ODISHA RENEWABLE ENERGY DEVELOPMENT AGENCY
BHUBANESWAR

Invites Tender

For

Standardisation of rates and area allocation for the repair and maintenance of the Solar Dual Pumps in the state on pre and post CMC period.

Tender Call Notice No. 4655/OREDA
Dt-17.10.19

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<th>Date of release of bid</th>
<th>18.10.19</th>
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<td>To be informed to the qualified bidders.</td>
</tr>
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</table>

S-3/59, MANCHESWAR INDUSTRIAL ESTATE, BHUBANESWAR-751010
Phone : (0674) 2585898,2581552,2580554. Fax:2586368
Website: www.oredaorissa.com, Email: ceoreda@oredaorissa.com
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Disclaimer

Kindly Note:

1. This document is not transferable

2. Though adequate care has been taken for preparation of this document following all circulars, specification of MNRE, the bidder shall satisfy himself that the document is complete in all respects. Intimation of any discrepancy shall be given to this office immediately. If no intimation is received from any bidder on the pre bid meeting or within ten days from the date of issue of the bid document, it shall be considered that bid document is complete in all respects and has been received by the bidder.

3. The Odisha Renewable Energy Development Agency (OREDA) reserves the right to modify, amend or supplement this bid document keeping in view the necessity in implementation of the scheme at any time before date of submission of bid.

4. While the bid document has been prepared in good faith, neither OREDA nor their employees or advisors make any representation, 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 and completeness of this bid document, even if any loss or damage is caused by any act or omission on their part.
ODISHA RENEWABLE ENERGY DEVELOPMENT AGENCY
Under the Department of Science & Technology, Government of Odisha
S/59, Mancheswar Industrial Estate, Bhubaneswar-751010, Odisha
Website: www.oredaorissa.com E-mail: ceoreda@oredaorissa.com

NOTICE INVITING E-TENDER

NO: 4655/OREDA DTD-17.10.19

ODISHA RENEWABLE ENERGY DEVELOPMENT AGENCY invites sealed e-tenders in two part bidding system from local solar vendors having adequate repair maintenance facility (workshop) for Supply, Installation (Erection), Commissioning, Warranty and Comprehensive Maintenance Contract for a period of 5 years for Solar Pump components for restoration / post 5 years for drinking water supply (1hp) in the State on rate contract as scheduled below.

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Interested prospective bidders may visit OREDA’s website www.oredaorissa.com and www.tenderwizard.com/OREDA for details relating bidding process and all other terms and conditions. The bidders can view the tender documents from www.oredaorissa.com website free of cost. Amendments if any will be published in the OREDA website only. No further notification will be made in the newspaper.

Chief Executive, OREDA
DETAIL OF NOTICE INVITING TENDER

ODISHA RENEWABLE ENERGY DEVELOPMENT AGENCY invites sealed e-tenders **in two part bidding system** from local solar vendors having adequate repair maintenance facility (workshop) for Supply, Installation, Commissioning, Warranty and Comprehensive Maintenance Contract for a period of 5 years for Solar Pump components for restoration / post 5 years maintenance for drinking water supply (1hp) in the State on rate contract as scheduled below.

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Estimated Quantity</th>
<th>Earnest Money Deposit (Rs.)</th>
<th>Tender processing fee Non refundable (in Rs.)</th>
<th>Non refundable Cost of Bid document</th>
<th>Last date/time for submission of bids</th>
<th>Date and time of opening of bid</th>
</tr>
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<tbody>
<tr>
<td>Supply, installation, commissioning including warranty and Comprehensive Maintenance Contract for a period of 5 year of solar water pumping for drinking water supply systems of various components complete in all respect as per the technical specification (MNRE/ IEC /BIS), schedule of materials and terms and condition of the of the work award from time to time on the basis of the lowest price arrived at within a period of minimum one year of the valid tender under the scope of work</td>
<td>2000</td>
<td>100,000</td>
<td>As applicable</td>
<td>Rs. 10500/-</td>
<td>Online 5:00 PM on 15.11.19 Hard copy at 1:00PM on 18.11.19</td>
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Interested prospective bidders may visit OREDA’s website www.oredaorissa.com and www.tenderwizard.com/OREDA for details relating bidding process and all other terms and conditions. The bidders can view the tender documents from www.oredaorissa.com website free of cost. The authority reserves the right to accept / reject any part thereof or all the bids without assigning any reason.

Chief Executive, OREDA
ONLINE SUBMISSION OF BID

General Information

i) Interested bidders may visit OREDA’s website www.oredaorissa.com or www.tenderwizard.com/OREDA for details. Tender documents can be viewed free of cost.

ii) Bidders who want to submit bid shall have to pay the tender cost. The tender cost is required to be paid in shape of Demand draft only, drawn in favour of Chief Executive, OREDA payable at Bhubaneswar. The tender cost is inclusive of VAT @ 5% and is non refundable.

iii) The bidders shall have to submit the non-refundable tender processing fee in e-payment mode only. The processing is inclusive of service tax.

(Note: For tender processing fee to K.S.E.D.C. Ltd. Bangalore, the bidder can use various modes of e-payment facility available through Tender wizard Portal, i.e. by Credit Card, Debit Card, Net Banking).

iv) The bidders shall have to scan the Demand Draft / Bank guarantee towards EMD, Tender Cost, Signed copy of unconditional acceptance of all terms and conditions of the tender, Signed copy of Confirmation to Technical Specifications and all other documents as required in the tender and upload the same in the prescribed form in .pdf or .jpg format in addition to sending the originals.

v) The bidders are advised to register their user / farmer ID, Password, company ID on website www.tenderwizard.com/OREDA by clicking on hyper link “Register Me”.

(vi) Any clarifications regarding the scope of work and technical features of the project can be had from the undersigned during office hours

NB: All subsequent addendum/Corrigendum to the tender shall be hoisted in OREDA’s official web site www.oredaorissa.com and www.tenderwizard.com/OREDA only.

For and on behalf of OREDA
A. MODE OF SUBMISSION OF BID:-

i) The bidder shall submit the bid in Electronic Mode only i.e. in www.tenderwizard.com/OREDA portal. The bidder must ensure that the bids are received in the specified website of the OREDA by the date and time indicated in the Tender notice.

ii) Bids submitted by telex/telegram will not be accepted.

iii) The OREDA reserves the right to reject any bid, which is not submitted in electronic mode and according to the instruction, stipulated above.

(A-I) PARTICIPATION IN e-TENDER:-

ACQUISITION OF DIGITAL SIGNATURE CERTIFICATE

i) For all the user / farmers it is mandatory to procure the Digital Signatures of Class III only.

ii) Contractors / Vendors / Bidders / Suppliers are requested to follow the following steps for registration.

(A-2) REGISTRATION IN TENDER WIZARD PORTAL

i) Log in www.tenderwizard.com/OREDA Click “Register”, fill the online registration Form.

ii) Payment shall be made to KSEDCL, Bangalore for vendor registration in tender wizard portal in e-payment mode only.

iii) As soon as the verification is done the e-tender user / farmer ID will be enabled/provided.

(A-3) ON-LINE REQUEST FOR e-TENDER DOCUMENTS.

After viewing Tender Notification in www.tenderwizard.com/OREDA if bidder intends to participate in tender, he has to use his e-tendering User / farmer ID and Password which has been received after registration and acquisition of DSCs (Digital signature certificate). If any Bidder wants to participate in the tender he has to follow the instructions given below.
1. Insert the PKI (which consists of your Digital Signature Certificate) in your System.
   (Note: Make sure that necessary software of PKI be installed in your system)
2. Click / Double Click to open the Microsoft Internet Explorer
3. (This icon will be located on the Desktop of the computer).
4. Go to Start > Programs > Internet Explorer. Type www.tenderwizard.com/OREDA in the address bar, to access the Login Screen.
5. Enter e-tender User / farmer Id and Password, click on “Go”. Click on “Click here to login” for selecting the Digital Signature Certificate. Select the Certificate and enter DSC Password. Re-enter the e- Procurement User / farmer Id Password
6. Click “Un Applied” to view / apply for new tenders.
7. Click on Request icon for online request. After making the request, bidder has to pay the requisite tender processing fee (as indicated in tender notice) through e-payment facility only available in the portal. Bidders will receive the Tender Documents which can be checked and downloaded by following the below steps.
8. Click to view the tender documents which are received by the user / farmer. Tender document screen appears.
9. Click “Click here to download” to download the documents.

NOTE: For vendor registration and payment of tender processing fee to KESDCL, the bidder can use various modes of e-payment facility available through Tender wizard Portal, i.e. by Credit Card, Debit Card, Net Banking.

(B) ONLINE SUBMISSION OF BID

The bidders shall have to scan the Demand Draft / Bank guarantee towards EMD, Tender Cost, signed copy of “unconditional acceptance of all terms and conditions of the tender”, Singed copy of “confirmation to technical specification” and other
documents as required for the tender and upload the same in the prescribed form in .pdf or .jpg format in addition to sending the original except bid sheets (.xls) prior to last date and time of receipt of bids as specified in tender Notice. Tender processing fees is mandatory & to be paid on e-payment mode as stated elsewhere in the document. The attachments should be properly renamed before uploading.

