

<b>Date of pre bid meeting</b>	<b>29.7.2013</b>	<b>3PM</b>
<b>Date of opening of tender</b>	<b>16.8.2013</b>	<b>3PM</b>

DETAILS OF TENDER CALL NOTICE  
NO -2369/OREDA , Dated-17.7.2013

Sealed tender are invited from registered MNRE approved Manufacturers/Authorized Dealer in the country having valid test certificates from MNRE authorized test centres for their products for supply, Distribution and maintenance for five year of CFL based Solar Lantern in different part of the state.

Sl.No	Item	Capacity	Quantity	EMD for the composite work in lakhs in shape of DD
1	CFL based Solar Lantern	12 volt 10 watt	9872	3.00

Bid document for the above work can be had from OREDA, S-3-59, Mancheswar Industrial Estate, Bhubaneswar-10 on all working days in between 11.00 A.M. to 4.00 P.M. till 14.8.2013 A.N on payment of Rs. 10,500/- (Rupees Ten Thousand Five Hundred) only which includes VAT @ 5%. 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. In case of downloading the cost of bid document may be deposited in shape of Demand Draft drawn on any Nationalised bank in favour of Chief Executive, OREDA payable at Bhubaneswar. The cost of the bid document in shape Demand Draft has to be submitted along with the technical bid only. The bids shall be accompanied with the required EMD and valid STCC/VAT clearance certificate without which the same shall be rejected. The pre-bid meeting will be held on 29.7.2013. Bids will be received up to 2.00 P.M of 16.8.2013 and the technical bid will be opened on the same day at 3.00 P.M in presence of the bidders or their authorized representatives if any.

Chief Executive, OREDA reserves the right to accept / reject any or all the bids without assigning any reason thereof.

Chief Executive

Memo No.2360 /OREDA

Dated:16.7.2013

Copy forwarded to The Commissioner-cum- Secretary to Govt., Science & Technology Department , Govt. of Orissa, Bhubaneswar for favour of information and necessary action.

Chief Executive

Chief Executive

Memo No.2361/OREDA

Dated:16.7.2013

Copy forwarded to Dr. G.Prasad, Director ( SPV) MNRE, Govt. of India, 14 CGO Complex, Lodi Road, New Delhi-110 003 for favour of information and necessary action.

Chief Executive

Memo No.2362/OREDA

Dated:16.7.2013

Copy forwarded to the PSO & Head, Regional Office(ER), MNRE, Govt. of India, Plot No.N-2/176,Ground Floor, I R C village,Nayapalli,Bhubaneswar-751 015 for favour of information and necessary action.

Memo No-2363 / OREDA

Chief Executive

Dated-16.7.2013

Copy forwarded to Director of textile and handloom, Odisha for information and necessary action.

Chief Executive

Memo No.2364/OREDA

Dated:16.7.2013

Copy to Director (Admn), OREDA for information and necessary action.

Copy to all divisional heads of OREDA for information and wide circulation.

Copy to Notice Board / Web sites of OREDA and S&T Department, Govt. Of Orissa

Chief Executive

# **ORISSA RENEWABLE ENERGY DEVELOPMENT AGENCY**

## **BID DOCUMENT**

**FOR No table of authorities entries found.**

Supply, distribution and maintenance  
of CFL based Solar Lantern for a period of five years.

S-59, MANCHESWAR INDUSTRIAL ESTATE , BHUBANESWAR-751010

Phone : (0674) 2588260,2586398,2580554. Fax:2586368

Website: [www.oredaorissa.com](http://www.oredaorissa.com).

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## Preamble

Directorate of Textile & Handloom, Govt. Odisha have decided to supply portable CFL based solar PV lanterns to each of the selected weaver household in district of the state in order to enhance their regular working hours. Accordingly a programme have been drawn up as per which during the financial year 2013-14 a total of 9872 no solar PV lantern are to be distributed in villages of different district. (List annexed at Annexure-I).

OREDA being the State Nodal Agency for Renewable energy, the department of Textile & Handloom have entrusted the responsibility of selection of solar PV lantern , accordingly the technical specification as per Ministry of New and Renewable Energy (MNRE), Govt. Of India guidelines and programmes distribution of the solar PV lanterns to OREDA.

In order to arrive at a fair and competitive price for the solar PV lantern OREDA in consultation with Directorate of Textile & Handloom have decided to procure the lantern through a process of competitive bidding from among the MNRE approved manufacture and or their authorized dealer.

