



**BID SPECIFICATION
FOR
SOLAR LANTERN**



JHARKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY (JREDA)
Plot No. 328/B, Road No. 4, Ashok Nagar, Ranchi 834002
Phone No. 2246970, FAX: 2240665, web-site: www.jreda.com

NOTICE INVITING BID

NIB No: JREDA/SPV/1/SL/2007-08

Date:14/08/2007

Sealed Bids in three parts separately containing EMD (Part-1), Technical & Commercial Offer (Part-II) and Price Offer (Part-III), are invited from reputed, experienced and financially sound parties/firms/Indian companies by JHARKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY for the following work, at their office. Eligible bidder may quote their offer as per the details mentioned.

Salient features of the bid are as follows:

TABLE-1

1.	Description of work	Manufacture/Assembly, Testing, Installation and supply of Indigenous CFL & LED based Solar Lantern (SL) for Jharkhand Renewable Energy Development Agency's schemes during 2007-08. <i>Tentative quantity of Solar Lanterns is as follows:</i> CFL based Solar Lantern (Model-IIA): 80,000 nos LED based Solar Lantern: 10,000 nos. (These quantities may vary)
2.	Minimum Lot Size	Bidder may quote for CFL based Solar Lantern , LED based Solar Lantern or both. The minimum quantity quoted should be as indicated below: CFL based Solar Lantern: 5000 nos. LED based Solar Lantern: 1000 nos. Bidder may also submit their offer for additional quantity in multiples of the quantities as indicated below: CFL based Solar Lantern: in multiple of 1000 nos, LED based Solar Lantern: in multiple of 100 nos.
3.	Earnest Money Deposit	<ul style="list-style-type: none">❖ Rs. 2,50,000/- (Rupees Two Lakh fifty thousand only) for 5000 CFL based Solar Lanterns and Rs. 50,000/- (Rupees Fifty Thousand only) for each additional 1000 CFL based Solar Lanterns.❖ Rs 40,000/- (Rupees Forty thousand only) for 1000 LED based Solar Lantern and Rs 4,000/- (Rupees Four thousand only) for each additional 100 LED based Solar Lantern❖ Rs. 1,25,000 (Rupees One Lakh twenty five Thousands only) for 5000 CFL based Solar Lantern and Rs. 25000/- (Rupees Twenty Five Thousands only) for each additional 1000 CFL based Solar Lantern for SSI units registered in the state of Jharkhand.

Prepared by Dr. R.P.Sharma | Checked by Dr. Arbind Kumar



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		<p>Accordingly Rs 20,000/- (Rupees Twenty thousand only) for 1000 LED based Solar Lantern and Rs 2,000/- (Rupees Two thousand only) for each additional 100 LED based Solar Lantern for SSI units registered in Jharkhand.</p> <p>❖ Rs. Nil for SSI units registered in Jharkhand as well as with NSIC.</p> <p>Bidder who intends to submit offer for both CFL and LED based Solar Lantern shall submit EMD as defined above. .</p>
4	Cost of Bid document (Non-refundable)	<p>❖ Rs. 15,000/- (Rupees Fifteen Thousands only) for general Bidder.</p> <p>❖ Rs. 7500.00 (Rupees seven thousand five hundred only) for SSI units registered in Jharkhand.</p> <p>❖ Rs. Nil for SSI units registered in Jharkhand as well as with NSIC.</p>
5.	Time of completion	150 days from the date of issue of purchase order/ intimation.
6.	Date of commencement of issue of bid documents	17 -08-2007 from 10.00 am to 6.00 pm on all working days
7.	Last date & time of purchase of bid documents	03-09-2007 till 6.00 pm.
8.	Last date & time of submission of bids	05-09-2007 till 11.00 am.
9.	Date & time of opening Part-I (EMD) & Part-II of Techno Commercial bid.	05-09-2007 at 11.30 am.
10	Place of issue and submission of bid documents and address for communication	Jharkhand Renewable Energy Development Agency(JREDA) Plot No. 328/B, Road No.4,Ashok Nagar Ranchi- 834002 Ph.No: 2246970,Fax No: 0651-2240665 Web site: www.jreda.com E-mail: info@jreda.com

1. Eligibility and Qualification Criteria

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The bidder shall meet the following requirements:

1.1 For the General Bidders

(i) The bidder

- should be a reputed supplier of solar lantern and who manufactures/assembles at least one or more major sub-systems (viz. PV modules or Storage Battery or Electronics) used in solar lantern system. The Electronics is design, fabrication and testing of said product under BOS.
- should have adequate facilities for testing of the Solar System.