(B-1) PROPER FILLING UP OF THE PRICE SCHEDULE:

The bidder should fill up the Techno commercial and price schedule properly in the bid sheets provided in .xls format and upload the same without changing the file name. The tender may be rejected if the schedule of price is submitted in incomplete form.

NB: The bid sheets (.xls file) shall be uploaded in www.tenderwizard.com/OREDA portal, prior to online closing of the tender. By no other means (except online) price bid shall be accepted for evaluation of tender.

i. After completing all the formalities, Bidders will have to submit the tender as specified in NIT and must take care of all instructions. Prior to submission, verify whether all the required documents have been attached and uploaded to the particular tender or not.

Note down / take a print of bid control number once it displayed on the screen

ii. Tender Opening event can be viewed online.

iii. Competitors bid sheets are available in the website for all participated bidders.

For any assistant, Contact:

E-Tendering help desk number: 080-40482000/121/133/140(Bangalore) OREDA Help Desk-09776823641/09937140591

NOTES:
(C) DEADLINE FOR SUBMISSION OF BIDS

i) Soft copy of the bid shall be uploaded through the portal www.tenderwizard.com/OREDA on or before the online submission time and date as stipulated in the bidding document.

DD towards Tender cost, DD/BG towards Bid Security, tender processing fee acknowledgement & a set of all uploaded documents including uploaded Techno-commercial Bid must be received by OREDA at the address specified not later than the time and date stated in the tender notification.

ii) In the event of the specified date for the submission of bids being declared a holiday for OREDA, the bids will be received on the next working day as per the time indicated in tender notification.

iii) OREDA may, at its discretion, extend this deadline for submission of bids by amending the Bidding Documents in accordance with Instruction to Bidders for the reasons specified therein at any time prior to opening of, in which case all rights and obligations of Employer and bidders will thereafter be subject to the deadline as extended.

(D) LATE BIDS

i) Soft copy of the bid will not be uploaded on the portal after expiry of submission time and the bidder shall not be permitted to submit the same by any other mode. In such case, even if the bidder has submitted the specific documents in hard copy in original (viz., bid security, tender cost & any other document) within the stipulated deadline, its bid shall be considered as late bid. The hard copy submitted [specific documents (viz., bid security, tender cost.)] shall be returned unopened to the bidder.

ii) Hard copy of the bid security i.e EMD in shape of DD/BG if received by OREDA after the last date for submission of the bid the same will be considered as late bid even if the bidder has uploaded the soft copy of the bid within the stipulated deadline. In such a case, the soft part of the bid uploaded on the portal shall be sent unopened to “Archive” and shall not be considered at all any further.
(E) MODIFICATION AND WITHDRAWAL OF BIDS:-

i) Bidder may modify or withdraw their bids through the relevant provisions on the portal www.tenderwizard.com/OREDA up to due date and time of submission of bid indicated in tender notification.

ii) The Bidders may modify and resubmit their bids as per the provisions given in the portal.

iii) Bidders may withdraw their bids through the relevant provisions of mentioned in the portal.

iv) No bid shall be modified/ withdrawn after the dead line for submission of bids. Withdrawal/modification of bid before the expiry of bid validity shall result forfeiture of Bidder’s bid security.

SUBMISSION OF HARD COPIES OF THE BIDS AND SEALING AND MARKING:-

(A) Hard copies of the following items should only be submitted to OREDA

All the papers of bid documents as per the check list except the price bid duly signed & should be uploaded in e-tender portal. Hard copy (i.e EMD, Tender cost & signed e-tender document) shall be submitted OREDA office at S-57, Mancheswar Industrial Estate, Bhubaneswar 751010 before tender closing date and time.
Submission of any documents other than the asked documents can’t be received at any cost. This may lead to the rejection of bid.

(B) Technical bid:

The Electronic Form/Template of the bid for the Techno–Commercial bid, as available on the portal, shall be duly filled and scanned copies of documents in support of meeting the minimum qualifying requirement of the tender shall be given as attachments.

(C) Financial bid:

The Electronic Form/Template of the Price bid (as available on the portal) shall be duly filled in.
Any condition in regards to financial aspects, payments, terms of rebate etc beyond the prescribed financial terms of OREDA will make the bid invalid.

Therefore it is in the interest of the bidders not to write anything extra in the Price Bid except price.

ACCEPTANCE/REJECTION:

OREDA reserves the right to accept / reject any or all Tenders without assigning any reason thereof and alter the quantity of materials mentioned in the Tender documents at the time of placing purchase orders. Tender will be summarily rejected if:

i) Bid security is not deposited either in shape of Bank Draft in favor of OREDA payable at Bhubaneswar or in Bank Guarantee.

Note: Bid security against previous Tenders, if any, will not be adjusted towards Bid security against this Tender.

ii) Complete Technical details are not enclosed.

iii) Tender is received after the last date for what-so-ever reasons.

PROCEDURE FOR OPENING THE BIDS:

The procedure of opening of the bid shall be as under

- The TECHNICAL BID shall be opened at the time & date mentioned in the bid notice by OREDA in the presence of bidders, who choose to be present. If necessary, the firms may be called for Technical Presentation the schedule for which will be intimated by OREDA.

- The Price bid shall be opened after evaluation of technical suitability of the offers. The date for opening of Price bid shall be communicated subsequently. The Price Bid of only those bidders shall be opened who qualify in the technical bid.

*Contactors/Vendors are advised to upload their tender documents well in advance to avoid last minutes disappointed
Background
OREDA has been implementing Solar Dual Pump Drinking Water Supply in association with the RWSS since 2013-14. OREDA has been rigorously monitoring the functionality of the systems installed being the mandate to meet the basic need of people. During the process of monitoring through the dedicated platform of Customer Relationship Monitoring System various aspect have emerged. More than 11,000 pumps have already installed and may exceed 13,000 shortly. It has come out that there various cases of repair maintenance issues which are to be addressed for a long term commitment.

1. Systems remain nonfunctional due to bore related problem like dry bore, low yield, bore jam or poor water quality.
2. Systems with damaged solar module due to storm or theft of module or controller.
3. Systems with solar pump unit non recoverable inside the bore collapsed
4. Irresponsibility of firms to maintain the dys-functional systems for a long time.

It is also anticipated that the solar dual pumping systems for drinking water would require maintenance after expiry of CMC period or otherwise. Nearly 2000 pumps may have issues at present or within a year or so. Four zones as per revenue system have been considered for repair and maintenance allotment. Bidders may offer for any of the zones or all.
Check list of documents to be submitted along with the bid. This is indicative and to be thoroughly read in the documents

<table>
<thead>
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<tbody>
<tr>
<td>1</td>
<td>Bank draft for Rs.10,500/- or or exempt as admissible with proof of exemption</td>
<td>Bank No Dt</td>
<td>Envelope</td>
</tr>
<tr>
<td>2</td>
<td>Bank draft / BG for Rs.100,000/- towards Earnest Money deposit or exempt as admissible with proof of exemption</td>
<td>Bank No Dt</td>
<td>Envelope</td>
</tr>
<tr>
<td>3</td>
<td>Forwarding letter &amp; Undertaking duly signed and stamped by the bidder. Undertaking to unconditionally accept all terms and conditions of the bid document with the endorsement by Board Resolution in case of non-proprietary.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Valid document registering the status of the bidder as manufacturer and quality control certificate</td>
<td></td>
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<tr>
<td>5</td>
<td>Copy of the PAN card of the bidder’s firm</td>
<td></td>
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<tr>
<td>6</td>
<td>Copy of the GSTIN card of the bidder’s firm</td>
<td></td>
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</tr>
<tr>
<td>7</td>
<td>Copies of latest Tax clearance certificate / returns</td>
<td></td>
<td></td>
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<tr>
<td>8</td>
<td>Document of summarized <strong>turnover on solar for last three years</strong> duly signed and stamped by a registered Chartered Account. No annual report or balance sheet( Pl read detail in eligibility criteria).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Proof of having repair and maintenance facility / workshop in the name of the bidder. (Pl read detail in eligibility criteria)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Relevant BIS or MNRE test certificate of OEM of offered Solar water pumping components ( Pl read detail in eligibility criteria)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Zone Applied, all or name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Undertaking for indigenous content</td>
<td></td>
<td></td>
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<td>13</td>
<td>A self certificate on not under debarred / black listed / default in any govt organization.</td>
<td></td>
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Forwarding Letter  
(To be submitted in the letter head of the bidder)

To,

Chief Executive  
Odisha Renewable Energy Development Agency  
S-59, MIE, Bhubaneswar-751010  
Odisha

Subject: Submission of tender for the repair and maintenance of Solar Pump for drinking water supply.  
Ref: Tender Call Notice No. 4655/OREDA, dtd. 17.10.19

Sir,

I/We have also read the various provisions of the Tender and confirm that the same are acceptable to us including the provision of CMC. We further declare that any additional conditions, variations, deviations, if any, found in our Tender offer shall not be given effect to. We further understand that any deficiency/ illegibility in documents shall make our tender liable for rejection. I/we submit our tender understanding fully well that

(a) The bid and other documents submitted along with the same will be subject to verification by appropriate authorities.

