

ODISHA RENEWABLE ENERGY DEVELOPMENT AGENCY  
S/59, MANCHESWAR INDUSTRIAL ESTATE  
BHUBANESWAR-751010, ODISHA

## **Tender**

For

**Standard Rate Contract**

on

Design, Manufacture, Supply, Installation (Erection), Testing, Commissioning, including Warranty and Comprehensive Maintenance Contract for a period of 5 years of **Solar energy based dual pump piped water supply schemes** on

**Turnkey basis** under

**National Rural Drinking Water Programme (NRDWP)** in  
**Integrated Action Plan (IAP)** districts of the **Odisha state**

Tender Call Notice- **3129/OREDA**

Dated- **27.9.13**

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Tel-06742588260, 2586398, 2585898,2580554,2581552, ,  
Fax-2586368, Web site : [www.oredaodisha.com](http://www.oredaodisha.com).  
E-mail : ceoreda@oredaodisha.com

## Background

### **Solar energy based dual pump piped water supply scheme:**

IAP (Integrated Action Plan) districts are typically characterized by small remote habitations. Bore well / tube wells are the only sources of drinking water in these habitations. When water level in the wells depletes or hand pumps go out of order providing minimum life supporting drinking water in these villages comes as a very big challenge. Since most of these habitations are either un-electrified or the power supply is highly erratic energising the wells with normal grid power is also very difficult. In such scenario Solar PV water pumping systems in tandem with regular existing hand pumps (called as dual pump) emerge as viable option for ensuring uninterrupted drinking water supply with minimum recurring expenses.

In the first phase, 1762 villages/habitations will be covered under program in 18 districts. RWSS will provide the list of villages, locations of the bore wells within the villages and water yielding report of each selected bore well. OREDA will execute the composite work of piped water supply through Turnkey Job Operators selected through this tender.

After completion of the entire turnkey job a joint commissioning report will be prepared wherein all details of the installed system will be provided which will be jointly signed by the Turnkey Operator, designated officers of RWSS and OREDA and representative of the Village Committee. The composite system along with the solar PV water pumping system, all civil structures, water tank, stand post, piping etc. will be the property of the Village Committee. After completion of the project the concerned turn key job operator shall handover the system to the village Committee either through its authorized representative or through the Junior Engineer of RWSS in charge of the respective village.

Two village youths nominated by the Village Committee will be adequately trained by the Turn Key Job Operator in day today operation, maintenance and upkeep of the system.

In view of the large geographical spread and limited time available for completion of the project it is contemplated to allocate the work to more than one qualified bidders subject their acceptance of the L1 price discovered through the tender.

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## DETAILS OF NOTICE INVITING TENDER-3129 Dt. 27.9.13

Sealed tenders are invited from registered manufacturers / System integrators of Solar PV Water Pumping Systems having valid MNRE test certificates for models / products / components with JNNSM / BIS/IEC compliance for design, manufacturing, testing, supply, installation, commissioning & maintenance of the pumps and other related systems/components for a period of five for the following **Solar energy based dual pump piped water supply schemes** under National Rural Drinking Water Programme(NRDWP) in 1762 identified villages/ habitations in 18 IAP districts in the state of Odisha.

S/N	Item	Quantity	EMD
1	<ul style="list-style-type: none"> <li>• Turnkey job of implementation of <b>Solar energy based Dual Pump Piped Water Supply Schemes</b> includes complete turnkey solution for water supply with comprehensive maintenance contract (CMC) for FIVE years.</li> <li>• The <b>Solar energy based Dual Pump Piped Water Supply Schemes</b> should consist arrangement of installation of Solar photovoltaic submersible pump of 675 Wp, in addition to the hand pump in the same bore well/Tube well.</li> <li>• System should consist Solar Photovoltaic Panels.</li> <li>• Hot dip galvanized Tank Tower Structure (3m ht) suitable for 5,000 liters.</li> <li>• HDPE tank, HDPE (5000 liters) /Stainless steel water tank (4000 liters), Auto Water Level Controller, distribution system with Stand Post as per standardized &amp; technical specification including Warranty, Operation and Maintenance for a period of 5 years in the 1762 villages.</li> <li>• It also covers the replacement to existing hand pump, and construction of platform.</li> </ul>	1762 sets	10 lakh

Bid document for the above work can be had from OREDA, S-3-59, Mancheswar Industrial Estate, Bhubaneswar-751010 on all working days up to 29.10.13 on payment of Rs. 10,500/- (Rupees ten thousand five hundred ) only including. Payment can be made in cash at OREDA cash counter or through Account payee Demand Draft in favour of Chief Executive, OREDA Payable at Bhubaneswar. The bid documents can also be downloaded from OREDA Website ([www.oredaodisha.com](http://www.oredaodisha.com)). In case of downloaded documents the cost of bid document shall have to be paid in shape of Demand Draft drawn on any Nationalised Bank in favour of Chief Executive, OREDA payable at Bhubaneswar. As proof of purchase of bid document the original money receipt issued by OREDA /demand draft has to be submitted along with the technical bid only. Bids will be received up to 1.00 PM on 30.10.13 and the technical bid will be opened on the same day at 3.30 PM in presence of the bidders or their authorized representatives, if any.

Chief Executive

## Disclaimer

Kindly Note:

1. This document is not transferable
2. Though adequate care has been taken for preparation of this document, 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.
4. While the bid 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.

## Important Dates

<b>1</b>	<b>Uploading of bid documents on web site</b>	<b>4.10.2013</b>
<b>2</b>	<b>Pre bid meeting</b>	<b>17.10.2013 at 11.00 AM</b>
<b>3</b>	<b>Sale of Bid documents</b>	<b>On all working days between 17.10.2013 to 29.10.2013 from 11a.m. to 4 p.m.</b>
<b>3</b>	<b>Last date of receipt of bids</b>	<b>30.10.2013 1.00 PM</b>
<b>4</b>	<b>Date of opening of technical bids</b>	<b>30.10.2013 at 3.30 PM</b>
<b>5</b>	<b>Date of opening of price bid of tech-comm qualified bidder</b>	<b>To be intimated</b>