### Important Dates

<b>1</b>	<b>Commencement of sale of bid documents</b>	<b>19.7.2013</b>
<b>2</b>	<b>Pre bid meeting</b>	<b>29.7.2013</b>
<b>3</b>	<b>Last date of sale of bid documents</b>	<b>14.8.2013</b>
<b>4</b>	<b>Last dates for submission of bids</b>	<b>16.8.2013</b>
<b>5</b>	<b>Date of opening of technical bids</b>	<b>16.8.2013</b>

## 1. Eligibility Criteria

- 1.1. The bidder must be a system integrator of CFL based solar lantern
- 1.2. The bidder must have got their CFL based solar PV lantern tested and qualified at any of the authorized test centres of MNRE (SEC or ETDC for PV modules and ERTL or CPRI or SEC for lighting systems) List attached at annexure C and have submitted information to the test centre about the company along with a copy to the Ministry in the MNRE format.
- 1.3. Authorized dealers of manufacturers as defined above are also eligible for participating in the tender.
- 1.4. The bidder must have valid STCC/ VAT clearance certificate.  
*(Pl. attach copy of valid STCC/ VAT clearance certificate)*
- 1.5. The bidder must have valid income Tax PAN and Service Tax Registration Certificate  
*(Pl. attach copy of valid income Tax PAN and Service Tax Registration Certificate)*
- 1.6. The bidder must have a minimum annual turnover of Rs 5.00 crore in any of last three years in the business of solar PV alone.  
  
*(Pl. attach copy of audited balance sheet for 2010-11, 2011-12 and 2012-13 clearly indicating the turnover from solar PV business )*
- 1.7. The bidder must have supplied and sold at least 500 CFL based solar lanterns / or installed 20 Kw solar off-grid systems in each of any 3 years out of last 5 years beginning from 2008-09 in any part of the state.  
  
*(Pl. attach certificates from the authorized officer of the concerned SNA/attach copy of the work order)*
- 1.8. The bidder must be having capacity to roll out at least 1000 CFL based Solar Lantern in any given month from its own facility.  
  
*(Pl. Submit proof thereon .....)*
- 1.9. The product must be in accordance with the recent technical specification for CFL based PV Lantern prescribed by MNRE, GOI.
- 1.10. The bidder must have established necessary quality assurance systems and organization in line with the same.  
*(Pl. attach copies of recent test certificates from SEC/ other authorized Test Centres of MNRE, GOI as well as details of quality assurance systems as proof thereof)*
- 1.11. Bidders having previous work experience in Odisha shall be preferred.
- 1.12. Bidders already open and willingness to open properly equipped service centre in Odisha shall only be allowed to participate. (An undertaking may be enclosed)

## **2. Scope of the work**

The broad scope of the work would include supply, distribution, impart training to users and maintenance of the lantern for a period of five years.

- 2.1. The bidder must facilitate pre-distribution inspection of the systems by the designated official of OREDA.
- 2.2. Supply of complete CFL based solar Lantern as per technical specifications given subsequently in this document.
- 2.3. Distribution of the supplied systems to the specific households/ beneficiary as directed by the designated officials of OREDA in consultation with the respective nodal officer of Textile and handloom department.
- 2.4. All the supplied systems must be warranted for a period of 5 years against any manufacturing defect or bad workmanship. The battery supplied with the systems should also be warranted for a period of 5 years. In case of low performance/ failure of the battery during the warranty period the same must be replaced by the supplier.
- 2.5. Comprehensive Maintenance Contract (CMC) of the complete system for five years warranty period. The date of commencement of CMC shall be reckoned from the date of distribution of system.
- 2.6. Training to each beneficiary on day to day operation, maintenance of the solar lantern during the distribution and also periodically once in every three month during the first year of supply.
- 2.7. Open at least one cluster level service centre for a cluster of 20 to 25 villages and one state level service centres in Bhubaneswar so as to deliver uninterrupted and sustainable maintenance services.
- 2.8. The successful bidder on distribution of CFL based Solar lantern shall submit all details of the installed systems like beneficiary details, systems details, installation report, etc includes photograph of user's in the formats (Annex-II) to be provided at the time of issue of purchase order.
- 2.9. All necessary conditions as further outlined in the subsequent sections of this document are to be followed.
- 2.10. The bidder shall be fully responsible for proper maintenance and upkeep of the systems during warranty/AMC period.



### 3. Instructions to Bidders

- 3.1. Bids must be submitted in English language only.
- 3.2. Incomplete, telegraphic or conditional bids shall not be accepted.
- 3.3. Prices quoted must be firm and fixed. No price variation / escalation shall be allowed.
- 3.4. The bidders must sign and stamp 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.
- 3.5. Last IT return Statement /Valid TIN / VAT/ Sales tax clearance certificate/Copy of PAN card/ Copy of service tax registration certificate duly attested must be submitted along with the bid.
- 3.6. Deviations in terms and conditions, Specification of material, Inspection clause etc. will not be accepted under normal conditions. However under exceptional situation the same may be considered at the discretion of OREDA.
- 3.7. Earnest money as specified in bid may be deposited in shape of Demand Draft drawn in favour of the Chief Executive, OREDA payable at Bhubaneswar from any Nationalized Bank. **Bids without E.M.D will not be accepted.**
- 3.8. Bids received late due to postal delay or otherwise **will not be considered.**
- 3.9. The quantity of materials intended to be purchased as mentioned in this documents is subject to alteration without any notice.
- 3.10. 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 later shall prevail.
- 3.11. Since timely execution of works is of paramount importance, requests for extension of time shall not be ordinarily entertained.
- 3.12. Canvassing in any manner shall not be entertained and will be viewed seriously leading to rejection of the bid.
- 3.13. Certificate to the effect that the systems to be supplied are indigenous & not fully imported must be furnished.
- 3.14. All essential supplementing documents submitted towards should be signed and stamped on each page and in case of need for verification, originals must be produced.
- 3.15. Copy of recent Test Reports for the composite system from Solar Energy Centers

(SEC)/Other Authorized Test Centres (OATC) confirming to MNRE specifications spelt out in the Administrative Approval of Jawaharlal Nehru National Solar Mission vide MNRE communication would be a major criteria for evaluation of bids must be furnished along with the Bid.