(b) OREDA reserves the right to accept or reject any application or the bid process itself without assigning any reasons thereof and shall not be held liable for any such action.

(c) Any genuine changes made by the department in the interest of the work with respect to the technical requirement during the course of project implementation will be acceptable.

We hereby declare that all the information and statements made in this proposal are complete, true and correct and also accept that any misinterpretation contained in it may lead to our disqualification.

We hereby declare that our Tender is made in good faith and the information contained is true and correct to the best of our knowledge and belief.

Yours faithfully,
Letter of Authorization
(to be submitted in the letter head of the bidder)

To,
Chief Executive
Odisha Renewable Energy Development Agency
S-59, MIE, Bhubaneswar-751010
Odisha

Sub: Submission of tender for the repair and maintenance of Solar Pump for drinking water supply.

Ref: Tender Call Notice No. 4655/ OREDA, dtd. 17.10.19

Sir,
I/we hereby authorise Ms. /Mr. _______________ , Designation ................................. of our company to sign all relevant documents on behalf of the company/firm in dealing with the above tender. She / He is also authorized to attend all meetings and submit technical and commercial information as may be required by OREDA in the course of processing of the tender.

We further authorise Ms. /Mr. ____________ designation................................ of our company to make technical presentation on behalf of the company.

Signature of the authorise persons
1. ______________________
2. ............................................................

Signature attested
Name and designation of the attesting officer with stamp.

Yours faithfully

Head of the organization
UNDERTAKING BY THE BIDDER

I/we here by undertake that

1. We have thoroughly read and examined the notice inviting tender and the tender document along with all its schedules, annexure etc.

2. The entire tender document has been discussed in the Board meeting and a resolution has been concurred for participation in the tender.

3. The rates quoted by us are firm and final and are meant for execution of the allotted supply / installation within the time frame stipulated in the tender/supply / installation order.

4. All terms and conditions of the tender including the rates quoted by us shall remain valid for a period of minimum one year from the date of opening of the technical bids.

5. In case our tender is incomplete in any respect or we violate any of the prescriptions given in the tender for submission of the same OREDA shall, without prejudice to any other right or remedy, be at liberty to forfeit the earnest money deposited by us.

6. In case of award of supply / installation in our favour OREDA shall have the right to convert the EMD deposited by us in to full or part (as the case may be) of the security deposit against award of the supply / installation.

7. In case we fail to commence or complete the supply / installation as per the time schedules or fail to fulfill any of the terms and conditions given in the tender OREDA shall, without prejudice to any other right or remedy, be at liberty to forfeit the security deposit/EMD made by us against the award of the supply / installation.

8. I/We hereby declare that I/We shall treat the tender documents, specifications and other records connected with the supply / installation as secret/confidential and shall not communicate information derived therefrom to any person other than a person to whom I/We have authorized to
communicate the same or use the information in any manner prejudiced to the safety of OREDA/the State Govt.

9. I/We shall abide by all the laws prevailing at the time of the execution of the supply / installation and shall be responsible for making payments of all the taxes, duties, levies and other Govt. dues etc. to the appropriate Govt. departments.

10. We are not under blacklisted / debarred / defaulted in any manner by any Central / State Government / Public Sector Undertaking in India.

11. In case any false documents submitted and found any time in future the firms shall be liable to be proceeded against as per prevailing laws.

12. Our TIN registration no. is__________________________
    The PAN No. under the Income Tax Act is _______________.

10. I/We shall be responsible for the payment of the respective taxes to the appropriate authorities and should I/we fail to do so, I/we hereby authorize OREDA to recover the taxes due from us and deposit the same with the appropriate authorities on their demand.

    Signature of bidder with stamp & date
1. SCOPE OF WORKS

The broad scope of the supply / installation includes supply, installation, testing commissioning, warranty, operation & Maintenance for 5 years for Solar energy based drinking water supply comprising providing, installing, testing and commissioning of Solar Photovoltaic pumps items in parts or full as may be required based on the survey and assessment with all accessories adhering to the standardized norm / BIS / MNRE/IEC/CE specification in the entire state as spelt out in the back ground.

All tax deductions at source applicable for contract will be made irrespective of Tax clearance documents subject to bifurcation of the price components.

a) Maintaining the Solar Dual Pumping system for drinking water supply for 5 years from date of the release of CMC period from the original vendor.

b) Collection of the list of site / village including, locations of the bore wells from OREDA / authorized officers.

c) Visit to the site / village and identifying the designated bore wells which require repair and maintenance. It should be properly checked for status at that point.

d) The main components which will come under the purview of the supply, installation and maintenance as per relevant standards are

   1. Solar module recommended capacity of 675 wp to 900wp
   2. Submersible pumps of 1hp capacity of various model / make
   3. Controller of various model / make
   4. Water tank
   5. Water distribution system as per RWSS schedule of rates

e) Transportation of all materials to the village and keeping the same in safe own custody within village/ site. OREDA shall not be the consignee to receive the materials supplied/ delivered.

f) Intimate OREDA, RE Cell Officials and Executive Engineer / Authorized Officer, Divisions on assignments.
g) Checking / maintenance of the water delivery system (piping) up to the existing outlet / inlet point.

h) After initial operation and testing of the pumping system handing over the same to the Gram panchayat / VWSC / Dept Authorised Officer/user to be maintained by the firm for 5 years under CMC.

i) Collection of all documents, including geo-tagged photographs, if connected, of the installed systems and preparing the joint commissioning reports.

j) Submission of all documents as detailed in the tender document including the joint Commissioning report to OREDA

k) Periodic maintenance of the system as detailed in this tender and adherence of CMC.

l) Opening of service centre/keeping servicing personnel and making available all essential spares in the vicinity of the solar water pumping system will give the desired performance with least interruption to be resolved within 48 hrs for the systems restore / taken over after post 5 years.

m) Submission of periodic reports and returns as per the MIS prescribed by OREDA from time to time.

n) Supply of all necessary components, subcomponents, spares, tools, tackles etc. as per technical specifications given or compliant with MNRE, IEC, BIS as relevant, in this document including packing, forwarding, safe storage, handling, commissioning, trial and performance testing and handing over, transit insurance.

o) The solar panel to be supplied shall be warranted for ten years with rated performance. Security cum PGF(PBG) for the corresponding amount for the period warranty is to be retained by this office as deemed necessary.

p) Solar PV pumps of respective capacity depending upon the yield of bore well will be utilized for the purpose of water supply in the user / farmer / utility as per the requirement of the village.

q) Comprehensive Maintenance for 5 years and Performance guarantees for the
rated delivery / discharge of water as per standard test condition.

r) While implementing Solar pumping system in the village/ site the physical condition of the area on shades / water logging during rain should be taken into consideration.

s) While cabling the array care must be taken such that no loose / open cables lie anywhere related to the supply / installations.

t) Price offers will be applicable for four different zones of the State. Bidders may offers for any of the zones or all. The lowest price of each zone will be considered among the offers.

u) Before execution of the supply / installation the yield test of the selected tube well shall be carried out by the agency to ensure the sustainability of the system.

v) Supply/ installation of all essential transparency boards, markers and all essential; and required documents and manuals clearly explaining the operation and maintenance and trouble shooting of various portion of the system in local language.
2. ELIGIBILITY CRITERIA

In order to be eligible to participate in the tender, the bidder must fulfill the following eligibility criteria. Any discrepancy or deviation from the same shall make the bidder ineligible for participating in the tender and such tender documents shall be rejected.

a) The bidder must be a company registered under the Indian Companies Act 1956 / a firm registered under statutory tax rule. The bidder must have valid GST registration certificate.

b) The bidder must be local (State) MSME / NSIC / DIC / Start up / Skill Development / Educational incubation centre having business in solar and already associated with OREDA in any form. A copy of the valid registration certificate not issued later than the date of floating this tender (DIC, NSIC, MSME, and Registrar of Companies) to that effect is to be attached.

c) A certificate from Chartered Accountant on the transaction of solar only for last 3 years shall be attached.

d) The firm must have own repair and maintenance facility / workshop in its name for Solar pumping system. This will be verified by suitable mechanism and without such facility bidder must not participate.

e) The bidder must engage SEM / Suryamitra Trainee having already experience in installation and repair of such system. An undertaking to that effect shall be attached.

f) The firm must not be debarred / blacklisted / defaulted by any Govt. Dept, agency, PSUs / institution / agencies / autonomous organisations. A self-certificate by an authorized person of the bidder's company/firm is to be attached.
3. INSTRUCTIONS TO BIDDERS

Intending bidders are requested to carefully study the instructions contained hereunder before preparing their bid documents for submission.

1. A Bidder shall submit a single offer-bid only. The bidders shall be responsible for properly uploading the relevant documents in the e-tender portal in the specified location and Tender Inviting Authority shall not be held liable for errors or omissions done while uploading the online bid.

2. Bidders must submit their bids for relevant items as stated in this bid document.

3. Demand Drafts towards cost of document and EMD should be submitted in a separate envelop placed inside the envelope containing the technical bid.