### Check list of documents to be submitted along with the technical bid

Sl no	Particulars	Complied	Page-no / Flag
1	Bank draft / MR for Rs.10500/- or original money receipt issued by OREDA as proof of purchase of tender paper.	Bank No Dt	Envelop
2	Bank draft for Rs.10,00,000/- towards Earnest Money deposit	Bank No Dt	Envelop
3	Forwarding letter duly signed and stamped by the bidder		
4	Undertaking duly signed and stamped by the bidder.		
5	Document stating the status of the bidder as manufacturer /systems integrator		
6	Copy of the PAN card of the bidder's firm		
7	Copy of the TIN card of the bidder's firm		
8	Copies of Tax returns, VAT/ STCC/		
9	Document stating annual turnover in solar business duly signed and stamped by a registered chartered accountant on the letter head of the chartered accountant		
	Annual audited balance sheets for 2010-11		
	Annual audited balance sheet for 2011-12		
	Annual audited balance sheet for 2012-13		
10	Proof of installation of number of Solar water pumping systems in Govt / PSU in the country.Copies of completion certificates given by the concerned government agencies to the enclosed		
11	Proof of Production capacity of solar PV water pumping system.		
12	Proof of registration with DIC/ NSIC/ MSME/ EPM for undertaking solar business.		
13	Proof of establishment of Quality assurance		

	systems and organisation		
14	Valid Test report of solar PV module from MNRE authorised test centres showing compliance to IEC 61215 & IEC 61730		
15	Valid Test reports of Solar PV water pumping systems of 675 and 900 Wp capacity		
16	Willingness to open service centre in the state of Odisha		
17	Undertaking for Indignity of the supplied items		
18	All accounting statements with auditor's note		
19	Undertaking to unconditionally accept all terms and conditions of the bid document with copy of Board Resolution		
20	Power of attorney to sign the agreement on behalf of bidders & partnership deed articles, if any.		
21	Filled in bid document duly signed and stamped at the bottom of each page except the price bid format.		
22	Organizational profile containing the original documents defining the constitution or legal status, place of registration and principle place of business or firm or partnership.		
23	Signed Technical bid in sealed envelop		
24	Price bid in separate single sealed envelop		



**Forwarding Letter**  
**(to be submitted in the letter head of the bidder)**

To,

The Chief Executive  
Odisha Renewable Energy Development Agency (OREDA)  
S.59. MIE, Bhubaneswar -751010  
Odisha

Subject: Submission of tender for the work of of Design, Manufacturing, Testing, Supply, Installation, Commissioning & Maintenance of **Solar energy based dual pump piped water supply Scheme** vide tender call notice no-----/OREDA dated- -----.2013.

Sir,

Having studied the Tender document carefully I/we, the undersigned, offer to submit our tender for the work of Design, Manufacturing, Testing, Supply, Installation, Commissioning & Maintenance for **Solar energy based dual pump piped water supply scheme** in conformity of the tender document.

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 it self without assigning nay reasons thereof and shall not be held liable for any such action.
- (c) Any genuine changes made by OREDA 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,

Signature of bidder

## 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 rates quoted by us are firm and final and are meant for execution of the allotted work within the time frame stipulated in the tender/work order.
3. All terms and conditions of the tender including the rates quoted by us shall remain valid for a period of one year.
4. 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.
5. In case of award of work 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 to be deposited by us against award of the work.
6. In case we fail to commence or complete the work as per the time schedules or fail to fulfil 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 made by us against the award of the work.
7. I/We hereby declare that I/We shall treat the tender documents, specifications and other records connected with the work as secret/confidential and shall not communicate information derived there-from 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.
8. I/We shall abide by all the laws prevailing at the time of the execution of the work and shall be responsible for making payments of all the taxes, duties, levies and other Govt. dues etc. to the appropriate Govt. departments.
9. Our state commercial tax / TIN registration no. is \_\_\_\_\_ and  
CST registration No. \_\_\_\_\_.  
The PAN No. under the Income Tax Act is \_\_\_\_\_ and  
Service Tax Registration No. 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

Dated:

**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 work of of Design, Manufacturing, Testing, Supply, Installation, Commissioning & Maintenance of **Solar energy based dual pump piped water supply Scheme.**

Ref: Tender call notice no-----/OREDA dated- -----.2013.

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

Nme and designation of the attesting officer with stamp

Yours faithfully  
Head of the organization

## DECLARATION

(to be submitted on the letter head of the company)

To,

Chief Executive  
Odisha Renewable Energy Development Agency  
S-59, MIE, Bhubaneswar 751 010.  
Odisha

Sub: Submission of tender for the work of Design, Manufacturing, Testing, Supply, Installation, Commissioning & Maintenance of **Solar energy based dual pump piped water supply Scheme.**

Ref: Tender call notice no-----/OREDA dated- ----- .2013.

Sir,

I/we hereby declare the following in the context of the aforementioned tender that:

- a) The entire tender document has been discussed in the Board meeting and a resolution has been concurred for participation in the tender (copy enclosed)
- b) We are not involved in any litigation that may have an impact of affecting or compromising the delivery of services as required under this tender
- c) We are not blacklisted / defaulted in any manner by any Central / State Government / Public Sector Undertaking in India.
- d) 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.

Yours faithfully,

Authorised signatory

(Stamp)

## 1. The Scope of works

The broad scope of the work includes turnkey job of design, manufacture, supply, installation, testing commissioning, warranty, operation & Maintenance for 5 years for a complete / composite work of 1762 **Solar energy based dual pump piped water supply scheme** comprising providing, installing, testing and commissioning of Solar Photovoltaic pumps sets along with storage tank, piping, stand post adhering to the standardized norm / BIS /MNRE specification (as per the valid test report of the authorized test centre submitted in the tender) in the entire state in the current year.

- a) Collection of the list of villages including, locations of the borewells, water discharge testing reports etc. from OREDA.
- b) Visit to the village and Identifying the designated borewell and intimating then Village Committee/ junior Engineer of RWSS/authorised representative of OREDA about the date and time of commencement of work.
- c) Deciding whether the solar PV array and the water storage tank will be installed on the rooftop of a school/government building located close to the bore well or a tower structure has to be erected for installation of the storage tank and solar PV array.
- d) Deciding the location of the stand post (not more than 15 m away from the bore well) after discussing with the villager committee/ junior engineer of RWSS.
- c) Transportation of all materials to the village and keeping the same in safe custody within village.
- d) Installation of the solar PV water Pump, storage water tank, solar PV array , stand post etc. as per the technical specifications and standards provided in the tender and testing the same in the presence of the village committee/ Junior Engineer of RWSS/ authorised technical person of OREDA.
- e) It also covers the replacement of hand pump and construction of platform.
- f) Installation of the water dispensing stand post including construction of its platform etc. in a manner which is convenient for collection of water.
- g) After initial operation and testing of the pump for about a week handing over the same to the Village Committee/Junior Engineer of RWSS.
- h) Collection of all documents, including photographs of the installed systems and preparing the joint commissioning reports.
- i) Submission of all documents as detailed in the tender document including the joint commissioning report to OREDA.
- i) Periodic maintenance of the system as detailed in this tender.
- j) 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.
- k) Submission of periodic reports and returns as per the MIS prescribed by OREDA from time to time.