To meet the requirement under (i), the bidder shall furnish Registration certificate clearly indicating that they are manufacturer/assembler of solar Lantern including PV module / storage batteries / electronics as applicable. Bidder shall also submit list of testing facilities along with their photographs.

(ii) The bidder must be in possession of valid test report for the CFL based Solar Lantern (Model IIA) or LED based Solar Lantern (as the case may be) from any of the following test centers.

- **Solar Energy Centre Gwalpahari – Gurgaon, Haryana (SEC),**
- **Electronics Regional Test Laboratory (East) Bidhan Nagar, Kolkata (ERTL)**
- **Central Power Research Institute, Thiruvananthapuram (CPRI)**
- **Energy Conservation and Development Division, Bangalore (ECDD)**
- **Electronics Test & Development center, Bangalore (ETDC)**

The corresponding test reports clearly indicating the validity shall be submitted along with bid. The test certificate issued on or after 1st January 2006 will be eligible for supply for 2007-08 programme subject to meeting other eligibility criterion (as per clause 1). The Solar Lantern tested on or after 1st January 2006 must have the specification as per Section 2A(CFL based SL) & 2B(LED based SL) respectively. The Bidders may visit www.jreda.com for specifications and related details.

To meet the requirement under (ii), the bidder shall submit the valid test certificate issued on or after 1st January 2006 from any aforesaid authorized test centres. Test Certificate issued before 1st January 2006 will lead to outright rejection of the Bid.

(iii) The bidder should have supplied solar photovoltaic systems of the value Rs 3 crores to any State Nodal Agencies / Govt. Organization during the past three financial years and supplies against such work order should have completed satisfactorily as certified by the concerned State Nodal Agencies/ Govt. organization.

To meet the requirements under (iii), the bidder shall submit (a) attested photocopies of purchase orders / contracts and (b) the certificate from the concerned State Nodal Agencies for the completion of the work satisfactorily. Non-submission of above document shall result in rejection of bid.



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- (iv) The bidder should have supplied a minimum 1000 nos. Solar Lantern system (CFL or LED based) and which should have worked satisfactorily for a minimum period of 1 year as on the date of submission of bid.

To meet the requirement under (iv) above, the Bidder shall submit attested photocopies of certificates from the respective SNAs / Govt. organization. Non-submission of above document may result in rejection of bid.

- (v) The make and serial number of PV Module used with the SPV System i.e. Solar Lantern must be recorded by the manufacturer in a permanent manner on the body of system along with the serial number and year of manufacturing of that SPV system. This will ensure matching of the Module with the rest of system components and also enable verification with the sale/supply record.
- (vi) The eligible bidders who are able to secure order of solar lantern will be required to set up at least one service center for every 500 system or a part thereof in Jharkhand.

1.2 For the bidders who are SSI units registered with GOJ or SSI units registered with GOJ as well as with NSIC.

(i) The bidder

- should be a reputed supplier of Solar Lantern and who manufactures/assembles one of the major sub-systems (viz. PV modules or Storage Battery or Electronics) used in the solar system. The Electronics is design, fabrication and testing of said product under BOS.
- should have adequate facilities for testing of the Solar Lantern.

To meet the requirement under (i), the bidder shall furnish Registration certificate clearly indicating that they are manufacturer/assembler of Solar Lantern including PV module / storage batteries / electronics as applicable. Bidder shall also submit list of testing facilities along with their photographs.

- (ii) The bidder must be in possession of valid test report for the CFL based Solar Lantern (Model IIA) and LED based Solar Lantern (as the case may be) from any of the following test centers.

- Solar Energy Centre Gwalpahari – Gurgaon, Haryana (SEC),
- Electronics Regional Test Laboratory (East) Bidhan Nagar, Kolkata (ERTL)
- Central Power Research Institute, Thiruvananthapuram (CPRI)
- Energy Conservation and Development Division, Bangalore (ECDD)
- Electronics Test & Development center, Bangalore (ETDC)

The corresponding test reports clearly indicating the validity shall be submitted along with bid. The test certificate issued on or after 1st January 2006 will be eligible for supply for 2007-08 Programme subject to meeting other eligibility criterion (as per clause 1.2). Solar Lantern (Model IIA) or LED based Lantern tested on or after 1st January 2006 must have the specification as per Section 2A/2B respectively. The Bidders may visit www.jreda.com for specifications and related details.



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To meet the requirement under (ii), the bidder shall submit the valid test certificate issued on or after 1st January 2006 from any aforesaid authorized test centres. Test Certificate issued before 1st January 2006 will lead to outright rejection of the Bid.