4. Bids must be submitted in English language only.

5. Incomplete, telegraphic or conditional bids shall not be accepted.

6. Prices quoted must be firm and fixed. No price variation / escalation shall be allowed during process of completion of the project or for a period of one financial year whichever is earlier except the statutory government revision.

7. The bidders must sign at the bottom of each page of the bid documents at the time of submission in token of unconditional acceptance of the departmental terms and conditions, technical specifications etc.

8. Valid Tax return document duly attested must be submitted along with the bid. All rules and circulars of Govt of Odisha issued from time to time will be applicable during project period from issue of tender to the completion of 5 years CMC period.

9. Deviations in terms and conditions, Specification of material, Inspection clause etc. will not be accepted under any condition.

10. The bidder shall submit copies of documents defining the constitution or legal status, place of registration and principle place of business of company or firm.
11. The bidder shall furnish a brief write up backed with adequate data, explaining capacity and experience (both technical and commercial) for the manufacture and supply of the required systems, equipments within the specified time of completion after meeting all their commitments.

12. Hard copies of Bids received late due to postal delay or otherwise will not be considered.

13. The bidders are required to furnish their offers in the price online only

14. Since timely execution of supply / installations is of paramount importance, requests for extension of time shall not be ordinarily entertained.

15. Canvassing in any manner shall not be entertained and will be viewed seriously leading to rejection of the bid.

16. Certificate to the effect that the systems to be supplied are indigenous & not fully imported must be furnished.

17. Power of attorney to sign the agreement on behalf of bidders & partnership deed articles, if any, should be enclosed along with original bid documents.

18. Notice inviting Tender, bid documents, prescribed Technical bid, price bid, terms & conditions will form the part of the tender.

19. All pages of the bid documents must be signed & sealed by the authorized person on behalf of the bidders.

20. Bids will be accepted & will be opened as per information mentioned in the notice-inviting tender. No receipt against submission of bid shall be issued by OREDA.

21. A pre bid meeting will be convened on 28.10.19. in the conference hall of OREDA. After discussion, deliberation and written statement / suggestions of the representative, the final tender document revised and approved by the technical committee is uploaded on the website replacing the previous one. Submission of document shall start hereafter.

22. No clarification on the tender documents after pre-bid conference will be issued in writing from OREDA.

23. Deviation of any commercial terms and condition and technical specification shall not be entertained under any circumstances
24. Bidders may in their own interest visit the sites in order to develop a clear understanding of the logistics and other features of the sites before submitting bids and under taking may be attached in the tender document. OREDA will not be responsible for any incidental or consequential losses of the firms while execution and till expiry of the period of maintenance.

25. All the bidders shall essentially indicate the break-up of prices as shown in Price bid.

26. If qualified, the bidder must have a local office at Bhubaneswar before commencement of the supply / installation for coordination of all jobs and service centres fully equipped with technical person and spare parts at cluster level in the district wherever necessary. Such facility must have proper mailing address with contact person detail from time to time for all documents. On award of contract the qualified bidder shall be termed as executing agency.

28. Opening of the bids:

The procedure of opening of the bid shall be as under
i) The technical bid opening is ONLINE. The date of opening of the technical bid is only published in advanced. The date of opening of the price bid will be decided after verification of those bidders who qualify in the technical bid evaluation and will be informed in advance.

ii) The online opening of the technical bid and the price bid shall be done by the Chief Executive / or his authorised representative as per bid schedule. The prospective bidders can access to the online opening by logging in to the e-tender portal with the registered digital signature. Bidders / its authorised representative may not come to this office of OREDA for the opening of the technical or price bids.

iii) In the event of the specified date for opening of the bids being declared holiday, the bid shall be opened at the appointed time and venue on the next working day.

iv) In the event of the bid and claims in the online documents are materially missing or of substantial error or want of required qualifications, shall stand disqualified and rejected.

29. Evaluation of Bids

i) The documents submitted as technical bids shall be scrutinized by a bid evaluation committee duly appointed as per the following Technical Evaluation and scoring pattern.
ii) The bid evaluation committee may also verify the veracity of claims in respect of the known performances of the items offered, the experience and reputation of bidder in the field. The Tender Inviting Authority, if required reserves the right to inspect the facility of the bidder for verification of information furnished in the bid.

iii) The decisions of the bid evaluation committee is final on whether the bidders are responsive or non responsive as per the eligibility criteria set.

iv) The verification of the items shall be conducted by the Technical Committee in which the external experts from the user / farmer institutions / funding agency, whenever necessary.

v) The decision of the technical committee will be intimated to the qualified bidders

30. Price bid opening

i) The opening of the price bid of the technically qualified bidders shall be done online by the Tender Inviting Authority or the authorized representative and only the price bids in the proper format of the those firms qualified in the evaluation of the technical bids shall be opened.

ii) Total cost will be the basis of calculation of L1 price though individual price may vary from bidder to bidder, even if the quantity of order of the supply item is unspecified. This will be duly decided and recommended by the competent financial committee.

iii) As it will be preferential lowest rate contract with empanelled vendors no price preference is warranted.

31. Acceptance/ Rejection of the bid documents:

Chief Executive, OREDA reserves the right to reject or accept any bid or annul the bidding process at any time prior to award of contract, without having prejudice of incurring any liability to the affected bidders or any obligation to inform the bidders

Chief Executive

I/we have carefully read & understood the above terms & conditions of the bid & agree to abide by them.

Signature and Seal of bidder
4. COMMERCIAL TERMS & CONDITIONS

The Chief Executive, OREDA shall award the contract to the successful bidders whose bids shall be qualified after evaluation in terms of the responsiveness and lowest rate determined on the basis of price bids. On receipt of the awarded work the same should be submitted duly signed by the authorised person on each page within 7 days duly endorsed by the respective Authorised Officer / Division and OREDA RE Cell Officials as acceptance of the terms and conditions. In case of non submission of the same duly complied the said award shall stand cancelled.

4.1 Rate:
The offer should indicate the unit cost including CMC charges (Annexure E1 to E4). The unit cost must be inclusive of packing, forwarding, loading & unloading charges, cost of insurance and transportation FOR destination in the entire state where the system will be installed as per the supply / installation order.

4.2 Tax & Duties etc.:
All taxes and duties applicable (revised at the time of delivery of materials or as per service period) from time to time will be paid. All statutory deductions applicable for the period of the project shall be effected.

4.3 Earnest Money Deposit:
4.3.1 Earnest money deposit Rs.1.00 lakh as specified in the Table above is required to be deposited along with the bid without which the bid will not be accepted. No interest will be payable for the EMD amount under any circumstances.

4.3.2 Earnest money shall be submitted in shape of a Demand Draft in favour of Chief Executive, OREDA or BG valid for 120 days (Annexure-D1) from any Nationalised Bank Payable at Bhubaneswar and the proof of deposits should be attached to the bid. E.M.D would be refunded to the unsuccessful Bidders after finalization of the bid without any interest.

4.3.3 E. M. D would be forfeited in case of non-compliance of the purchase order by the successful bidders. EMD submitted shall be returned to successful bidders only after Security cum Performance Bank Guarantee as work award is deposited.
4.3.4 In case of claim for exemption from deposit of Earnest money sufficient proof in support of claim for exemption of EMD as prescribed in Govt. of India Notification is to be attached with the bid. **All benefits as per the State Govt policies will be applicable for local eligible firms only.**

4.4 **Security Deposit/ Performance Guarantee Fees:**

The successful bidders must deposit a bank guarantee (Annexure-D1) towards Security cum Performance Guarantee fees with the Chief Executive, OREDA, Bhubaneswar for the feasible cases only along with acceptance of work order as follows

2% of the order value per year in shape of irrevocable Bank Guarantees up to 5 years validity from the date of supply, installation and commissioning till the completion of respective warranty and CMC period of the composite system.

The said deposit would be forfeited or BG invoked in part or full depending upon the significance of the performance or deficiency of services, if the supplies are not made and performances are not as per the Terms & Conditions of the purchase order. Every year the validity shall lapse with Warranty and CMC period discharged of the systems after commissioning of each system, subject to satisfactory execution / performance of the systems. The solar module should be guaranteed on the performance as per the MNRE recommended technical specification. OREDA may at point of time get the performance test checked in any approved manner during period of guarantee. In case of deficiency of the same the whole lot of supply on that said order shall remain liable to be replaced. In case non adherence of quality, the executing agency shall be penalised suitably by the authority, besides, other measures of suspension, de-registration and blacklisting will be invoked.

**All benefits as per the State Govt policies will be applicable for local eligible firms only.**

4.5 **Programme Execution Schedule:**

The programme of execution of the supply, installation and commissioning shall be carried out as per the schedule given in the supply / installation order subject to issue of water yield test / layout documents by the respective Nodal Officer / Authorised Officer in phased manner. In case yield test / feasibility report are available at the time of issue of supply /
installation order the entire job has to be completed within maximum 4 months of sites clearance reports from User / farmer / OREDA. Execution of supply / installation shall be carried out in an approved manner as outlined in the technical specification or where not outlined, in accordance with the relevant Indian Standard Specification, to the reasonable satisfaction of the Authorized OREDA Officer.