- 3.16. The bidders must be having / willing to open a local office at Bhubaneswar before commencement of work for close coordination with OREDA and also cluster level service centres at suitable places as will be indicated by OREDA during installation of the systems.
- 3.17. Bidders will be required to train the beneficiary in day to day operation and routine maintenance and upkeep of the system.
- 3.18. Bidders will also be required to open at least one State Level Service Centre in Bhubaneswar having trained personnel, adequate spares & consumables and facilities to undertake component level repairs of PCBs etc and all other repairs / services that cannot be provided by the cluster level service centres.
- 3.19. Power of attorney to sign the agreement on behalf of bidders & partnership deed articles, if any, should be enclosed along with original bid documents.
- 3.20. Notice inviting tender, bid documents, prescribed Technical bid, price bid, terms & conditions will form the part of the tender.
- 3.21. 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.
- 3.22. The last date of receipt of the bid is 5.8.2013 up to 2 P.M. Sealed tenders may only dropped in the specified tender box kept in the Project 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. 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.
- 3.23. The technical bid shall be opened on 5.8.2013 at 3.00 P.M 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.
- 3.24. The bid document should be submitted in two parts as detailed below:
  - 3.24.1 Bids should be submitted in two separate sealed envelope as mentioned below & addressed to the Chief Executive, OREDA, Bhubaneswar -10, inside a sealed envelope superscripted "Bid for CFL based Solar Lantern against Bid Call Notice No. /OREDA dtd.00.00.0000. First sealed envelope should contain Demand draft towards cost of bid document ( in case of down loading)/copy of the receipt issued by OREDA in case of purchase of bid document directly from OREDA. Technical Bid as per Annexure -A prescribed test certificate, Earnest Money, Technical Specification, valid VAT / Sales tax clearance certificate ,Income Tax return, PAN card, Service Tax Registration Certificate Commercial terms & conditions, other bid

documents duly signed & sealed, Indignity 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.

- 3.24.2 Second sealed envelope (part-II) should contain Price bid as per Annexure –B in a separate sealed envelope. It should be super-scribed with "PART- II PRICE BID". 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-B1.

#### **4. Procedure for opening the bids**

The procedure of opening of the bid shall be as under

- 4.1 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.
- 4.2 Second envelope (part-II) containing Price bid shall be opened after evaluation of technical suitability of the offer. The date for opening of second envelope (Price bid) shall be communicated subsequently. Second envelope of only those bidders shall be opened who qualify in the technical bid. If necessary, the bidder will be called for Technical Presentation of their product as per the time intimated by OREDA and submission of samples Solar Lantern.
- 4.3 All taxes applicable at the time of supply will be charged separately.
- 4.4 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 . OREDA will have the right to suitably dispose off the same and forfeit the amount.
- 4.5 The supplied materials should strictly comply with the specifications as mentioned in the bid, otherwise the material would be liable for rejection.
- 4.6 Any clarification on the technical specification and commercial terms and conditions may be clarified in writing from OREDA.
- 4.7 Deviation of any commercial terms and condition and technical specification shall not be entertained under no circumstances.
- 4.8 OREDA will not be responsible for any incidental or consequential losses of the firms while execution and till expiry of the period of CMC.
- 4.9 All the bidders shall essentially indicate the break-up of prices as shown in Price bid.
- 4.10 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.

## **5. Acceptance/ Rejection of the bid documents**

Chief Executive, OREDA reserves the right to

- i) reject or accept any or all bids without assigning any reason thereof.
- ii) to split the quantities against the bid on more than one firm for the same items/ work.
- iii) cancel the tender without assigning any reason thereof.
- iv) alter or delete any of the terms and conditions mentioned in this document during the process of tender till finalisation.

No reason will be assigned by OREDA for this and the same will be binding on 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

## **6. Commercial Terms & Conditions**

### **6.1 Rate:**

The offer should indicate the unit cost of the CFL based Solar Lantern including CMC Charges for five years and taxes & duties separately. The unit cost should also be included of packing, forwarding, loading & unloading charges, cost of insurance and transportation FOR destination where the system will be distributed as per the work order.

### **6.2 Sales Tax & Duties etc**

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

### **6.3 Earnest Money Deposit**

- 6.3.1 Earnest money for an amount Rs. 3.0 lakhs is required to be deposited along with the bid without which the bid will not be accepted. No interest will be payable on the EMD amount under any circumstances.
- 6.3.2 Earnest money can be deposited 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.
- 6.3.3 E.M.D would be refunded to the unsuccessful Bidders after finalization of the bid without any interest.
- 6.3.4 EMD would be refunded to successful bidder(s) after submission of security deposit as detailed at clause 6.4.
- 6.3.5 E. M. D would be forfeited in case of non- compliance of the purchase order by the successful bidder.
- 6.3.6 In case of claim for exemption from deposition of Earnest money sufficient proof in support of claim for exemption of EMD as prescribed in GOI/ Odisha Notification is to be attached with the bid.