- l) Supply of the complete systems, including all necessary components, sub-components, spares, tools, tackles etc. as per technical specifications given in this document including packing, forwarding, safe storage, handling, commissioning, trial and performance testing and handing over, insurance.
- m) **The solar panel shall be warranted for ten years with rated performance. Security cum PGF for the corresponding amount for the period warranty to be retained by this office.**
- o) Solar submersible pumps of 675Wp capacity will be utilized for the purpose of water supply in the villages as per the requirement of the villages.
- p) Coverage, comprehensive maintenance for 5 years.
- q) Performance guarantees for the rated delivery / discharge of water as per standard test condition. Deficiency / gap in water delivery will be penalized and amount recoverable from PGF.
- r) All civil structures and site clearances for setting up of the complete job are to be obtained before installation.
- s) All structural drawings to be got approved from OREDA / any other competent authority.
- u) While implementing Solar energy based dual pump piped water supply scheme in the village the physical condition of the area on shades / water logging during rain should be taken into consideration.
- v) There should not be any damage what so ever in the village due to setting up of the solar dual hand pump and later there is no leakage of any water connection of the said project the in the village.
- w) While cabling the array care must be taken such that no loose / open cables lie anywhere related to the works.
- x) Adequate training has to be provided to the persons to be designated by OREDA / pump users in day to day maintenance and upkeep of the installed system. The installed and commissioned systems are to be handed over to the Village Committee / respective Jr. Engineer. The bidder must also provide a detailed operation and maintenance manual specific to the installed systems.

## 2. Eligibility Criteria

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

- a) The bidder must be a company registered under the Indian Companies Act 1956 or a firm registered under VAT/STCC in any state in India.
- b) The bidder's company/ firm must have valid STCC/ VAT clearance certificate from appropriate authorities.
- c) The bidder's company/firm must be in the business of solar PV at least for the last 5 years.
- d) The bidder's company/firm must have the capacity to design, manufacture/ integrate and test at least 1000 solar PV water pumping systems per annum.
- e) The bidder's company/firm must have got their models/ products/major components of the SPV water Pumping systems such as PV modules etc. in any of the authorized test centers of MNRE, GOI or in the test labs of TUV and possess recent test certificates against the same.
- f) The solar PV water pumping systems including all its components and sub- components must be in compliance to the relevant IEC/BIS standards.
- g) The bidder's company/firm must have a minimum cumulative turnover of Rs 15 (Fifteen) Crores over last three years exclusively in the business of solar PV. As proof of the same a certificate to the effect duly signed and stamped by a registered chartered accountant in the letter head of the CA's firm must be included in the tender document.
- h) The bidder's company/firm must have designed, manufactured, tested, and commissioned minimum 50 solar submersible pump systems for any government department/PSU/Institution in the entire country during last 3 years.
- i) Notwithstanding to any of the above clauses local firms/MSMEs registered with DIC/OSIC/NSIC for last 5 years and carrying out the business of solar PV in Odisha will be eligible to participate in the tender.
- j) The bidder's company/firm must have established quality assurance system and organization in line with the requirements under the tender.
- k) Following award of work the bidder's company/firm must be willing to open cluster level service centres adequately equipped with technical personnel, spares, tools and tackles etc. to provide proper maintenance services to the installed systems.
- l) The firm must not have been debarred / blacklisted / defaulted by any Govt. Dept, agency, PSUs / institution / agencies / autonomous organisations. As proof of the same the bidder shall submit duly notarized a self-certificate by an authorized person of the bidder's company/firm.

### 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 can submit a single bid only.
2. Bidders must submit their bids for all items as stated in this bid document above in a **single hard bound book form** properly page numbered and Indexed. **No loose or separate papers or spiral bound documents will be accepted. Submission of loose papers or spiral bound documents shall lead to the rejection of the same.**
3. Demand Drafts towards cost of document and EMD should be submitted in a separate envelope 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.
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 TIN / VAT/ Sales tax clearance certificate / e-submission document duly attested must be submitted along with the bid. All rules and circulars of Finance Department, 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.
9. Deviations in terms and conditions, Specification of material, Inspection clause etc. will not be accepted under any condition.
10. The bidders should furnish the information on all past supplies and satisfactory performance.
11. 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 or partnership.
12. 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.
13. The bidders shall submit reports on the financial standing of its company/firm such as audited profit and loss statements, balance sheets and auditor's reports, bankers' certificates etc. All accounting statements submitted should be duly audited and with proper auditor's note on accounts and accounting standards.
14. Earnest money as specified in bid may be deposited in cash at OREDA cash counter or in shape of Demand Draft drawn in favour of Chief Executive, OREDA payable at Bhubaneswar from any nationalized bank. **Bids without E.M.D will not be accepted.**



15. Bids received late due to postal delay or otherwise **will not be considered**.
16. The bidders are required to furnish their offers in the price bid both in words & figures. In case of corrections, if any, the original text/numerical must be clearly crossed out and re-written legibly above, below or on the side of the crossed out characters as per availability of space and the authorized person must put his dated initial under such corrections. In case of any conflict between figures and words, the latter shall prevail.
17. Since timely execution of works is of paramount importance, requests for extension of time shall not be ordinarily entertained.
18. Canvassing in any manner shall not be entertained and will be viewed seriously leading to rejection of the bid.
19. Certificate to the effect that the systems to be supplied are indigenous & not fully imported must be furnished.
20. Power of attorney to sign the agreement on behalf of bidders & partnership deed articles, if any, should be enclosed along with original bid documents.
21. Notice inviting Tender, bid documents, prescribed Technical bid, price bid, terms & conditions will form the part of the tender.
22. All pages of the bid documents must be signed & sealed by the authorized person on behalf of the bidders.
23. 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.
24. A pre bid meeting as mentioned will be convened on 17.10.2013 at 11.00 A.M. in the conference hall of OREDA. Intending bidders may participate in the same to clarify any doubts arising out of the tender document or give suggestions for improvement in the tender terms and conditions including technical perimeters. The corrigendum/ addendum, for all items accepted by the technical committee will be reflected in the final bid document which will be uploaded on the website subsequently.
25. The last date of receipt of the bid is 30.10.13. Sealed tenders may only be dropped in the specified tender box kept in the Support Service Division, OREDA during office hours on working days. Bids received after due date & time will not be considered. The bids of such firms shall only be considered who have purchased the bid documents from the Agency by depositing the prescribed fee of the bid document (Non refundable) / downloaded from the website and submitted along with cost of the tender paper in shape of cash / DD drawn in favour of Chief Executive OREDA from any nationalised bank. If due to any reason the due date is declared as a holiday the bid will be opened on next working day at the same time.
26. The technical bid shall be opened on 30.10.13 in the OREDA office, Bhubaneswar in presence of such bidders or their authorized representatives, who may like to be present at the time of opening.
27. All Taxes applicable at the time of supply (from the date of consignment) will be extra and admissible.