4.5.1 Upon intimation about commissioning of the systems by the executing firm a joint inspection will be carried out by the representatives of the executing firm, OREDA and other officers of user / farmer agency / from Govt of Odisha / Govt. of India. 4.5.2 The issuance of a JCC shall, in no way relieve the executing firm of its responsibility for satisfactory operation of the solar pumping systems.

4.6 **Validity of offer:**

The price bid offer (Annexure-E1-E4) must be kept valid minimum for a period of one year from the date of opening of the technical bid. No escalation clause except the admissible tax component under the period of consideration would be accepted, if any. The validity can be mutually extended for a suitable period, if situation demands, with all terms and conditions as per the tender.

Total cost in the price bid offer shall be the basis of calculation of L1 price and the vendor though individual price may vary from bidder to bidder, even if the quantity of order is unspecified. The lowest price offered shall be just and genuine to implement the project with the capability to maintain for 5 years with stringent monitoring through CRC.

4.7 **Tax return:**

The bidders must submit attested copy of valid up to date Tax clearance / tax return certificate along with the bid. The bid would not be considered without this document.

The original certificate would be produced at the time of opening of the bid, or, before issue of purchase order, if required.

4.8 **Warranty:**

The Supplier warrants that the Goods(as per the test report issued by authorized test centre) supplied under this Contract are new, unused, of
the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that the Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or is required by the Purchaser’s Specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in conditions prevailing in the country of final destination. This warranty shall remain valid for the period as per MNRE norms after the Goods or any portion thereof as the case may be, have been delivered to and commissioned and accepted at the final destination indicated in the Contract.

The Purchaser shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall repair or replace the defective Goods or parts thereof, without cost to the Purchaser other than, where applicable, the cost of inland delivery of the repaired or replaced Goods or parts from the port of entry to the final destination.

If the Supplier, having been notified, fails to remedy the defect(s), the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier’s risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

4.9 **Penalty and termination of contract:**

The systems shall be supplied, installed and commissioned within the scheduled time as mentioned in the supply / installation order. If the supplier fails to adhere to the schedule, OREDA shall without prejudice to its other remedies under the contract deduct from the contract price as liquidated damages a sum equivalent to 1% of the delivery price of the delayed goods or unperformed services for each week of delay until actual delivery or installation/commissioning up to a maximum deduction of 5% of the contract price for delayed goods or installation and commissioning. Once the maximum is reached (i.e 5 weeks of delay) OREDA may consider termination of the contract and forfeit the security deposit without prejudice to the other remedies of the contract.

If at any time during the performance of the Contract, the Supplier or its subtle executants(s) should encounter conditions impeding timely delivery of the Goods and performance of the Services, the Supplier shall promptly
notify the Purchaser in writing of the fact of the delay, its likely duration
and its cause(s). As soon as practicable after receipt of the Supplier's
notice, the Purchaser shall evaluate the situation and may at its discretion
extend the Supplier's time for performance, with or without liquidated
damages, in which case the extension shall be ratified by the parties by
amendment of the Contract.
A delay by the supplier in the performance of its delivery obligations shall
render the supplier liable to the imposition of liquidated damages
pursuant, unless an extension of time is agreed upon without the
application of liquidated damages.

4.10 Termination for Default
The Purchaser may, without prejudice to any other remedy for breach of
contract, by written notice of default sent to the Supplier, terminate the
Contract in whole or in part:
4.10.1 if the Supplier fails to deliver any or all of the Goods within the
period(s) specified in the Contract, or within any extension
thereof granted by the Purchaser; or
4.10.2 if the Supplier fails to perform any other obligation(s) under
the Contract.
4.10.3 If the supplier, in the judgement of the purchaser, has engaged
in corrupt or fraudulent practices in competing for or in
executing the contract.

For the purpose of this clause:
“Corrupt practice” means the offering, giving, receiving, or soliciting of
anything of value to influence the action of a public official in the
procurement process or in contract execution. “Fraudulent practice” means
a misrepresentation of facts in order to influence a procurement process or
the execution of a contract to the detriment of the borrower, and includes
collusive practice among bidders (prior to or after bid submission)
designed to establish bid prices at artificial non-competitive levels and to
deprive the borrower of the benefits of free and open competition.
In the event the Purchaser terminates the Contract in whole or in part, the
Purchaser may procure, upon such terms and in such manner as it deems
appropriate, Goods or services similar to those undelivered, and the
Supplier shall be liable to the Purchaser for any excess costs for such
similar Goods or services. However, the Supplier shall continue the
performance of the Contract to the extent not terminated.
4.11 Inspection:

Pre delivery inspection of major components may be carried out by a team of designated officials of OREDA, any other department as may be considered appropriate at the factory site of the vendor / manufacturer. Before despatch of consignment intimation shall be given sufficiently ahead so that no delay occurs for deputing officials and inspection at the premises / test site.

4.11.1 The rest of the tests and inspections shall be made at the place of delivery. Officers authorized by OREDA shall be entitled at all reasonable time to inspect and supervise and test during erection and commissioning. Such inspection will not relieve the executing firm of their obligation in the contract. The water output as per technical specification has to be guaranteed without any controversies of variation of water table.

4.11.2 OREDA shall have the right to have the tests carried out at its own cost by an independent agency at any point of time.

4.12 Payment:

Full payment will be made in phases of solar water pumping system installed / restored out of the total supply / restoration order issued against the respective work assignment in the following manner:

Total value of systems with full taxes / duties will be made after commissioning of the project. The check list of documents to be submitted along with the bills and requisite Security cum Performance Bank Guarantee for release will be as per the purchase order issued.

For processing of the payment the indicative documents are to be submitted like all technical detail of the installed system, location map of the System, GPS based photograph wherever available of the solar PV pumping, System handing over report, Warranty certificate, Joint commissioning certificate or any other documents as may be required as per work award.

4.13 Allocation of award & Execution:

Minimum 50 % total allocation (to the extent possible) of work will be awarded to the lowest evaluated responsive bid (L1) in each relevant...
category and area of operations in four Revenue Zones. However, the firm work order will be placed on availability and feasibility of sites and subsequent performance of the firm.

In case L1 rate being quoted by more than one bidder, the work to be executed shall be equally divided among them.

In view of large geographical spread and expeditious completion of the project, it is imperative that there shall be multiple vendors subject to their acceptance to the L1 price discovered in the tender for the bidders other than the local category. Successful bidders willing to accept the L1 price may be duly empanelled and arranged in order of their quoted price up to L5 bidder technically qualified. Allocation of work award shall be as per the previous order issued and the overall execution performance.

4.14 Comprehensive Maintenance Contract:

CMC will be applicable during the period of the warranty period of 5 years. The bidder must enter into a Comprehensive maintenance contract for the specified period at the time of execution of the order. Offer without such CMC shall not be considered (sample format of CMC enclosed at Annexure). The scope of CMC must cover supply of all spare parts, services and performance reports during the contract in force. Order shall be placed on bidders who agree to offer such CMC. No payment for the guarantee & AMC will be paid. This is linked to the performance guarantee fees in shape of BG which will lapse @ 2% each year for 5 years for successful functioning unless otherwise invoked by the authority full or part and compliance with required MIS monitored through CRC.

4.15 Limitation of Liability:

OREDA, will, in no case be responsible for any accident fatal or non-fatal, caused to any worker or outsider in course of transport or execution of supply / installation. All safety measures as per prevailing norms should be adopted. All the expenditure including treatment or compensation will be entirely borne by the Executants as per statutory Govt policies. The Executants shall also be responsible for any claims of the workers including PF, Gratuity, ESI & other legal obligations. The executants shall take all steps towards the security compliances.

4.16 Force Majeure:
In no event shall either Party have any liability for failure to comply with this Agreement, if such failure results directly from the occurrence of any contingency beyond the reasonable control of the Party, including, without limitation, strike or other labor disturbance, riot, major power failure, war, natural calamities including but not limited to floods, earthquakes, fire, volcanic eruptions, epidemics, National Emergency, interference by any government or governmental agency, embargo, seizure, or enactment or abolition of any law, statute, ordinance, rule, or regulation (each a "Force Majeure Event"). In the event that either Party is unable to perform any of its obligations under this Agreement because of a Force Majeure Event, the Party who has been so affected shall as soon as may be, after coming to know of the Force Majeure Event, inform the other Party and shall take reasonable steps to resume performance as soon as may be after the cessation of the Force Majeure Event. If the period of nonperformance due to a Force Majeure Event exceeds thirty (30) days, the Party whose ability to perform has been so affected may, by giving written notice, terminate this Agreement.

4.17 Dispute:
If any dispute of any kind whatsoever arise between Nodal Agency and the vendor in connection with or arising out of the work award including without prejudice to the generality of foregoing, any question regarding the existence, validity or termination, the parties shall seek to resolve any such dispute or difference by mutual consent.
For adjudication of any dispute between OREDA and the bidders arising in this case, reference can be made to any Law courts under the jurisdiction of Odisha High court only.
The Chief Executive, OREDA reserves the right to accept or reject any or all bids without assigning any reason thereof.

Chief Executive
I/We have carefully read and understood the above terms and conditions of the bid and agree to abide by them.