- (iii) The bidder should have supplied solar photovoltaic systems of the value of **Rs 1.5 crores** to any State Nodal Agencies/ Govt. Organization during the past three financial years (i.e. 2004-05, 2005-06 & 2006-07) and supplies against such work order should have completed satisfactorily as certified by the concerned State Nodal Agencies.

(This Clause is not applicable to SSI units registered with GOJ as well as with NSIC)

To meet the requirements under (iii), the bidder shall submit (a) attested photocopies of purchase orders / contracts and (b) the certificate from the concerned State Nodal Agencies for the completion of the work satisfactorily. Non-submission of above document may result in rejection of bid.

- (iv) The bidder should have supplied a minimum 1000 nos. Solar Lantern system (CFL or LED based) which should have worked satisfactorily for a minimum period of 1 year as on the date of submission of bid.

To meet the requirement under (iv) above, the Bidder shall submit attested photocopies of certificates from the respective SNAs. Non-submission of above document may result in rejection of bid.

(This Clause is not applicable to SSI units registered with GOJ as well as with NSIC)

- (v) The make and serial number of PV Module used with the SPV System i.e. Solar Lantern must be recorded by the manufacturer/assembler in a permanent manner on the body of system along with the serial number and year of manufacturing of that SPV system. This will ensure matching of the Module with the rest of system components and also enable verification with the sale/supply record.
- (vi) The eligible bidders who are able to secure order of solar lantern will be required to set up at least one service center for every 500 system or a part thereof in Jharkhand.

2. For availing any concession in cost of bid document and / or EMD, the bidder shall furnish attested copies of valid SSI registration certificate issued by Govt. of Jharkhand and/ or from NSIC clearly indicating validity & monetary limit, as applicable.

3. Bidder may submit their offer for minimum lot size defined or additional quantities and EMD for each additional quantity shall be enhanced as mentioned in TABLE - 1.

4. Cost of the bid documents (non-refundable) shall be deposited in the form of Demand Draft drawn in favour of Director, JHARKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY on any Indian Nationalized Bank / Scheduled Bank, payable at RANCHI, India. Bidder will purchase bid document from the office of Director, JHARKHAND



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RENEWABLE ENERGY DEVELOPMENT AGENCY, Plot No. 328/B, Road No. 4, Ashok Nagar, Ranchi - 834002 after submission of cost of bid document. Prospective bidders can also download complete bid document from the web site of JREDA (address indicated above) and submit their bid along with cost of Bid document (in Part – I envelope) in the manner described herein above.

5. Bid documents including Terms & Conditions and detailed specification of work shall be available on submission of demand draft from the Office of the Director of JHARKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY during the time and period as mentioned in TABLE – 1 here in above.
6. All bids will be received in duly Sealed Cover with WAX within the due date and time. Bids received after the due date and time shall be outright rejected.
7. Details about date and time of issue of bid documents, submission of bid, opening of bid, date, time, place of submission etc are given in Table – 1.
8. If it happens to be holiday on the date of submission / opening of bids then same shall be submitted/ opened on next working day at the same time & at the same venue.
9. No postal transaction shall be entertained for obtaining of Bid Documents.
10. Issuance of bid documents shall not construe that the bidders would be automatically considered qualified.
11. EMD shall be submitted in the form of Demand Draft from any Indian Nationalised Bank/ Scheduled Bank payable at Ranchi or in the form of Bank Guarantee from any Indian Nationalised Bank/ Scheduled Bank along with bid.
12. Bid documents are not transferable.
13. JREDA reserve absolute rights to distribute the total quantities to any number of bidders, in the way deems fit. JREDA will adhere to fair and transparent methodology in distribution of the total quantities to the successful bidders taking into consideration of their experience and past performance with JREDA in different programmes, capabilities with respect to manufacturing/testing facilities and their financial strength as per Proforma VI.
14. JREDA reserves the right to amend the scope of work, accept or reject any or all the offers/ bids, in part or in full or cancel/withdraw the invitation for bids without assigning any reasons whatsoever and in such case no bidder / intending bidder shall have any claim arising out of such action.
15. JREDA reserves the right to postpone the date of receipt and opening of the bids or cancel the bid without bearing any liability, whatsoever, consequent upon such decision.



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16. Bidder shall submit his Permanent Account Number (PAN) copy and recent passport photograph of Managing Director and all Directors or CEO's of the company with Name and Address or photocopy of the passport.
17. The bidder shall submit the GPS Co-ordinate (Longitude & Latitude) and digital photograph of their registered office and factory campus showing their board etc.
18. If at any time any of the documents/ information submitted by the bidder is found to be incorrect, false or untruthful, the bid and/ or the resultant order may be summarily rejected/ cancelled at the risk of the bidder.