In case of supply of any defective material or substandard material, the materials will be rejected & it will be the responsibility of the supplier for taking back & replacing the rejected materials at their own cost. In case of non-lifting of such rejected materials within a reasonable time offered by the office it will have the right to suitably dispose of the same and forfeit the amount.

28. The supplied materials should strictly comply with the specifications as mentioned in the bid; otherwise the material would be liable for rejection. The valid test report on components issued by the accredited test centres of MNRE, GOI are to be submitted. Specified under JNNSM issued by MNRE Govt. of India vide letter no- 5/23/2009-P & C dt 8.7.2010 and subsequent addendums. **List of accredited test centres of MNRE is enclosed at Annexure.**
29. Any clarification on the technical specification and commercial terms and conditions may be clarified in writing from OREDA.
30. Deviation of any commercial terms and condition and technical specification shall not be entertained under any circumstances
31. 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 .
32. All the bidders shall essentially indicate the break-up of prices as shown in Price bid.
33. During the warranty period, MNRE/ State Agencies/ Users reserve the right to cross check the performance of the systems with the minimum performance levels specified in the MNRE specifications.
34. The Chief Executive, OREDA shall award the contract to the successful bidder whose bid shall be qualified after evaluation in terms of the responsiveness and lowest rate determined on the basis price bids.
35. If awarded, the bidder must be willing to open a a local office at Bhubaneswar before commencement of the work for coordination of all jobs and service centres fully equipped with technical person and spare parts at cluster level in the district where water pumps installed. Such facility must have proper mailing address with contact person detail from time to time.
36. On award of contract the qualified bidder shall be termed as turnkey operator.

#### **Submission of bids:**

The bid document should be submitted in two parts as detailed below:

- i) Bids should be submitted in two separate sealed envelope as mentioned below & addressed to the Chief Executive, OREDA, Bhubaneswar -5, inside a sealed envelope super-scribed "Bid for Design, Manufacturing, Testing, Supply, Installation, Commissioning & Maintenance for a period of five years of Solar PV Water Pumping Systems for Mini Drinking Water Supply Projects to be implemented under National Rural Drinking Water Programme(NRDWP) in IAP districts in the state of Odisha against Departmental Notice No. 3129/ OREDA dtd 27.9.13".
- ii) First sealed envelope should contain Technical Bid as per Annexure – A, prescribed test certificate, Earnest Money, Processing fees, Technical Specification, valid VAT / Sales tax clearance certificate, Commercial terms & conditions, other bid documents duly signed &

sealed, Indiginity Certificate, organizational profile, balance sheets and profit & loss accounts for last three years, certificate and proof as per qualification criteria as well as brochure, literature etc. It should be super-scribed with **Part-1 Technical Bid** ". All the papers of bid documents except the price bid duly signed should be submitted in the first envelope. Required earnest money deposit in the form of Demand draft in favour of Chief Executive, OREDA payable at Bhubaneswar should be attached. If the bid document has been downloaded from the website, the bank draft towards cost of bid document should be submitted in a separate envelop superscribed "cost of bid document" and kept in the main envelop.

- iii) In case of non remission of "cost of bid document" no other documents will be entertained and the bid shall stand rejected.
- iv) Second sealed envelope (part-II) should contain Price bid as per Annexure in a separate sealed envelope. It should be super-scribed with "**PART II Price Bid only and no other document**". Any condition in regard 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 in Annexure- except price.

#### **Opening of the bids:**

The procedure of opening of the bid shall be as under

- i) First envelope "**PART-1 Technical Bid**" shall be opened at the time & date mentioned in the bid notice by OREDA representative in the presence of bidders, who choose to be present.
- ii) Second envelope (part-II) containing Price bid shall be opened after evaluation of technical-commercial suitability of the offer by assessing responsiveness in line with the requirements mentioned in the bid document. The date for opening of second envelope (Price bid) shall be communicated subsequently. Second envelope of price bid of only those bidders shall be opened who qualify in the technical bid. If necessary, the firms may be called for Technical Presentation of their product as per the time intimated by OREDA.

#### **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 of Bidder with Seal

#### 4. COMMERCIAL TERMS & CONDITIONS

##### 4.1 Rate:

The offer should indicate the unit cost of the system, Installation & Commissioning charges, CMC Charges and taxes & duties separately. 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 work order.

##### 4.2 Sales Tax & Duties etc.:

All Taxes and duties as prescribed both under Central and State Government sales tax rules would be applicable.

##### 4.3. Earnest Money Deposit:

- 4.3.1 Earnest money deposit Rs.10.00 (ten) 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 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 adjusted against Security cum Performance Bank Guarantee deposit in case of successful bidders who have submitted BD.
- 4.3.4 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 is deposited.
- 4.3.5 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.

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

The successful bidder must deposit **Two numbers of bank guarantees towards** Security cum Performance Guarantee fees as follows

- i) 5 % of the ordered value with the Chief Executive, OREDA, Bhubaneswar at the time of acceptance of the work order in shape of irrevocable Bank Guarantees with **5 years validity** from the date of acceptance of the work order till the completion of respective warranty period of the composite system.
- ii) 5 % of the ordered value with the Chief Executive, OREDA, Bhubaneswar at the time of acceptance of the work order in shape of irrevocable Bank Guarantees with **10 years validity** from the date of acceptance of the work order till the completion of respective warranty period of the module.

The said deposit would be forfeited, if the supplies are not made and performances are not as per the Terms & Conditions of the purchase order. The first security deposit amount will be refunded after the expiry of the Warranty period and CMC period of the systems i.e 5 years after commissioning of each system, subject to satisfactory execution / performance of the systems. The 2<sup>nd</sup> PBG will be refunded after the expiry of 10 years i.e module performance guarantee. In case of under-performance in generation / rated water output penalty shall be imposed and the cumulative amount shall be recovered from the PGF.

#### 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 work order subject to issue of water yield test reports by the respective Nodal Officer of RWSS. In case all yield test report are available at the time of issue of work order the entire job has to be completed as per the following schedule

- i) 50 % of the 1<sup>st</sup> batch work i.e supply, installation and commissioning has to be completed within 8 weeks of issue of the work order
- ii) 50 % of the 2<sup>nd</sup> batch work has to be completed in another 6 weeks of issue of the work order.

Execution of work 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. In case of deficiency / gap in any rated output of water the supplier shall stand to be penalized. Penalty shall be imposed pro rata as per the deficiency of any system calculated on the basis cost of system.

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 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 submersible pump systems.

#### 4.6 Validity of offer:

The offer must be kept valid for a period of one year from the date of opening of the technical bid or till the completion of the tender project. No escalation clause except the admissible tax component under the period of consideration would be accepted.