Signature of the bidder with Seal
MINISTRY OF NEW AND RENEWABLE ENERGY
SPECIFICATION FOR SOLAR PHOTOVOLTAIC WATER PUMPING SYSTEMS
Indicative for quality assurance

(Relevant components to comply)

1. SCOPE
These specification covers design qualifications and performance specifications for Centrifugal Solar Photo Voltaic (SPV) Water Pumping Systems to be installed on a suitable bore-well, open well, water reservoir, water stream, etc., and specifies the minimum standards to be followed under New Scheme for Farmers launched by Government of India on 8.3.2019.

2. TERMINOLOGY
In addition to the terminology specified in 3 of 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 tube well during operation of pump set.

2.3 Submergence — It is the minimum height of 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 meter of water column when pump operates at suction lift.

2.5 Static Suction Lift — Static 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 SPV panel, 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 Converter/Controller with Inbuilt MPPT mechanism, Pump set and piping.

2.8 SPV 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

Annexure-A
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 pump set using pump controller.

3.2 A SPV Water Pumping system typically consists of:

3.2.1 Pump Set

Pump set may be of any one of the following types:

i) Mono-set pump;

ii) Open well submersible pump;

iii) Submersible pump;

3.2.2 Motor

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

i) AC Induction Motor.

ii) DC Motor [PMSM/BLDC/SRM (with brush or brushless)].

3.2.3 SPV Controller See 2.8

Note: Some controllers are inbuilt in the motors

3.2.4 Provision for remote monitoring for the pumps must be made in the pump controller through an integral arrangement having following basic functions:

▷ Controller must be assigned with a unique serial number and its live status must be observed remotely on online portal through login credentials.

▷ Live status must indicate whether controller is ON/ OFF

▷ The parameter i.e. the water output, water flow rate, in fault condition, array input voltage/ current, power and motor frequency should at logged at an interval of 10 minutes

▷ Controller must have a back up to store the data locally ( at least for 1 year

3.3 Solar Photo Voltaic (SPV) Array

3.3.1 SPV arrays contains specified number of same capacity, type and specification modules connected in series or parallel to obtain the required voltage or current output. The SPV water pumping system should be operated with a PV array minimum capacity in the range of **900 Watts peak to 9000 Watts peak**, measured under Standard Test Conditions (STC). 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 200 Watts peak, with adequate provision for measurement tolerances. Use of PV modules with higher power output is preferred.

3.3.2 Modules supplied with the SPV water pumping systems shall have certificate as per IS14286/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 15 percent and fill factor shall be more than 70 percent.

3.3.5 Modules must qualify to IEC TS 62804-1:2015 for the detection of potential-induced degradation - Part 1: Crystalline silicon (Mandatory in case the SPV array 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 TS 61701:2011 for salt mist corrosion test.

3.3.7 The name plate shall conform the IS 14286/IEC 61215

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

3.3.9 Variation in overall SPV array wattage from the specified wattages shall be within zero percent to +10 percent.

3.3.10 The PV 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.

3.4 Motor-Pump Set

3.4.1 The SPV water pumping systems may use any of the following types of motor pump sets:
   a) Surface mounted motor-pump set
   b) Submersible motor-pump set
   c) Floating motor-pump set
   d) Any other type of motor pump set after approval from Ministry.

3.4.2 The “Motor-Pump Set” should have a capacity in the range of 1 HP to 10 HP and should have the following features:
   a) The mono block DC/ AC centrifugal motor pump set with the impeller mounted directly on the motor shaft and with appropriate mechanical seals which ensures zero leakage.
b) The motor of the capacity ranging from 1 HP to 10 HP should be AC/DC. The suction and delivery head will depend on the site specific condition of the field.
c) Submersible pumps could also be used according to the dynamic head of the site at which the pump is to be used.

3.4.3 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. The motor-pump set should have a 5 years warranty and therefore, it is essential that the construction of the motor and pump should be made using parts which have a much higher durability and do not need replacement or corrode for at least 5 years of operation after installation.

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 case of HDPE pipes the minimum pressure rating of 8 kg/sqcm-PE100 grade for pumps up to 3 HP, 10 kg/sqcm-PE100 grade for 5 HP pumps 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 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. 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 should 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. 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 IS 5624 for foundation hardware) or direct pilling, it should be decided as per the site and relevant IS i.e. IS 6403 / 456 / 4091 / 875 should be referred for foundation design.
3.5.4 Details of Module Mounting Structure for different capacity of SPV pumps are attached at Annexure-I. These are indicative of minimum standards and an Implementing Agency may specify higher standards.

3.6 SPV 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 must have IP (65) protection or shall be housed in a cabinet having at least IP (65) protection.

3.6.3 Adequate protections shall be provided in the SPV Controller to protect the solar powered pump set against the following:
   a) Dry running;
   b) Open circuit;
   c) Accidental output short circuit;
   d) Under voltage;
   e) Reverse polarity;
   f) SPD to arrest high current surge; and
   g) Lightening arrestor.

3.6.4 A good reliable DC Circuit Breaker as per IS/IEC 60947-2 suitable for switching DC power ON and OFF shall be provided in the SPV Controller.

3.6.5 All cables used shall be as per IS 694. 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.

3.6.6 Controller shall be integrated with GSM/GPRS Gateway with Geo tagging. GSM/ GPRS Charges to be included in the Costing till the end of Warranty period of the Pump set.

3.7 Earthing Arrangement

3.7.1 Earthing of the motor shall be done as per IS 9283 in accordance with the relevant provisions of IS 3043. Separate earthing shall be provided for Controller, pump and SPV array.

3.7.2 For safety purpose, it shall be ensured during installation that the earthing is capable of taking care of leakage current.

3.7.3 In case of uPVC/HDPE pipes used as discharge pipe, a separate non-corrosive, low resistance conductor from motor earth terminal to control panel earth terminal shall be provided for earthing.
3.7.4 A lightening arrestor shall be provided with every SPV Water Pumping System.

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.

4. PERFORMANCE REQUIREMENTS

4.1 Under the “Average Daily Solar Radiation” condition of 7.15 KWh / sq.m. on the surface of PV array (i.e. coplanar with the PV Modules), the minimum water output from a Solar PV 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 meter (Suction head, if applicable, maximum of 7 meter) and with the shut off head being at least 12 meter.

ii) 55 liters of water per watt peak of PV array, from a Total Dynamic Head of 20 meter (Suction head, if applicable, up to a maximum of 7 meters) and with the shut off head being at least 25 meter.

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 meter.

iv) 23 liters of water per watt peak of PV array, from a Total Dynamic Head of 50 meter and the shut off head being at least 70 meter.

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 meter.

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 meter.

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 given in the Annexure II.

**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 meter (Suction head, if applicable, maximum of 7 meters) and with the shut off head being at least 12 meter.
ii) 49 liters of water per watt peak of PV array, from a Total Dynamic Head of 20 meter (Suction head, if applicable, up to a maximum of 7 meters) and with the shut off head being at least 25 meter.

iii) 35 liters of water per watt peak of PV array, from a Total Dynamic Head of 30 meter and the shut off head being at least 45 meter.

iv) 21 liters of water per watt peak of PV array, from a Total Dynamic Head of 50 meter and the shut off head being at least 70 meter.

v) 14 liters of water per watt peak of PV array, from a Total Dynamic Head of 70 meter and the shut off head being at least 100 meter.

vi) 9 liters of water per watt peak of PV array, from a Total Dynamic Head of 100 meter and the shut off head being at least 150 meter.

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 given in the Annexure III.

5. TESTS FOR HYDRAULIC AND ELECTRICAL PERFORMANCE OF PUMPSET

5.1 The motor-pump set shall be tested independently for hydraulic and electrical performance as per the relevant IS specification including following test
   a) Constructional requirements/features
   b) General requirements
   c) Design features
   d) Insulation resistance test
   e) High voltage test
   f) Leakage current test

5.2 Testing of SPV Water Pumping Systems shall be done as per 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 7.1 under the “Average Daily Solar Radiation” condition of 7.15 KWh/m^2 on the surface of SPV array (i.e. coplanar with the 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.
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 Warrantee 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;
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 Pump set; &
l) Photo Voltaic (PV) Array Rating in Watts peak (Wp)

7.1.2 Controller
a) Manufacturer's name, logo or trade-mark;
b) Model Number;
c) Serial Number;
d) Voltage Range;
e) Power Range in kW for Controller; and
f) Current rating (A)

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 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 and 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 warranty card for the modules and the motor pump set should also be provided to the beneficiary.

**Standard MMS for 4, 6 and 8 solar modules have been specified. These standard MMS may be used in combinations for different capacities of solar water pumping systems as follows:**

1. Standard MMS of 4 Modules for 1 HP
2. Standard MMS of 6 Modules for 2 HP
3. Combination of standard MMS of 4 Modules and 6 Modules for 3 HP
4. Combination of two standard MMS of 8 Modules for 5 HP
5. Combination of three standard MMS of 8 Modules for 7.5 HP

and so on....

**Specifications of main parts used in MMS are given below:**

1. **Centre Shaft:** - Centre shaft used in structure should be of minimum 139 OD with minimum thickness of 4 mm with base plate minimum 10 mm thickness if used and foundation hardware should be as per IS 5624. For system without base plate i.e. direct pilling is should be as per the site condition based on the properties of Soil and refer (IS 6403 / 456 / 4091 / 875) for foundation design.