### **6.4. Security Deposit/ Performance Guarantee Fees**

The successful bidder must deposit the Security amount cum Performance Guarantee fees @ 10% of the ordered value with the Chief Executive, OREDA, Bhubaneswar-10 at the time of acceptance of the work order in shape of Bank Guarantees in two parts, 50 % value with 5 ½ years validity and the balance 50% value with 10 ½ years validity from the date of acceptance of the work order or till the completion of respective warranty periods whichever is later. The said deposit would be forfeited, if the supplies are not made as per the Terms & Conditions of the purchase order. 50% of the security deposit amount will be refunded after the expiry of the Warranty period and CMC period (ref. clause 2 of Scope of Work) of the systems, subject to satisfactory execution / performance of the systems. Balance 50% of the

Security deposit shall be released after expiry of warranty period of 10 ½ years provided for the SPV modules subject to the successful performance.

#### **6.5 Allocation of work:**

In view of large geographical spread, limited time available for completion of the project as well as past experience OREDA may split the work order among a maximum of 3 techno- commercially qualified bidders provided that the second, third bidder or latter in serial order positioned based on their lowest quoted prices agree to execute the work at the prices quoted by L1 bidder. In such case the order will be split amongst the first three willing bidders in the ration L1 bidder and the rest two willing bidders in the following manner i.e L1= 50% of the total order. Second bidder willing to accept order at L1 price =30%. Third bidder willing to accept order at L1 price =20%. If only two bidders will be agreeable to execute the work at L1 prices the total order will be divided in the ration 60:40 between L1 and the second willing to execute the work at L1 price. In case no other bidder submit their willingness to accept L1 price then L1 bidder must execute the entire work.

**The decision of OREDA in this regard shall be final and binding.**

#### **6.6 Programme Execution Schedule**

##### 6.6.1. Delivery of systems at sites:

Delivery of the system----- inter-alia include supply of systems to each individuals identified ----- and proper documented there of. This should done as per monthly schedule of delivery to be given by OREDA.

6.6.2. Upon intimation about distribution of the systems by the executing firm a joint inspection will be carried out by the representatives of the executing firm, Representative of Handloom and textile department, OREDA. Following such inspection a joint commissioning/performance report (Annexure-D) shall be brought out within 10 days of intimation about distribution of the systems in the prescribed format, which shall form a part of the documents for release of payments.

6.6.3 The issuance of a joint commissioning/performance Joint Report shall, in no way relieve the executing firm of it's responsibility for satisfactory operation of the SPV systems for a period of 5 years.

#### **6.7 Quantity**

The quantities of CFL based Solar lantern mentioned in the bid are subject to revision according to the requirement.

#### **6.8 Validity of offer**

The offer must be kept valid 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. The validity can be further extended with

mutual consent.

## **6.9 STCC**

The bidders must submit attested copy of valid up to date sales Tax / VAT clearance 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 placement of purchase order, if required.

## **6.10 Warranty**

The SPV Modules and the Balance of Systems(BOS) should be warranted against any manufacturing defect or bad workmanship for a period of 10 (Ten) and 5 (five) years respectively from the date of commissioning of the systems.

Warranty certificate to the above effect must be furnished along with the distribution reports.

Any defect noticed during warranty period should be rectified/replaced by the supplier free of cost upon due intimation by the concerned beneficiary/District Renewable energy Cell of OREDA. The warranty period shall be extended by the period during which the systems remain non-operative due to reasons within the control of the executants. Care should be necessarily taken to make the system operational within two days of reporting of defect. If the system is not made operational within fifteen days, OREDA may rectify the same and charge all expenses incurred with service charges of 10% of the system on the said account to the vendor. The defects should not be ordinarily attributed to tempering by the users. The firm has to devise suitable mechanism to ensure non-tempering of systems.

## **6.11 Penalty and termination of contract**

The systems shall be supplied and distributed within the scheduled time. 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 distribution up to a maximum deduction of 10% of the contract price for delayed goods or distribution. Once the maximum is reached (i.e 10 weeks of delay) OREDA may consider termination of the contract and forfeit the security deposit without prejudice to the other remedies of the contract along with recovery of mobilization advance by forfeiture of bank guarantee.

However, Chief Executive, OREDA may at his own discretion allow reasonable time extension upon written application of the supplying firm. If the delay is considered intentional or due to negligence of the vendor extension can be allowed with imposition of penalty . If the delay is considered to be genuine time extension can be allowed without imposition of penalty.

## **6.12 Force Majeure**

The supplier of the CFL based Solar Lantern shall not be charged with liquidated

damages nor shall his security for performance be forfeited when failure of the supplier in making delivery is due to any event beyond the control of the supplier and could not have been foreseen, prevented or avoided by a prudent person. These include, but are not restricted to acts of God, acts of public enemy, acts of Government, fires, floods, epidemics, strikes, freights, embargoes and unusually severe weather.