#### 4.7 Tax return:

The bidders must submit attested copy of valid up to date sales Tax / VAT clearance / e-submission 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 60(sixty) months 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 work 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.

#### **Penalty for low / under performance**

The systems have to perform as per the MNRE / BIS standard and other norms of national /international standard applicable from time. In case of low performance / under performances of the penalty will be imposed. The pumps are to deliver the rated output.

#### **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 or 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 will 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. The cost of such inspection shall have to be borne by the supplier.

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:**

Payment will be made in instalment of minimum 20 solar water pumping system installed out of the total work order issued against respective executant in the following manner

- i) **75%** of the total value of systems with full taxes / duties (excluding AMC charges) will be made after commissioning of the project. The check list of documents to be submitted with the bills for release will be as per the purchase order issued. For processing of the payment the indicative documents like a) All technical detail of the installed system b) Inspection and testing report c) Location map of the System d) GPS based photograph of the hand pump, OH tank and solar PV array e) System handing over report f) Warranty certificate g) Joint commissioning certificate etc
- ii) Balance **25%** of the systems and other order value will be released after successful functioning of the system for six months after measurement of all performance parameters for 2 days (with full sunny days) and submission of all documents (report of completion training and signing of CMC effective from the date of total commissioning of systems of the work order) as given in the purchase order.

#### **4.13 Allocation of work & Execution:**

In view of large geographical area, limited time available for completion of the project, OREDA may consider distribute the work equitably amongst more than one techno-commercially qualified bidder subject to the condition that other bidders agree to undertake the work at L1 prices and submit irrevocable undertaking to that effect. In case of non-submission of the same the bidder shall not be included in the list.

Initially only 50% of the entire order will be equally distributed amongst more than one numbers of qualified bidders agreeing to undertake the work at L1 price. Depending upon the performance of the

bidders with regards to quality of execution and timely completion of the projects the balance 50% will be allotted.

The allotment of the area / districts will be the discretion of the OREDA authority. However, while allocating the works care will be taken to allot contiguous patches to bidders so that subsequent maintenance etc will be easier. Local qualified bidders shall be given preference in allocation of work for limited scale.

#### **4.14 Comprehensive Maintenance Contract:**

CMC will be applicable on expiry 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 during the contract in force. Order shall be placed on bidders who agree to offer such CMC. The CMC charges quoted by the bidder must be realistic in view of actual rendering of after sale services. The payment of annual maintenance charges under the Comprehensive Maintenance Contract shall depend upon the functionality of the system duly certified by the concerned Authorised officials of OREDA. Upon receipt of such certificates CMC amount as applicable shall be paid at the end of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> years.

#### **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 work. All the expenditure including treatment or compensation will be entirely borne by the Executants. 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:**

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



**ANNEXURE-A****TECHNICAL SPECIFICATION**

**DEFINITION : Solar energy based dual pump piped water supply scheme** includes complete turnkey solution for supply, installation, commissioning and comprehensive maintenance contract (CMC) for FIVE years. The solar dual pump should consist arrangement of installation of Solar photovoltaic submersible pump in addition to the hand pump in the same bore well/Tube well.

System should consist Solar Panels, Hot dip galvanized Tank Tower Structure (3m ht) suitable for 5,000 liters HDPE/4000 liters stainless steel tank., HDPE (5000 liters) /stainless steel water tank (4000 liters), Auto Water Level Controller, Stand Post duly hot dip galvanized.

**I. Technical Specification of Solar Dual Pumping System:**

1. Maximum Pumping head – 90 mtr.
2. Daily yield of Solar Submersible Pump at solar irradiance 6kWh/m<sup>2</sup> – 5000 lpd
3. Overhead Water Tank capacity - 5,000 liters HDPE Tank / 4000 Stainless Steel tank. HDPE Tank / 4000 Stainless Steel tank.
4. Galvanized Overhead Tank Structure height 3 mtr.
5. Stand post hot dip galvanized.
6. India mark II hand pump with 12X 3 m riser pipes.

Battery bank should not be used as a backup system.

Solar panels should not be connected to submersible pump through either inverter or converter.

The system should be suitable for 100mm and above/onward bore size.

**II. Solar Submersible Pump:–**

- Light weight S.S. permanent magnet submersible pump with embedded controller inside the motor having CE certification, Permanent magnet DC brushless type.
- Pump type – Positive displacement, Helical rotor
- Rated rpm – 500 to 3600
- Rated voltage – 30 to 300V
- Rated current – 10 amp (max)
- Built-in features –
  - a. Outer dia should not be more than 96 mm,
  - b. Out let of the pump should be 32mm
  - c. Dry run protection
  - d. Wire to water efficiency not be less than 50 %.
- Over and under voltage protection
  - a. Overload protection
  - b. Temperature Protection
- ISI mark cable 3 core x 2.5 sq.mm.

**III. Auto Water Level Controller without Battery :-**

Automatic OFF/ON for controlling water level in the tank.

**IV. Cable:-**

1. 3 core x 2.5 sq.mm cable as per IS 694- 70 meters.
2. PVC Pipe ½ inch for covering cable for concealed connection – 10 mtrs.
3. Cable clips ..... 20 Nos.

**V. Solar Panels as per IEC 61215:-**

The SPV water pumping system should be operated with a PV array capacity in the range of 675 Watts peak, measured under Standard Test Conditions (STC). Sufficient number of modules in series and parallel could be used to obtain the required PV array power output. The power output of individual PV modules used in the PV array, under STC, should be a minimum of 74 Watts peak, with adequate provision for measurement tolerances. Use of PV modules with higher power output is preferred.

Indigenously produced PV module (s) containing mono/ multi crystalline silicon solar cells with following features should be used in the PV array for the SPV Water Pumping systems:

- Modules supplied with the SPV water pumping systems should have certificate as per IEC 61215 specifications or equivalent National or International/ Standards.
- Modules must qualify to IEC 61730 Part I and II for safety qualification testing.
- The efficiency of the PV modules should be minimum 13% and fill factor should be more than 70%.
- The terminal box on the module should have a provision for “Opening” for replacing the cable, if required.
- Each PV module must use a RF identification tag (RFID), which must contain the following information:

(i) Name of the manufacturer of PV Module

(ii) Model or Type Number

(iii) Serial Number

(iv) Month and year of the manufacture

(v) I-V curve for the module

(vi) Peak Wattage of the module at 16.4 volts

(vii)  $I_m$ ,  $V_m$  and FF for the module

(viii) Unique Serial No and Model No of the module

RFID shall be mandatory placed inside the module laminate A distinctive serial number starting with NSM will be engraved on the frame of the module or screen printed on the sheet of the module.