2. **Rafters:** - The Main and secondary rafter used in structure should be of either SHS & RHS pipe sections.

3. **Purlin:** - Mounting Purlins used in the structure should be made of Cold form steel section as per IS 1079 with minimum thickness of 2mm.
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.

5. **Provision for Daily Tracking**: - Provision for Daily tracking should be provided by the way of providing min. 8 mm thick metal sheet with precision cut grooves.

6. **Module Locking System**: - Modules should be locked with antitheft bolts of SS 304 Grade.

7. **General Hardware for Structure Fitment**: - Either SS 304 or 8.8 grade hardware should be used for fitment.

8. **Hot Dip Galvanizing**: - All structure parts should be hot dip galvanized according to IS 4759.

9. **Tolerance for fabrication**: - Tolerance for fabrication of steel structure should as per IS 7215.

10. **Welding**: - Welding should be done as per IS: - 822 & grade of welding wire should be (ER70S-6).

**Raw material test certificates** (MTC) of all types of raw material used in dual axis manual tracking type MMS as per appropriate IS code should be submitted along with dispatch documents.

Tests to be performed on Dual Axis Manual Tracking Type MMS for Solar Water Pumping System: -

1. For ascertaining proper welding of structure part following should be referred.
   a. Weld wire grade should be of grade (**ER 70 S - 6**)
   b. D.P. Test (Pin Hole / Crack) (**IS 822**)

2. For ascertaining hot dip galvanizing of fabricated structure following should be referred: -
   a. Min coating required should be as per IS 4759.
   b. Testing of galvanized material.
      i. Preece Test (CuSO4 Dip Test) (**IS 2633**)
      ii. Mass of Zinc (**IS 6745**)
      iii. Adhesion Test (**IS 2629**)
ANNEXURE-B

Joint Restoration Cum Handing Over certificate of Solar Pump

(1) Village/ Site       GP       Block       District

(2) Supply / installation Order No.:___________ Date:___________

(3) Actual Date of Commissioning:_______________

It is hereby certified that the executants M/s----------------------------- has successfully installed & commissioned the SPV Pumping system with all components and recommended workmanship as below:

<table>
<thead>
<tr>
<th>S N</th>
<th>Name of the items installed &amp; commissioned</th>
<th>Unit</th>
<th>Quantity</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Solar module of --------- wp of --------- make as per test certificates only submitted to OREDA</td>
<td>No.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>---------hp pump of make---------, model---------,---- Sl no equivalent pump as test certificate.</td>
<td>No.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>MPPT pump controller with suitable indications and controls</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Module mounting structure as per MNRE / BIS standard</td>
<td>Set</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>All riser pipes, cables, wiring, control &amp; accessories</td>
<td>Set</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The supply / installation and restoration has been fully executed as per the order and it is handed over in good working condition as detailed above. The executants shall provide complete warranty against all manufacturing defects and defective/erroneous installation for a period of 5 years from this date of handing over. (The warranty certificate, engineering documents have been handed over to OREDA. The above-mentioned SPV Pump is hereby handed over by the executants to------------------ in fully satisfactory working condition to the user / farmer. The safety and security of the system is with the user / farmer. No individual / community user / farmer shall remove / dispose of the system or part thereof.

Seal and Signature

Sarpanch / User /

Authorized OREDA

Seal and Signature

Authorized Officer
ANNEXURE-C

Warranty –cum-Comprehensive maintenance of Solar Pumping Systems for a period of 5 years (in Non-Judicial Stamp Paper of Rs------------) to the full compliances of CRC.

All materials, components of the Solar Pumping System during the period of maintenance shall be the property of Village Committee / user / farmer’s authorised person where the system is installed.

This Warranty applies to the items / goods manufactured and supplied by the “The executants” consisting of pump set, controller, solar panels and accessories as per the format.
The “Company” warranties the solar water pumping system only against manufacturing defects. Faulty materials &/or workmanship for a period of 5 years from the date of commissioning.
Within the warranty period “The executants” undertakes to repair or replace any part/component found to be having manufacturing defects or unserviceable immediately upon its knowledge. “The executants” shall be under no obligation under this warranty, if the company is satisfied that the defects are due to improper usage, negligence, any modifications / alterations or tampering, accident, act of god or installation / repairs carried out by any person not duly authorized by “The executants” of by any reason beyond the control of “The executants” such as theft, war, earthquake, flood or storm & such other natural calamities like hailstorm, typhoon or cyclone uprooting of trees or electric poles, wire & radio or T.V. Antennas etc. causing accident damage to the system.
Under the warranty, no responsibility is accepted for any consequential loss or damage caused by any defect due to tampering to the system.
Any part, component or system replacement shall be granted in exchange of the defective part, component or system to the company by.
This warranty in no case shall extend to payment of any monetary consideration or compensation.
-------------------------------------------------------------------- (hereinafter referred as “The executant”) offers warranty of the Solar water pumping system as under:
This warranty excludes any damage inflicted by animals such as monkeys, domestic animals, birds or any creatures or miscreants.
This warranty excludes damages to the pump / motor due to foreign material like stand, clay coming along with water or due to collapse of bore well / tube well formation.
Regular maintenance of the all Systems for a period of 5 years of warranty against manufacturing defects after commissioning along with supply of consumable items as and when necessary and submission of daily performance of solar submersible pump systems shall come, under the comprehensive maintenance contract. The break down maintenance of the entire system including supply of necessary spare parts, if any are already under the coverage of warranty clause of the General Terms & Condition and special terms & condition for a period of 5 years from date of commissioning of solar pumping systems. The operation and maintenance schedule of the SPV solar pumping systems during the 5 years contract period shall be as detailed below.

1. 5 years comprehensive maintenance period shall begin on the date void of CMC period / from the date of commissioning for the solar pumping systems.

2. The requisite numbers of qualified and trained personnel are required to be deputed / available in the state.

3. The security of the solar pumping systems will rest with the village committee/ user / farmer till such time comprehensive maintenance of the solar submersible pump systems.

4. The deputed personnel shall be qualified and well trained so that they can handle any type of operation hazard quickly and timely.

5. The deputed personnel shall have to keep the record on quarterly basis for the solar pump systems as per format to be supplied after commissioning of the solar submersible pump systems.

6. 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.

7. The Village Committee / user / farmer shall keep clean the solar pumping systems in all time.

8. Normal and preventive maintenance of all systems all electrical connection, changing of tilt angle of module mounting structure shall be the responsibility of the supplying agency.

9. During the maintenance period of 5 years of the solar all systems, if there is any defect of any component of all systems the supplier shall be responsible for immediate replacement / rectification. The damaged component may be
repaired, if it is understood after examination that after repairing performance of the component shall not be degraded, otherwise the defective component shall have to be replaced by new one without any extra cost.

10. Comprehensive Maintenance Instructions:

10.1 Proper maintenance of the systems shall be carried out by the executants during the maintenance period of 60 months with quarterly / half yearly review check up of systems and equipment in detail with purchaser.

10.2 Properly qualified and trained personnel well versed in maintenance of SPV systems and knowledge of computers with approval from purchaser shall be deployed at site for maintenance.

- Systems personnel shall be deputed on such basis so that a qualified / trained person with a minimum Technical qualification should be available at site always during the maintenance period.

- Supplier shall depute an engineer of their company for the maintenance of the systems who shall be fully responsible for the complete maintenance and optimum operation of the systems. The name and contact nos. of this engineer shall be notified to the purchaser for the purpose of contact, responsibility and correspondence with regard to all trouble shooting.

- Replacement & repair of damaged parts shall be carried out immediately during the maintenance period so as to ensure at least 95% uptime.

- Systems operation reports in a format prescribed (Management Information System) by the purchaser shall be furnished by the supplier on a weekly and monthly basis or as may be required.

- Systems shall be operated as per the standard practices to ensure proper safety measures.

- The supplier shall ensure replacement of worn out parts and component during the comprehensive maintenance period for which purpose the supplier shall carry and maintain minimum inventory of spares at the systems and its supply / installations.
• In case of delay in repair & maintenance and non-observance of schedule, the purchaser shall have the right to impose any penalties including forfeiture of performance security.

• In case of any fault, the fault must be removed within 2 days of receipt of the complaint, failing which a penalty of Rs.500/- per day shall be charged. In case of delay of more than 10 days OREDA may on its take up repair by any suitable method and the cost of the repair along with the penalty amount will be charged from the supplier to be paid or deducted from the performance security deposit by invoking the BG in part to the extent of the repair cost.

• In case habitual defaulter, large non performance and delays OREDA may take up other steps against the firms for deregistration, debarring and blacklisting

10.3 Routine, preventive, breakdown & Capital Maintenance:

• Routine and Preventive maintenance shall include such checks and maintenance activities quarterly / half yearly and yearly basis which are required to be carried out on all the components of the solar submersible pump systems to minimize breakdown and to ensure smooth and trouble free running of the all systems. The supplier shall be responsible to carry out routine and preventive maintenance and replacement of each and every component/equipment of the solar submersible pump systems and he shall provide all labour, materials, consumables etc. for routine and preventive maintenance of his own cost.

