2]

(Signature, Name & Designation of the person authorized vide Board Resolution Dated _____)

Witnesses:

1) Signature -----

2) Signature -----

Name:

Name:

Address:

Address:

Signature and stamp of Notary of the place of execution

DECLARATION FOR THE LOCAL CONTENT*(To be submitted on the Letter Head of the Bidder/Lead member)*

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder)*

Tel. #:

Fax #:

E-mail address#

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We declare that we will be using indigenously manufactured solar panels with indigenous solar cells and modules. Further, we are agreeing to accept and follow Guidelines for the implementation of PM-KUSUM scheme issued by MNRE on 22-07-2019 and its subsequent amendment(s).

We are aware that in accordance with order no. F. No. 283/22/2019-GRID SOLAR dated 09.02.2021 issued by MNRE, only class-I Local Suppliers' are eligible to bid under this RfS. Also, we have carefully gone through the above mentioned order to understand the whole process and definitions of various terms (Class-I Local Supplier, Local Content etc.) pertaining to above referred order and its supporting appendix and annexures as amended till date.

Further, we hereby undertake that I/We certify that we/our Collaborator/JV Partner are/is are not being under debar list/undergoing debarment period on account of breach of the code of integrity under Rule 175(1)(i)(h) of the General Financial Rules for giving false declarations of local content.

List of imported components used in the manufacturing of solar water pumping system:

S. No.	Item Imported

(Name and Signature of the Authorized Signatory of the bidder/lead member)

**DECLARATION FOR USING SAME MAKE OF EQUIPMENTS AS PER THE TEST
CERTIFICATE**

(To be submitted on the Letter Head of the Bidder)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder)*

Tel.#:

Fax#:

E-mail address#

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We are agreeing to accept that the same make of solar panels, pumps, VFD/inverter/controller for which the test report is to be submitted to the Implementing agency, as per **MNRE's latest revised solar pump testing procedure issued in 2023** and amendments thereof, will be supplied by us.

In case, if some different make of solar panels, pumps, VFD/inverter/controller will be supplied during the implementation or AMC period, we will submit the test report for that particular make component(s). We also agree that such test reports shall be issued by the National Institute of Solar Energy and any other lab accredited by NABL for testing of solar PV water pumping system as per MNRE specifications and testing procedure.

(Name and Signature of the Authorized Signatory)

**DECLARATION FOR SUBMITTING THE TEST CERTIFICATE AS PER MNRE
TECHNICAL SPECIFICATIONS FOR SOLAR WATER PUMPSETS ISSUED IN 2023**

(To be submitted on the Letter Head of the Bidder)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidder)*

Tel.#:

Fax#:

E-mail address#

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi – 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We are agreeing to accept that the test certificates are to be submitted to the Implementing Agency, reports as per **MNRE's revised** technical specifications and testing procedures issued in **2023(latest)** and amendments thereof, will be submitted by us by 31.07.2023 or before issue of LoA, whichever is later. In failure of which our empanelment will stand cancelled, without any prior intimation. These certificates shall be submitted either in original form or attested copy by the issuing test lab.

(Name and Signature of the Authorized Signatory)

PRELIMINARY ESTIMATE OF COST OF SPWPS**(To be submitted by all the empanelled bidders before signing of Contract Agreement with SIA)****Bidder Name:****State Name:****Capacity (HP):****Type (AC/DC):****Category (Surface/Submersible):****Controller (without USPC/With USPC):****Module Type (with DCR Cell/Non-DCR Cell):**

S. No.	Particulars	Estimated Cost (In Lakhs INR) (exclusive of GST)
1.	System Cost	
	<i>i. Module</i>	
	<i>ii. Pump</i>	
	<i>iii. Controller</i>	
	<i>iv. Module Mounting Structure (MMS)</i>	
	<i>v. Balance of System (BoS)</i>	
2.	Transportation Cost	
3.	Installation Cost	
4.	5-year EMC Cost	
5.	5-year Insurance Cost	
6.	Others (if any)	

Dated the _____ day of _____, 20....

Thanking you,
 We remain,
 Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/
 Board Resolution/ Declaration.

DECLARATION REGARDING THE DIFFERENT MODELS OF SOLAR WATER PUMPING SYSTEMS SPECIFIED IN THE MNRE SPECIFICATION FOR THE PARTICULAR CATEGORY/TYPE OF THE PUMPS

(To be provided on the letter head of the bidder or lead member at the time of bid submission)

Ref No. _____

Date: _____

From: _____ (Insert name and address of Bidding Company/ Lead Member of Consortium)

Tel.#: _____

Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi - 110 023

Sub: Response to RfS No. _____ dated _____ for _____.

Vide this declaration this is to certify that that M/s..... (Name of the Bidder) has all the models(*e.g. Model-5, Model-6 & Model-7, it is mentioned w.r.t. 5HP-AC-Submersible pump*) of the Solar Water Pumping System as specified in the table, category/type-wise of the pumps (5HP-AC-Submersible) as per the MNRE revised specifications issued in .2023 (latest), for which the firm is participating in the bid for the various state(s) and will furnish the required **test reports** and details of the models specified: Shut Off-Head (meters), Dynamic-Head (meters), Water output (Liters per day), No. of stages in the model, diameter of each stage of the respective model, Diameter of the discharge pipe (in inches) to MNRE and the concerned SIA at the time of signing of agreement with SIA for supply of such pumps.

Table

The details of the different models which are to be supplied by the firm:

S. No.	Type/Category of the pump	Model No. as per MNRE Specification, to be supplied by the firm

I,, on behalf of M/s..... (Name of the Bidder) am aware, without any doubt, that any deviation of the above information with the information provided to SIA/MNRE at the time of signing of agreement would invite penalties such as forfeiture of EMD by SIA and/or blacklisting of firm for the period of 5 years from the date of the issue of the Notice for the blacklisting.

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/
Board Resolution/ Declaration.