DIRECTOR
JREDA



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SECTION – 1 GENERAL TERMS & CONDITIONS

1. INTRODUCTION

- 1.1 The instruction/information contained in the Bid documents are for guidance and compliance of the intending Bidder. Bidder is advised to obtain, in writing, clarifications from the Jharkhand Renewable Development Agency (**JREDA**), if any, prior to submission of their Bid, failing which it will be deemed that the stipulation made in the Bid documents have been read, understood and are acceptable to the Bidder.
- 1.2 Bidder shall bear all costs associated with preparation and submission of the Bid, journeys undertaken by them, and subsequent Bidding process till award of the order to successful Bidder and the JREDA shall, in no case, be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process.

2. BID DOCUMENTS

- 2.1 Bid documents shall comprise of NIB, Section-1, 2A, 2B, & Proforma-I to X (A, B & C). In addition, any other document / instruction / amendments / revisions issued by the JREDA to the Bidder till due date of submission of the offers, shall also be deemed to be integral part of the order. Failure to furnish all the information required by the bidding document in every respect will be at bidder risk.

3. COST OF BID

- 3.1 Non-refundable cost of Bid document shall be submitted by the Bidder during purchasing of bid document, in form of a Demand Draft from any Indian Nationalised Bank / Schedule Bank, drawn in favour of Director, JREDA, Ranchi. The cost of BID DOCUMENT shall be

- ❖ **Rs. 15,000 /-(Rupees Fifteen Thousand only)**
- ❖ **Rs 7500/- (Rupees Seven thousand five hundred only) for SSI units, which are registered with Govt. of Jharkhand.**
- ❖ **Rs. Nil for SSI units registered with Govt. of Jharkhand as well as with NSIC.**

Bidders downloading the Bid document from JREDA web site, shall submit the cost of bid document at the time of submission of their bid inside Part – I envelope, i.e., envelope for **Earnest Money Deposit**

4. SCOPE OF WORK

The Scope of work for Solar Lantern includes:

Manufacture/Assembly, shop testing, packing & forwarding, transportation & supply of CFL /LED based solar lantern system complete in all respects along with one set of operation instruction-cum-maintenance manual in Hindi for each set and delivery on FOR destination/site (door delivery) basis across the State of Jharkhand including, demonstration of performance and training at all sites located within the state of Jharkhand as per direction of JREDA. List of consignees will be given before start of dispatch by JREDA.



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5.0 TECHNICAL SPECIFICATION

The general technical specification of Solar Lantern are enclosed at **Section – 2A (CFL based) & Section –2B (LED based)**. Solar Lantern offered by the bidder should conform to the Ministry of New and Renewable Energy (MNRE) specification 2006-07. The bidder shall submit a "Compliance Certificate for meeting Technical Specifications" alongwith the Part-II: Technical & Commercial Part, as per Proforma – III for qualification conditions. The bidder shall submit the detailed technical specifications of the Solar Lantern offered to be supplied.

6.0 TEST CERTIFICATE

It is mandatory for the bidders to have test certificate issued by the Solar Energy Centre (SEC), Gwalpahari – Gurgaon, Haryana; or Electronics Regional Test Laboratory (East) (ERTL) Bidhan Nagar, Kolkata; or Central Power Research Institute (CPRI), Thiruvananthapuram; that Solar Lantern conform to specification of MNRE, Govt of India. Test Certificates issued on or after 1st January, 2006 would be considered valid only if it is as per MNRE specification on Solar Lantern **Model IIA**, this is detailed in technical specifications Section-2A for CFL based Solar Lantern & in Section-2B for **LED** based Lantern. The test issued prior to 1st January 2006 is not valid. Bid received without test certificate with Technical & Commercial Part: Part–II will be rejected outright and no correspondence will be entertained in this regard. The test reports shall be furnished for specific make/manufacturer, type/model number and capacity of a particular solar lantern. The bidders are not allowed to change make / model or any components / items at the time of supply. The test report issued by SEC/ERTL/CPRI test centers shall be considered valid only for a specific make/ model mentioned in that test report. No test report shall be considered valid wherein more than one make / model is specified for the solar lantern components in a single test report. Tenderer may visit www.jreda.com also for specs and related details.

7.0 QUANTITY OF SUPPLY

The requirement given in Table–1 of Notice Inviting Bid, the Bill of Quantity indicated is tentative and is subject to increase or decrease depending upon the actual requirement at the time of placing order and resource available. Bidder may submit their Offer for minimum lot size and additional quantities as defined, and EMD for each additional quantity shall be enhanced as mentioned in TABLE - 1.