• Breakdown maintenance shall mean the maintenance activity including repairs and replacement of any component or equipment of the all systems which is not covered by routine and preventive maintenance and which is required to be carried out as a result of sudden failure/breakdown of that particular component or equipment while the systems is running. The supplier shall be responsible to carry out breakdown maintenance of each and every component of the solar pumping systems and he shall provide the required manpower, materials, consumables, components or equipment etc. for breakdown maintenance at his own cost irrespective of the reasons of the breakdown/failure.
• Capital maintenance shall mean the major overhaul of any component or equipment of the solar pumping systems which is not covered by routine, preventive and breakdown maintenance which may become necessary on account of excessive wear & tear, aging which needs repair / replacement. The capital maintenance of solar pumping systems and all civil structures shall normally be planned to be carried out on an annual basis. For this purpose a joint inspection by the supplier and purchaser shall be carried out of all the major components of the solar submersible pump systems, about two months in advance of the annual maintenance period.

The decision of the purchaser shall be final and binding.

Signature of the bidder
ANNEXURE-D (I)

Model Bank Guarantee Format for Performance Security
[Ref Para 22(i1)]

To

WHEREAS---------------------------------------------(name and address of the supplier) (hereinafter called "the supplier") has undertaken, in pursuance of contract no----------------- dated----------------- to supply ------------------------------------------

--------(description of goods and services) (herein after called "the contract")'

AND WHEREAS it has been -stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein, as security for compliance with its obligations in accordance with the contract;

AND WHEREAS we have agreed to give the supplier such a bank guarantee;

NOW THEREFORE we hereby affirm that we, are guarantors and responsible to you on behalf of the supplier, up to a total of ----------------- . (Amount of the guarantee in words and figures). and we undertake to pay you. Upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid.

without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your- demanding the said debt from the supplier before presenting us with the demand.

We further agree that no change or addition to or other 'modification of the terms of the contract to be performed there under or of any of the contract documents -- which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change. Addition or modification.

This guarantee shall be valid until the day of----------20------- .

Our branch at * (Name & Address of the ___ * branch) is liable to pay the guaranteed amount depending on the filing of claim and any part thereof under this Bank Guarantee only and only if you serve upon us at our------------ * branch a written claim or demand and received by us at our ___ * branch on or before Dt.---------- otherwise bank shall be discharged of all liabilities under this guarantee thereafter.

(Signature of the authorized officer of the Bank)

Name and designation of the officer

Seal. name & address of the Bank and address of the Branch
ANNEXURE-D (2)

FORMAT FOR BANK GUARANTEE FOR EMD

On stamp paper of requisite amount

B.G. No:..................

Whereas ‘OREDA’ has invited tender for the work of Design, supply, installation, commissioning and maintenance of SPV Systems vide Tender Call Notice No.----------/OREDA AND WHEREAS M/S. (Name and address of the firm), who having submitted their tender hereinafter referred to as the ‘Tenderer’ and have agreed to deposit to the ‘OREDA’ an amount of Rs...... (Rupees ..........) as per the terms and conditions of the Tender Document AND WHEREAS the ‘OREDA’ also willing to accept a Bank guarantee in lieu of payment by demand draft of any amount equivalent to the amount of earnest money required to be deposited by the Tenderer to the ‘OREDA’ i.e. an amount equal to Rs........ which as guarantee will be kept valid up to ---------.

In consideration of the ‘OREDA’ having agreed to consider the Bid proposals submitted by the tenderer without depositing the amount of earnest money and against this Bank guarantee, we ......(name and address of the bank) hereby undertake and guarantee to make payment to the ‘OREDA’ the amount of Bid earnest money deposit at any time (time being the essence of the contract) when the ‘OREDA’ asks for the same as per the terms and conditions of the tender Document.

The bank further undertakes not to revoke this guarantee during its currency except with the previous consent of the ‘OREDA’ in writing and the guarantee shall be continuous and irrevocable guarantee up to a sum of Rs........ (Rupees..................)only provided always that any indulgence or relation on the part of the ‘OREDA’ to the said tenderer with or without the consent of the bank shall not prejudice or restrict remedies against the bank nor shall the same in any event be a ground of defence by the Bank against the ‘OREDA’.

In case the ‘OREDA’ Force puts forth a demand in writing on the Bank for the payment of amount full or in part against this bank guarantee, the bank will consider that such demand by itself is a conclusive evidence and proof that the tenderer has failed in complying with the terms and conditions stipulated by the ‘OREDA’ in its bids and payment will be made to the ‘OREDA’ without raising any disputes regarding the reasons for such failure on the part of the tenderer.

The bank shall not be discharged for release from this guarantee by any
arrangement between the tenderer and the ‘OREDA’ with or without the consent of the bank or any alterations in the obligations of the parties or by an indulgence, forbearance shown by the ‘OREDA’ to the tenderer.

This guarantee shall be in addition to and without prejudice to any other securities or remedies which the ‘OREDA’ may have or hereafter possess against the tenderer and the ‘OREDA’ shall be under no obligations to marshal in favour of the bank any such securities or fund or asset that the ‘OREDA’ at its absolute discretion may vary, exchange, renew, modify or refuse to complete or enforce or assign any security or instrument.

The Bank agrees that the amount hereby guaranteed shall be due and payable to the ‘OREDA’ on ‘OREDA’ serving a notice requiring the payment of the amount and such notice shall be served on the bank either by actual delivery thereof to the Bank or by dispatching thereof to the bank by Registered post at the address of the said Bank.

Any notice sent to the Bank at its address by Registered Post shall be deemed to have been duly served on the Bank notwithstanding that the notice may not in fact have been delivered to the Bank.

In order to give full effect to the provisions of this guarantee the bank thereby waives all rights inconsistent with the above provisions and which the bank might otherwise as a guarantor by entitled to claim and enforce.

We,........(name and address of the bank), lastly undertake not to revoke this guarantee during its currency except with the previous consent of the ‘OREDA’ in writing.

“Notwithstanding anything contained herein”,

(i) Our liability under this guarantee shall not exceed Rs...... (Rupees ........................ only).

(ii) This Bank Guarantee shall be valid up to ........................

(iii) We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if we receive from you a written claim or demand on or before ........................ (date of expiry of Guarantee)

Dated:- .... day of ....... 2017

Price bid

Supply of components of solar pumping systems
Rates applicable for one year
**South Zone**

As per MNRE/ JNNSM/ Other national / international standards on components / systems with terms and condition on warranty / replacements, performances

<table>
<thead>
<tr>
<th>Sl no</th>
<th>Particulars</th>
<th>Price in Rs. each</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Removal of defective pump and supply, installation, warranty with 5 years CMC of Solar Photovoltaic <strong>DC pump with or without brushes, centrifugal Pump &amp; controller</strong> of 1hp capacity to run on 675-900 wp having valid test certificate issued to OEM or BIS certificate as per MNRE latest guideline</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>--------------------------make, model</strong></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Removal of defective pump and supply, installation, warranty with 5 years CMC of Solar Photovoltaic <strong>slim BLDC helical rotor Pump &amp;controller</strong> of 1hp capacity to run on 675-900 wp having valid test certificate issued to manufacturer or BIS certificate as per MNRE latest guideline</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>--------------------------make, model</strong></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Removal of defective pump and supply of Solar Photovoltaic <strong>AC centrifugal Pump &amp; controller</strong> of 1hp capacity to run on 675-900 wp having valid test certificate issued to manufacturer or BIS certificate as per MNRE latest guideline</td>
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<tr>
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<td><strong>--------------------------make, model</strong></td>
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</tr>
<tr>
<td>4</td>
<td>Supply, installation, warranty with 5 years CMC for Solar Photovoltaic panel of 675 wp having valid test certificate issued to manufacturer or BIS certificate as per MNRE latest guideline</td>
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<td>Supply, installation, warranty with 5 years CMC for Solar Photovoltaic panel of 900 wp having valid test certificate issued to panel manufacturer or BIS certificate as per MNRE latest guideline</td>
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<td>7</td>
<td>Supply, installation, warranty with 5 years CMC of monopole MS galvanized module mounting structure for 675 wp -900wp solar panel as per technical specification / relevant BIS certificate latest guideline.</td>
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<td>8</td>
<td>Removal of old working pump from non operational tube well and reinstallation in new tube well adjacent to it.</td>
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Composite works contract taxes as applicable will be payable at the time of the supply of material and services. Total cost will be the basis of calculation of L1 price though individual price may vary from bidder to bidder, even if the quantity of order is unspecified.

(In words----------------------------------------------------------------------------------------------------------------------)

Signature of the bidder with Seal
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<th>Sl no</th>
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Signature of the bidder with Seal
ANNEXURE- E3

ONLINE ONLY

North Zone

As per MNRE/ JNNSM/ Other national / international standards on components / systems with terms and condition on warranty / replacements, performances

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8  Removal of old working pump from non operational tube well and reinstallation in new tube well adjacent to it.

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(In words-----------------------------------------------)

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**ONLINE ONLY**

**Central Zone**
As per MNRE/ JNNSM/ Other national / international standards on components / systems with terms and condition on warranty / replacements, performances

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