### **6.13 Inspection**

6.13.1 All tests and inspections shall be made at the place of delivery unless otherwise specifically agreed upon by the bidder and OREDA at the time of purchase. Authorized OREDA Officer shall be entitled at all reasonable time to inspect and supervise and test during supply and distribution. Such inspection will not relieve the executing firm of their obligation in the contract.

6.13.2 OREDA has the right to have the tests carried out at its own cost by an independent agency at any point of time. Pre- delivery inspection at the factory site if necessary will be carried out by OREDA.

### **6.14 Payment**

Payment will be made as per the following schedule subject to submission of completed documents as detailed against each

6.14.1. 50% of system cost and 100% Tax subject to distribution of the systems and submission of the following documents.

- Material Verification Report by concerned Asst. Director (Tech).
- Individual receipt by each beneficiary indicating all system details. (Annex-II)
- Certificate to the effect that training has been conducted in the village along with a report on training, list of beneficiaries attended the training and clear photographs covering the training proceedings.

6.14.2. 40% of material cost after two month and subject to submission of

- Functional report of the Asst. Director , District Renewable Energy Cell against the materials supplied In the prescribed format

6.14.3 10% of material cost after 6 month subject to submission of functional report of the Asst. Director , District Renewable Energy Cell against the materials supplied In the prescribed format.

### **6.15. Comprehensive Maintenance Contract**

The bidder must enter into a Comprehensive Maintenance Contract for a period of five year at the time of execution of the order. Offer without such CMC shall not be considered.(sample format of CMC enclosed at Annex- E) The scope of CMC must cover supply of spare parts ( including battery) / 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. Bids with very low/unrealistic CMC charges will be liable for rejection. The payment of annual maintenance charges under the Comprehensive Maintenance Contract shall depend upon the functionality of the system duly certified by the concerned local 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.

**6.17. 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.

**6.18. 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 Orissa 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, OREDA

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

SIGNATURE OF BIDDER  
WITH SEAL

## TECHNICAL SPECIFICATIONS FOR

### COMPACT FLUORESCENT LAMP (CFL) BASED SOLAR LANTERN (Off-grid Solar Applications Scheme 2013-14)

A Solar Lantern is a portable lighting device consisting of a PV module, battery, lamp, and electronics. Battery, lamp, and electronics are placed in a suitable housing, made of metal or plastic or fiber glass. The Solar lantern is suitable for either indoor or outdoor lighting, covering a full range of 360 degrees.

PV module converts sun light into electricity, charges the battery which powers the luminaire. Luminaire consists of Compact Fluorescent Lamp (CFL) and an Electronic Circuit.

## BROAD PERFORMANCE SPECIFICATIONS

The broad performance specifications of a CFL light source based solar lantern system are given below:

PV Module	10 Wp under STC
Battery	Sealed Maintenance Free (SMF) lead acid battery or NiMH battery or Lithium Ion Battery.
Light Source	7 Watt CFL luminaire with 4 pins only along with proper pre-heating circuit
Electronics	Efficiency approximately 85%.
Duty cycle	4 hours a day under average daily insolation of 5.5 kWh sq.m. on a horizontal surface.
Autonomy	Minimum of 3 days or 12 operating hours per permissible discharge

## TECHNICAL DETAILS

### PV MODULE

- (i) Indigenously manufactured PV modules should be used in the solar lantern.
- (ii) The PV module should have crystalline silicon solar cells, and should have
- (iii) humidity, freeze and damp heat test certificate conforming to IEC 61215 Edition II/ BIS 14286 from an NABL or IECQ accredited Laboratory.
- (iv) The PV module must have a minimum of 10 Wp at a load voltage\* of 16.40 ±0.2 V under the standard test conditions (STC) of measurement.
- (v) The open circuit voltage\* of the PV modules under STC should be at least 21.0 Volts.
- (vi) The module efficiency should not be less than 10%.**

- (vii) The terminal box on the module should have a provision of opening it for replacing the cable, if required.
- (viii) There should preferably be an arrangement (stand) for mounting the module at an optimum angle in the direction facing the sun.
- (ix) A foil/ strip containing the following details should be fixed inside the module so as to be clearly visible from the front side:-
  - a) Name of the Manufacturer and/ or distinctive Logo
  - b) Model and/ or Type No.
  - c) Serial No.
  - d) Year of manufacture
- (x) **A distinctive serial number starting with NSM will be engraved on the frame of the module or screen printed on the tedlar sheet of the module.**

\*The load and open circuit voltage conditions of the PV module are not applicable for the system having MPPT.

### **BATTERY**

- (i) Sealed maintenance free lead acid battery with a capacity of up to 7.5 AH, voltages of up to 12V @ C/20 rate of discharge rate at 27°C. or NiMH or Lithium Ion battery of requisite capacity.
- (ii) For lead acid battery, 80% of the rated battery capacity (~ 5.6 AH at 27°C should be between the low voltage cut off and full charge condition of the battery.
- (iii) Battery should conform to the latest BIS/ International standards.