1. Mono/Multi-crystalline Solar Panels Capacity – 675wp
2. Adequate anti-theft fittings need to be provided for each panel.

**VI. Overhead Tank Structure:-**

- Tender should provide design and drawings of structure along with bid.
- Structure should be strong enough (Main columns and base frame for Overhead Tank and supporting structure for panels should be made out of minimum of 100mm x 100mm x 4.8 mm square tube) to hold minimum of 6 tonnes of weight and cater to a minimum of 150km/hr. wind speed. RCC foundation should be strong enough to hold weight of structure and water tank. Foundation bolt – M -16X700mm (length)-16 nos. 4 nos. for each concrete foundation.
- The structure should be sized to hold 5,000 litres HDPE water tank / 4000 liters of Stainless Steel water tank
- The structure should be hot dip galvanized (minimum thickness 60 microns).
- Height at which the tank is kept is 3 mtr.
- Overhead Tank Structure should be erected on suitable solid foundation made of reinforced cement concrete as per the ground requirement.
- Overhead HDPE water tank with 2 layers-5000 litre capacity
- Overhead 304 grade stainless steel water tank made out of minimum 0.8 mm thickness, minimum 1600mm diameter – 4000 liter capacity

**VII. Common stand post:-**

Tap Stand should be hot dip galvanized with 4 nos of stainless steel taps having platform of 1.5 mtr x 1.5mtr with proper drainage up to 3 mtr.

**VIII. Plumbing:-**

1. Underground UPVC piping essential for all connections within the periphery of 10 mtr. from the bore well to overhead tank and overhead tank to stand post should be provided by the supplier.
2. Plumbing outside the periphery of 10 mtr. will be paid extra as per the approved rates.

**IX. Civil Work:-**

1. Civil work essential for erection of Overhead Tank Structure as per local site conditions and soil formation.
2. Civil work essential for erection and skirting of Stand Post – 2mtr x 2mtr
3. Civil work essential for repairs to platform existing Hand Pump as per UNICEF design.

**WARRANTY (Defect liability Period):-**

1. Complete system would be under warranty for a period of 5 years from the date of commissioning against any defects.
2. SPV Modules will contain warranty of 10 year for 90 % peak output 25 years for 80 % peak output from the date of commissioning of system.

**Comprehensive Maintenance Contract (CMC):-**

1. Duration of CMC – 5 years.
2. Quarterly monitoring and performance report duly certified by authorized person is required to submit during Warranty and CMC period.

**ANNEXURE-B****INDICATIVE DOCUMENTS TO BE SUBMITTED ON COMPLETION**

FORMAT FOR WARRANTY CARD TO BE SUPPLIED WITH SOLAR PV DUAL PUMP SYSTEM

1. Name & Address of the Manufacturer/Supplier of the System	
2. Name & Address of the Users / Village Committee	
3. Date of supply of the system	
4. Details of SPV module (s) supplied in the system Make (Name of the manufacturer) Model Serial No. (s) Wattage of the PV Modules under STC Warranty valid up to	
5. Details of submersible pump Make (Name of the manufacturer) Model Batch/Serial Nos.(s) Warranty valid up to	
6. Details of Electronics other BOS items Make (Name of the manufacturer) Model Serial No (s) Warranty valid up to	
7. Designation & Address of the person to be contacted for claiming warranty obligations.	

(During the warranty period RWSS /OREDA authorized Officer / nominated trained person reserves the right to cross check the performance of the system with the minimum levels specified in the MNRE specification.

(Signature)

Name & Designation

Name & address of the

Manufacturer/Supplier

## ANNEXURE-C

**Status Report of Solar energy based dual pump piped water supply scheme after commissioning.****(A) PARTICULARS**

1. Name of the Village :
2. (a) Place of installation  
(b) Gram Panchayat :
3. Block :
4. District :
5. Date of visit :
6. Name & address of the visiting staff :

**(B). OBSERVATIONS**

7. Visual damage of the system :
8. Damage of the module :
  - (i) Sl. No. & make of the damage module:
9. Routine maintenance work :
  - (i) Cleaning up the module surface :
  - (ii) Tightening of the all electrical connection:
- Changing of tilt angle of the module
- Mounting structure. :
10. Type of repair/rectification carried out:
11. Suggestion imparted to the user
12. Status of the system
13. Remarks of the user:

Signature of the user/representative(with name & stamp if any) with date

Signature of the staff visiting the installations with date -

Signature

Asst Director, RE Cell

**ANNEXURE-D**

## Check List for submission of information/documents after commissioning of the project

S/N	Information/document to be submitted	Whether submitted
1	Site Details Name of the Institution Postal Address Phone No. Fax No. Name of the Contact Person	
2	System details a. Solar PV Modules Make of the modules Year of manufacturing Module test report from MNRE authorized test centre Serial Number and IV curve of each module may be submitted in a separate sheet d. Wires and cables Make of the wires/ cables Length( Meter) and Thickness in sq. mm of all wires and cables used BIS test certification for the wires and cables used. e. Any other feature of the system that needs special mention	
3	JCC / Warranty/ Guarantee of the composite system	
4	Training details Date of training No. of persons trained Name & designation of the persons	
5	Service Centre Details Name /address / contact details of the service centre that will cover the project Name & mobile No. of the person of the service centre in-charge of the project	
6	Performance details (as per enclosed format)	

## ANNEXURE- E

**Inspection Report for Work**

I. 1.Name of Supplier-

4. Officer-in-charge

2.Order No.&amp; Date- /

5. Site –

3.Invoice No &amp; Date-

S. No	Item	Unit	Measurement of work			Remarks
			Done	Accepted	Rejected	
	Supply, installation and commissioning of solar hand pump Capacity .....Wp consist of Solar Submersible pump, Solar Panels, Hot dip galvanized Tower Structure (3m ht) suitable for 5,000 litres HDPE tank., HDPE water tank (5000 litres), Auto Water Level Controller, house hold tap connection/ Stand Post (4 taps) with drainage arrangements	Set				

III. Certified that the above accepted work has been verified on ----- and found to be as per specifications of the order.

IV. JCC related documents are enclosed

Seal and

Seal and

Seal and

Seal and

Signature

Signature

Signature

Signature

Sarpanch/

Authorized

OREDA

RWSS

VC

In-Charge

Officer

Officer

**ANNEXURE-F****Joint Commissioning Cum Handing Over Certificate of SPV Hand Pump**

- (1) Village                      Block                      District
- (2) Capacity of SPV Hand Pump installed : \_\_\_\_\_ Watt
- (3) Work Order No.: \_\_\_\_\_ Date: \_\_\_\_\_
- (4) Actual Date of Commissioning: \_\_\_\_\_
- (5) Name & address of the executants:

It is hereby certified that the executants M/s-----  
----- has successfully installed & commissioned the \_\_\_\_\_ Watt SPV Hand Pump in  
Village \_\_\_\_\_ on \_\_\_\_\_ (date) with all components as mentioned in Annexure I  
appended hereto, as per the terms and conditions of the work order mentioned at serial No. (3) above.