### **LIGHT SOURCE**

- (i) The lamp should be a 7 Watt compact fluorescent lamp (CFL) with 4 pins only along with proper pre-heating circuit.
- (ii) The lamp should preferably be mounted in a base up configuration.
- (iii) The housing should be suitable for indoor as well as outdoor use.

### **ELECTRONICS**

- (i) The inverter should be of quasi-sine wave/sine wave type with a crest factor less than 1.7 and the frequency in the range of 20-35 kHz.
- (ii) Efficiency of the electronic system should be at least 85%.
- (iii) Electronics should have temperature compensation for proper charging of the battery throughout the year.
- (iv) The idle current should not be more than 1 mA.
- (v) The voltage drop from module terminals to the battery terminals should not exceed 0.6 volts including the drop across the diode and the cable when measured at maximum charging current.
- (vi) The PCB containing the electronics should be capable of solder free installation and placement.
- (vii) The electronics circuit should ensure full charging of the battery under different ambient temperatures (0 – 45 C). Further, the electronic circuit should have adequate temperature compensation arrangement for the battery charge regulation set point/ high voltage disconnect for proper charging of the battery throughout the year.
- (viii) Necessary lengths of wires/ cables, switches suitable for DC use and other protections should be provided.

## **ELECTRONIC PROTECTIONS**

- (i) Adequate protection is to be incorporated for “No Load” condition, e.g. when the lamp is removed and the lantern is switched ON.
- (ii) The system should have protection against battery overcharge and deep discharge conditions.
- (iii) The load reconnect should be provided at around 80% of the battery capacity status.
- (iv) Adequate protection should be provided against battery reverse polarity.
- (v) A fuse should be provided to protect against short circuit conditions.
- (vi) Protection for reverse flow of current through the PV module should be provided.
- (vii) During the charging, lamp cannot be switched “ON”.

## **INDICATORS**

- (i) The system should have two indicators, green and red.
- (ii) The green indicator should indicate the charging under progress and should glow only when the charging is taking place. It should stop glowing when the battery is fully charged.
- (iii) Red indicator should indicate the battery “Load Cut Off” condition.

## **QUALITY AND WARRANTY**

- (i) The complete Solar Lantern with CFL should be warranted for five years and the battery must be warranted for a minimum period of Two (5) years.
- (ii) The Warrantee/ Guarantee Card to be supplied with the Solar Lantern must contain the details of the system supplied.

## **OPERATION and MAINTENANCE MANUAL**

An Operation, Instruction and Maintenance Manual, in English and the odia should be provided with the Solar Lantern. The following minimum details must be provided in the Manual:

- Basic principles of Photovoltaics.
- A small write-up (with a block diagram) on Solar Lanterns - its components, PV module, battery, electronics and luminaire and expected performance.
- Significance of indicators.
- Type, Model number, Voltage, capacity of the battery, used in the system.
- The make and wattage of the CFL used in the lighting system.
- Clear instructions on mounting, operation, regular maintenance and trouble shooting of the Solar Lantern.
- Instructions on replacement of battery.
- DO's and DONT's.
- Name and address of the contact person for repair and maintenance during the warranty.

**ORISSA RENEWABLE ENERGY DEVELOPMENT AGENCY  
S-59, MANCHESWAR INDUSTRIAL ESTATE,  
BHUBANESWAR-751010**

**FORMAT FOR WARRANTY CARD TO BE SUPPLIED WITH CFL BASED SOLAR LANTERN**

1. Name & Address of the Manufacturer/Supplier of the System	
2. Date of supply of the system	
3. 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	
4. Details of Battery Make (Name of the manufacturer) Model Batch/Serial Nos.(s) Rated V & AH capacity at C/20/C/10 rate at 20 C Warranty valid up to	
5. Details of Electronics other BOS items Make (Name of the manufacturer) Model Serial No (s) Warranty valid up to	
6. Designation & Address of the person to be contacted for claiming warranty obligations.	

( During the warranty period MNRE / OREDA authorized Officer / Users 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

(Seal)

Place: -

Date: -

**ANNEXURE-A**

**TECHNICAL BID**

**Supply, distribution and maintenance for CFL based Solar lantern**

We conform the following technical specification.

<b>Sl. No</b>	<b>Item</b>	<b>Description</b>
1.	Duty Cycle	
2.	Lamp	
3.	Battery	
4.	Electronics	
5.	PV Module(s)	
6.	Electronics Protection	

**SIGNATURE OF THE BIDDER WITH SEAL**

**ANNEXURE-B**

**PRICE BID**

**CFL BASED SOLAR LANTERN WITH FIVE YEARS WARRANTY AS WELL AS CMC**

<b>Sl. No</b>	<b>Item</b>	<b>Rate per system</b>
1.	Supply of CFL Solar Lantern comprising of CFL luminary with lamp, lead acid battery, PV module (s) with cable of 5 meter, control electronics, Module mounting structure etc, all complete as per technical specifications, operation instructions and maintenance manual all complete including packing & forwarding, distribution, loading and unloading charges and cost of insurance and transportation, delivery FOR assigned site.	
2.	Taxes & Dues, if any, on item-1 (mention separately)	
3.	Sub-Total (A)	
4.	Annualized Comprehensive maintenance contract for five years .	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
5.	Taxes & Duties, if any, on item 4 (mention separately).	
6.	Sub Total (C)	
7.	GRAND TOTAL (A+B+C )	

Bidders are required to follow the details of technical specification while quoting rates

ANNEXURE- C

SAMPLE FORMAT FOR C.M.C

(Subject to modification as per suitability of system and project requirement)

Comprehensive Maintenance Contract (CMC) for maintenance of CFL based Solar Lantern supplied and install by M/S..... for five years.

This Comprehensive Maintenance Contract (CMC) is executed between the Orissa Renewable Energy Development Agency (OREDA), S-3-59, Mancheswar Industrial Estate, Bhubaneswar-10, represented by its Deputy Director (Tech), Project Division herein after called as Ist. Party and M/S.....

herein after called as 2nd party, for maintenance of ..... no of CFL based Solar Lantern for a period of five years with effect from ..... AD, supplied, distributed vide purchase order No ..... Dated ..... in ..... village covering ..... blocks of ..... Districts.

The 2nd party will maintain these CFL based Solar Lantern as per the terms and conditions mentioned here under.

1. It has been envisaged in the purchase order No ...../ OREDA dated ..... under clause No ..... that these ..... no of CFL based Solar Lantern shall be warranted against any manufacturing defect and bad workmanship at least for a period of 5 years for the system and battery and 10 years for the PV modules from the date of commissioning . As these CFL based Solar Lantern have been commissioned and handed over to the 1st party through its Assistant Director ( Tech) / authorized OREDA official at ..... During distribution all these systems , as such are covered under warranty period up to ..... and ..... respectively.

Hence, the 2nd party is fully responsible for their trouble free maintenance and the 2nd party is liable to rectify / remove any defect noticed within the aforesaid period free of cost.

- 2. The 2nd party will impart training on operation and maintenance to each beneficiaries in a village to be able to provide first aid repair service for CFL based Solar Lantern distributed to the beneficiaries.
3. An amount of 10% of the ordered value shall be kept as fees towards Performance guarantee for a period of 10 years of warranty & maintenance . After expiry of the successful and satisfactory maintenance period of 10 years which remains valid up to ..... AD , the security deposit / PGF shall be returned to the 2nd party thereafter only.
4. The CMC includes repair/ replacement of all spares and consumable, including CF Lamp, battery & PV module during the maintenance period.
5. The 2nd party will setup a state level office at Bhubaneswar duly headed by a Service Engineer.



- 6 . The 2<sup>nd</sup> party shall undertake the periodical maintenance work of these ..... sets prescribed formats attached herewith ( Format I ) on the 10<sup>th</sup> of every succeeding quarter duly countersigned by the concerned Assistant Director ( Tech), / Authorized Officer, R.E. Cell , DRDA .....
7. The 2<sup>nd</sup> party should be in readiness to attend to the defects of any system ( out of these ..... Sets ), as and when required by the beneficiary/ 1<sup>st</sup> party and ensure rectification of defects and restore functionality within seven days of lodging the complaints. The 2<sup>nd</sup> party shall furnish the status report after the maintenance work are over, which shall invariably bear the signature of the beneficiaries as per the format annexed herewith (format- II ).
8. The 2<sup>nd</sup> party shall appraise the 1<sup>st</sup> party about the requirements and supply of spares during warranty as well as CMC period.
9. The 2<sup>nd</sup> party will ensure to submit quarterly reports of visits made by their representatives to the completed villages every three months during the warranty and CMC period.
10. The 1<sup>st</sup> party in consultation and cost sharing with the 2<sup>nd</sup> party will maintain a central complaint cell at Bhubaneswar alongwith adequate stock of spare parts as a backup.
11. Separate bills/ invoices in triplicate enclosing the prescribed formats duly filled in (Format-I and II ) are to be submitted by the 2<sup>nd</sup> party to 1<sup>st</sup> party for effecting payment after end of the each year from the date of maintenance of the systems.
12. Certificates in support of successful maintenance of the CFL based Solar Lantern shall be obtained from the users which should be countersigned by the Assistant Director ( Tech), / Authorised Officer, RE Cell , DRDA ..... In token of verification of maintenance done.
13. It will be the liberty of the 1<sup>st</sup> party to cross check the systems maintained by the 2<sup>nd</sup> party. Random verification of the maintenance may be carried out by the 1<sup>st</sup> party wherever necessary.
14. The 2<sup>nd</sup> party may continue to maintain the gadgets after expiry of the maintenance period of 10 years , provided the beneficiaries/ 1<sup>st</sup> party desires.
15. For adjudication of any dispute between the two parties arising on execution of this CMC , the matter shall first be brought to the notice of Chief Executive, OREDA.
16. In case, there will be no amicable settlement of the issues, the matter can be referred to the court of law having jurisdiction at Bhubaneswar only.

The Annual Maintenance contract is signed jointly between the two parties today i.e on dated ..... day of 2011 and shall come into force from the date of its signature(s).