The work has been fully executed as per the work order and it is handed over in good working condition. We shall provide complete warranty against all manufacturing defects and defective/erroneous installation for a period of FIVE years from this date of handing over. (The warranty certificate, operation & maintenance manual, necessary spare parts, tool kit & engineering documents have been handed over to OREDA. The above-mentioned SPV Hand Pump is hereby handed over by the executants to RWSS / Village Panchayat in fully satisfactory working condition.

Seal and	Seal and	Seal and	Seal and
Signature	Signature	Signature	Signature
Sarpanch	Authorized	OREDA	RWSS
	In-Charge	Officer	Officer



## ANNEXURE- G

## Details of System

SN	Name of the items installed/works commissioned at site	Unit	Quantity	Remark
1	SPV Modules of _____Wp each of _____make as per tender specifications along with IV curve details of every individual panel with anti theft fittings	No.		
2	Module Mounting Structure (Hot dipped Galvanized)	No.		
3	Submersible pump with embedded controller inside the motor and riser pipe	Set		
		Set		
5	Overhead Tank of HDPE capacity 5000 liters with Suitable Hot Dipped Galvanized Structure and civil work as per design	Set		
6	Auto Water Level Controller without Battery	No.		
7	Cable	Set		
8	Taps / Common stand post and platform with proper drainage channel arrangements	No.		
9	UPVC/HDPE Pipe with valves	Mtr & no.		
10	Civil Work Platform for Pump with proper drainage channel arrangements	no.		
11	Others if any ,(pl specify)			

Seal and

Signature

Sarpanch

Seal and

Signature

Authorized

In-Charge

Seal and

Signature

OREDA

Officer

Seal and

Signature

RWSS

Officer

**ANNEXURE-H**

**WARRANTY CERTIFICATE**

----- (hereinafter referred as “The executant”) offers warranty of the Solar water pumping system as under:

This Warranty applies to the items / goods manufactured and supplied by the “The executants” consisting of pump set, controller, solar panels and accessories.

The “Company” warrants 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” or 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.

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 sand, clay coming along with water or due to collapse of bore well / tube well formation.

Any replacement of Spares after warranty period during CMS will be done at cost. Estimate for replacement of spares if required will be provided to the concerned authority during schedule visits.

Authorized Representative

## ANNEXURE-I

**SITE SELECTION CRITERIA**

Name of Village: -

Block:-

District

Location of Borewell:- \_\_\_\_\_

(e.g Distance from \_\_\_\_\_)

Other land mark) \_\_\_\_\_

Type of Existing Pump  4inch  6 inch  Other \_\_\_\_\_

Depth of Borewell as per Record (eg 30 mtrs) \_\_\_\_\_ meters

Existing Depth of Borewell (eg 30 mtrs) \_\_\_\_\_ meters

Length of Casing Pipe (eg 20 mtrs) \_\_\_\_\_ meters

Yield of Borewell (Min. 2,500 lit./hr) \_\_\_\_\_ liters/hour

Static Water Level (eg 10 mtrs) \_\_\_\_\_  
meters below ground level.

Pumping Water level \_\_\_\_\_

(Max.40 hrs where water level is stable \_\_\_\_\_ meters below ground level.

while pumping).

Material Delivery Contact

Material Delivery

(Person to approach when delivering

Name, Place (location to store)

Equipment &amp; material).

Mobile \_\_\_\_\_

\_\_\_\_\_ its the executants are allowed to work for the installation of Solar Dual Pump System.

Sarpanch / village representative

Authorized Officer, RWSS

## ANNEXURE- J

**SITE SELECTION CRITERIA**

Name of Village:-

Block:-

District:-

- 
- Yield of the borewell should not be less than 2,500 literes / hour.
  - Pumping Water Level should not be more than 40 meters.
  - Identified borewell should not have any obstacles such as tree roots stones etc.
  - Identified borewell diameter should not be less than 100 mm or 4 inches.
  - Water from the identified borewell should not be muddy at the depth at which the pump is expected to be installed.
  - Tank tower location should not have any tree in the 15 meter periphery.
  - The tank tower location should not have any transmission lines in the vicinity.
  - Building structures more than 3 meters tall should not be near the tank tower location so that no shadow of any tree or house falls on the tank tower through the day.
  - Distance between the stand post and tank tower should not be more than 15 meters and the distance between borewell and tank tower should not be more than 15 meters.
  - The stand post location should have natural slope for drainage of accumulated water.

Sarpanch / Gramsevak/

RWSS

Member of Panchayat

Authorized Officer

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**ANNEXURE-K****Scope of operation & maintenance of solar submersible pump for a period of 5 years. (Contract draft subject to revision)**

All materials, components of the solar submersible pump systems during the period of maintenance shall be the property Village Committee where the system is installed.

Regular operation & maintenance of the Solar submersible pump Systems for a period of 5 years years of warranty after commissioning along with supply of consumable items as and when necessary and submission of daily performance data of solar submersible pump systems shall come, under the operation & 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 submersible pump systems. The operation and maintenance schedule of the SPV solar submersible pump systems during the 5 years contract period shall be as detailed below.

1. 5 years operation and maintenance period shall begin on the date actual commissioning for the solar submersible pump systems. The requisite numbers of qualified and trained personnel are required to be deputed / available in the state.
2. The security of the solar submersible pump systems will rest with the village committee till such time operation and maintenance of the solar submersible pump systems.
3. The deputed personnel shall be qualified and well trained so that they can handle any type of operation hazard quickly and timely.
4. The deputed personnel shall have to keep the record on quarterly basis for the solar submersible pump systems as per format to be supplied after commissioning of the solar submersible pump systems.
5. 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. Any abnormal behavior of any equipment shall be brought to the notice of OREDA immediately for appropriate action.
6. The Village Committee shall keep clean the solar submersible pump systems in all time.
7. Normal and preventive maintenance of the solar submersible pump systems all electrical connection, changing of tilt angle of module mounting structure shall be the responsibility of the supplying agency.
8. During operation & maintenance period of 5 years of the solar submersible pump systems, if there is any defect of any component of the solar submersible pump 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.
9. List of spare parts & measuring instruments are to be supplied along with the systems may be specified in the bid.
10. Operation & Maintenance Instructions:

- 10.1 The successful bidder shall furnish before three months prior to completion of the works. 4 copies of maintenance instruction in English for approval and supply 5 sets of the approved manuals of instructions at the time of inspection and taking over of the equipment. These manuals shall properly bound in book form and contain all information, description of equipment, diagram etc. necessary to enable the customer to operate and maintain the whole scheme.
- 10.2 Proper maintenance of the systems shall be carried out by the executants during O & M period of 60 months with 6 monthly / annual review check up of systems and equipment in detail with purchaser.
- 10.3 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.
- 10.4 Proper repainting, re-coating of exposed surfaces to prevent rusting & replacement of worn out parts shall be carried out along with the maintenance.
- Systems personnel shall be deputed on such basis so that a qualified / trained person with a minimum Technical qualification / Diploma in Engineering should be available at site always during the maintenance period.
  - Supplier shall depute an engineer of their company for the operation and 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 by the purchaser shall be furnished by the supplier on a weekly and monthly basis.
  - 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 operation & maintenance period for which purpose the supplier shall carry and maintain minimum inventory of spares at the systems and its works.
  - In case of delay in repair & maintenance and non-observance of purchaser's O&N 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 failing which a penalty of Rs.1,000/- per day shall be charged. In case of delay of more than 7 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. However, under Force Majeure circumstances penalty can be waived off.
- 10.5 Routine, preventive, breakdown & Capital Maintenance :

- Routine and Preventive maintenance shall include such checks and maintenance activities monthly 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 solar submersible pump systems. The supplier shall be responsible to carryout 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 solar submersible pump 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 submersible pump 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 submersible pump 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 submersible pump 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. In order to ascertain as to which components of the solar submersible pump systems require capital maintenance . In this regard the decision of the purchaser will be final and binding. However, if the condition of any systems and component warrants its capital maintenance at any other time, a joint inspection of the purchaser and supplier shall be carried out immediately on occurrence of such situation and capital maintenance shall be carried out. If required, in consultation with concerned authorities. The decision of the purchaser shall be final and binding.

Signature of the bidder

## ANNEXURE-L

**Annexure-II of Finance Department Office Memorandum 4939 dtd 13.2.12, Govt of Odisha  
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-M

## List of Authorised Accredited Test Centres of MNRE,Off-Grid Programme

Lab/ Organi zation	PV Module	Lighting Systems		Battery	Inverter >100W		Charge Controller	
		Specificatio n(MNRE)	Environm ental		Efficiency	Environ mental	Protection s	Environm ental
SEC	Yes (IEC61215 up to100WP) NABL Accredited	Yes MNRE Accredited	Yes (Including IP) MNRE Accredited	Yes MNRE Accredited	Yes (up to 100KVA) )MNRE Accredited	Yes (Including IP) MNRE Accredited	Yes MNRE Accredited	Yes (Including IP) MNRE Accredited
ERTL (East)	STC Test Facility MNRE Accredited	Yes NABL/ MNRE Accredited	Yes NABL/ MNRE Accredited	Yes Up to 1000 AH	Yes NABL/ MNRE Accredited	Yes NABL/ MNRE Accredited	Yes NABL/ MNRE Accredited	Yes NABL/ MNRE Accredited
ETDC (B)	Yes (IEC61215) under ICEECB, IEC 61701 (upto100WP) NABL Accredited	Yes NABL/ MNRE Accredited	Yes NABL/ MNRE Accredited	Yes Up-to 100 AH	Yes (up to 3 KVA) NABL/ MNRE Accredited	Yes NABL/ MNRE Accredited	Yes NABL/ MNRE Accredited	Yes NABL/ MNRE Accredited
CPRI (B)	No	Yes NABL/ MNRE Accredited	Yes NABL/ MNRE Accredited	Yes up to 1000 AH	Yes (up to 10 KVA) NABL/ MNRE Accredited	Yes NABL/ MNRE Accredited	Yes NABL/ MNRE Accredited	Yes NABL/ MNRE Accredited
ERTL (N)	No	Only Electronics & luminaire NABL Accredited	Yes NABL Accredited	No	Yes Up to 5 KVA NABL Accredited	Yes NABL Accredited	Yes up to 5 KW (NABL Accredited)	Yes NABL Accredited
UL (B)	Yes (IEC61215 IEC 61730 Pt.II and IEC 61701) up to 400WP NABL Accredited	<b>Yes Except Battery</b> NABL Accredited	Yes NABL Accredited	No	Yes Up to 6 KVA NABL Accredited	Yes ABL Accredited	Yes up to 6 KW (NABL Accredited)	Yes NABL Accredited
TUV Rhine land	Yes (IEC61215 IEC 61730 Pt.II upto 400Wp)	<b>No</b>	Yes NABL Accredited	No	Yes Up to 10 KVA NABL	Yes NABL Accredited	Yes up to 10 KW (NABL	Yes NABL

	NABL Accredited				Accredited		Accredite d)	Accredited
Inter Tek	No	Only Electronics & luminaire NABL Accredited	Yes NABL Accredited	No	Yes Up-to 5 KVA NABL Accredited	Yes NABL Accredite d	Yes up to 5 KW (NABL Accredite d)	Yes NABL Accredited

## ANNEXURE- N

**PRICE BID**

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

Description	For 675 wp SPV array,
Design, supply, installation, commissioning of solar pump set with water storage tank and other required items as per tender	Submersible pump head 90 m
Turnkey Rates inclusive of all taxes, duties, incidentals etc. But exclusive of VAT. For supplies, Installation and Commissioning with <b>HDPE (5000 liters)</b> FOR site per set Rs.	
Turnkey Rates inclusive of all taxes, duties, incidentals etc. But exclusive of VAT. For supplies, Installation and Commissioning with <b>Stainless Steel (4000 liters)</b> FOR site per set Rs.	
CMC for 5 years from the date of Commissioning 1 <sup>st</sup> year 2 <sup>nd</sup> year 3 <sup>rd</sup> year 4 <sup>th</sup> year 5 <sup>th</sup> year	

Signature of Bidder

Date Seal

**ANNEXURE-O****ABSTRACT OF DISTRICT WISE SOLAR ENERGY BASED  
PIPED WATER SUPPLY SCHEMES**

<b>SI No.</b>	<b>Name of the district</b>	<b>No,of schemes proposed</b>	
1	2	3	
1	Bolangir	27	
2	Deogarh	25	
3	Gajapati	24	
4	Ganjam, Berhampur, Bhanjanagar	48	
5	Jajpur	31	
6	Kalahandi	30	
7	Kandhamal	60	
8	Keonjhar	230	
9	Koraput	258	
10	Malkangir	72	
11	Mayurbhanj	376	
12	Nowrangpur	92	
13	Nayagarh	81	
14	Nuapada	38	
15	Raygada	149	
16	Sambalpur	31	
17	Sonpur	49	
18	Sundargarh	141	
	<b>TOTAL</b>	<b>1762</b>	