For and on behalf of Orissa Renewable  
Energy Development Agency, Bhubaneswar

For and on behalf of M/S

.....  
( 1<sup>st</sup> Party)

.....  
Deputy Director ( Tech)

(2<sup>nd</sup> party) with

Seal

Project Division, OREDA  
(Seal)

Witness  
Deputy Director ( Tech)

RE Division, OREDA  
Bhubaneswar  
(Seal)  
Check List Of Documents

Sl No	Items	
1	Copy of valid STCC/ VAT clearance certificate.	
2	Copy of audited balance sheet and profit and loss account for 2010-11 2011-12 and 2012-13 clearly indicating the turnover from solar PV business.	
3	Certificates from the authorized officer of the concerned SNA/ copy of the work order as proof of experience in supply of solar lantern/ solar gadgets.	
4	Proof of production capacity.	
5	Recent test certificates from appropriate authorized test centers of MNRE, GOI.	
6	Xerox copy of the Income Tax PAN card of the company.	
7	Xerox copy of Service Tax Registration Certificate.	
8	Original Money receipt /Demand Draft as proof of payment of Tender Cost.	
9	Demand Draft submitted as Earnest Money.	
10	Undertaking for Indignity of the supplied item.	
11	Willingness to open a local office at Bhubaneswar before commencement of work.	
12	Undertaking to open cluster level service centres at suitable places as will be indicated by OREDA.	
13	Undertaking to unconditionally accept all terms and conditions of the bid document.	
13	Power of attorney to sign the agreement on behalf of bidders & partnership deed articles, if any.	
14	Technical bid in format in Annexure A1 .	
15	Price bid in Annexure B1.	
16	Filled in bid document duly signed and stamped at the bottom of each page.	
17	Organizational profile	
18	Covering letter	

**SCHEDULE OF SUPPLY OF SOLAR LANTERN TO WEAVER HOUSEHOLD IN THE YEAR  
2013-14**

**Month of distribution**

S I N o	Name of the Zone	Name of the District	Tar get for 201 3-14	Allre ady suppl ied	Ju ly	Aug ust	Septe mber	Octo ber	Nov ember	Dece mber	Tot al
1	2	3	4	5	6	7	8	9	10	11	12
1	Athagarh	(i) Cuttack (Athgarh& banki Sub Divi)	100 0	0	35 0	0	350	0	300	0	100 0
2	Cuttack	(i)Cuttack	270	0	0	270	0	0	0	0	270
		(ii)Jagatsingh pur	125	0	0	0	0	125	0	0	125
		(iii)Kendrapa da	145	0	0	0	145	0	0	0	145
		(iv)Jajpur	175	0	0	0	0	0	0	175	175
3	Balasore	(i)Balasore	150	0	0	0	150	0	0	0	150
		(ii)Bhadrak	156	0	0	0	0	156	0	0	156
4	Baripada	(i)Mayourbha nj	120	0	0	0	120	0	0	0	120
		(ii)Keonjhar	155	0	0	0	0	0	155	0	155
5	Berhmpur	(i)Ganjam	270	200	70	0	0	0	0	0	270
		(ii)Gajapati	7	0	0	0	7	0	0	0	7
6	Boudha	(i)Boudha	500	0	30 0	0	200	0	0	0	500
		(ii)Kandhama l	70	0	0	0	70	0	0	0	70
7	Dhenkanal	(i)Dhenkanal	101	0	0	0	0	101	0	0	101
		(ii)Anugul	130	0	0	0	0	0	0	130	130
8	khurda	(i)Khurda	400	0	0	200	0	0	200	0	400
		(ii)Puri	130	0	0	0	0	130	0	0	130
9	Koraput	(i)Koraput	77	0	0	0	0	77	0	0	77
		(ii)Nawrangp ur	148	0	0	0	0	148	0	0	148
		(iii)Malkangir i	0	0	0	0	0	0	0	0	0
		(iv)Rayagada	4	0	0	0	0	4	0	0	4
10	Nayagarh	(i)Nayagarh	365	0	0	0	0	365	0	0	365
11	Sonepur	(i)Sonepur	125 0	0	35 0	300	0	0	300	300	125 0
12	Patnagarh	(i)Patnagarh	780	0	0	0	300	200	0	280	780
13	Sundargarh	(i)Sundargarh	52	0	0	0	0	0	0	52	52
		(ii)Jharsugud a	156	0	0	0	0	156	0	0	156

		(iii)Deogarh	22	0	0	0	22	0	0	0	22
1	Bargarh	(i)Bargarh	290	0	25	450	500	500	700	500	290
4		(ii)sambalpur	0	0	0	0	0	0	0	185	185
		(i)Kalahandi	129	0	0	0	129	0	0	0	129
1	Kalahandi	(ii)Nuapara	100	0	0	0	0	0	0	100	100
5			100	72	13	1220	1993	1962	1655	1722	100
	TOTAL		72	200	20						72

STATEMENT OF DISTRIBUTION

Annexure-II

Name of the District-

Date of Distribution-

Place of Distribution-

Sl No	Name of the beneficiary /Father's name	Village	Bock	System No	Module No	Battery No	Signature of the beneficiary

Signature  
Representative of  
  
OREDA

Signature  
Representative of  
  
Handloom & Textile

Signature  
Representative of  
  
Supplier