In case any bidder offers less than the minimum lot size their offer will be rejected.



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8.0 MINIMUM ELIGIBILITY AND QUALIFICATION CRITERIA

- 8.1 This has been detailed in Notice Inviting Bid.
- 8.2 Bid(s) of bidders who do not submit valid test reports for the system in terms of stipulations of as given above shall be rejected as being non-responsive.
- 8.3 The bidder shall submit a letter in confirmation of meeting the Minimum Eligibility Conditions and qualification conditions as per Proforma – II given in the bid document.
- 8.4 The bidder shall submit declaration that they have never be de-listed or banned at any time in the past by any State Nodal Agency, State Govt, Public Sector undertaking or Central Govt. On failure to submit the same, JREDA shall have the discretion to reject the bid.

9.0 SUBMISSION OF BID

Bid shall be submitted in **THREE SEPARATE SEALED COVERS** as indicated below:

9.1 Part-I EARNEST MONEY DEPOSIT (EMD)

To be submitted in **original only (1+0)**

This cover should be sealed and super-scribed “PART – I; Earnest Money”. This envelope should contain the following:

- (i) Cost of Bid Document (for the bidders who have downloaded the Bid Document from JREDA web site) or copy of DD/money receipt if purchased from JREDA.
- (ii) Forwarding letter in original (PROFORMA-I)
- (iii) Authorization letter in original (PROFORMA-Iv)
- (iv) The original EMD (as applicable) of requisite value.
- (v) Copy of un-priced (blanking out the price part) PRICE SCHEDULE (PROFORMA-V).
- (vi) Copy of registration certificates (as applicable). For availing concession/exemption in submission of EMD by SSI Unit registered in Jharkhand, bidder should submit attested copy relevant SSI registration certificate from Govt of Jharkhand and from NSIC (if applicable). Bidders not submitting EMD or SSI Unit registered in Jharkhand, not submitting relevant SSI registration certificate from Govt of Jharkhand and from NSIC (as the case may be) shall be liable for outright rejection. If the EMD value submitted by the bidder does not match with the quantity offered, their offer is liable for rejection.

9.2 Part-II TECHNO-COMMERCIAL PART

To submit in **original plus two Copies (1+2)**

This cover should be sealed and super-scribed “PART – II; TECHNICAL AND COMMERCIAL BID”. It should contain the following:

- (i) CHECKLIST along with attachments in the same sequence as mentioned.
- (ii) Complete Bid Document (in original) received from JREDA and any additional instruction or documents issued shall be duly signed and stamped on each page as a token of having been read, understood and accepted all the terms and conditions mentioned therein.
- (iii) Proforma I to IX (Proforma-VII without Price, quantity only) duly filled.



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9.3 Part-III PRICE PART

To submit in **original only (1+0)**

- (i) This cover should be sealed and superscripted “PART-III-PRICE BID”. It should contain only Proforma-V duly filled up in both figures and words and signed with stamp by authorised signatory of the Bidder.
- (ii) In case of any contradictions between the Prices mentioned in Figures and Words, the Prices mentioned in Words shall be considered final. Also, in case of any arithmetical error in regard to the Total Amount and Individual rates, the Individual rates shall be taken as final and the total amount shall be adjusted accordingly

CHECKLIST

I	Forwarding letter : Proforma – I
II	Minimum Eligibility Condition – qualification : Proforma – II
III	Compliance Certificate for meeting Technical Specifications –eligibility and qualification: Proforma – III
IV	Attested Photostat copy of Registration Certificate of firm/SSI/NSIC Certificate as the case may be.
V	Copy of all valid Registration Certificate PAN/ST/FF/ESI etc.
VI	Copy of MOU signed for Pre-Bid tie-up on Rs100.00 NJ Stamp paper
VII	Attested Photo-copy of Partnership Deed in case of partnership firm Article/Memorandum of Company/Trust/Society with the photograph & details of two partner/Director/Trustee.
VIII	Power of Attorney for authorised signatory in case of companies/trust/society
IX	Financial capability certificate from Bank/Financial Institution indicating that the manufacturer has the necessary resources for execution of the order and also BG/CC limit/OD/Packing etc.
X	(i)Proof of annual turnover for past 3 years for SPV systems including details of manufacturing capacity / facility along with testing facilities and list of items / products manufactured in house and bought-out items. ii) copy of Audited Balance Sheet and Profit & Loss account for last three years.
XI	Details of past experience against supply made to different States Nodal Agencies/JREDA: Proforma – VI, A and B and C
XII	Photocopies of certificate of satisfactory performance of systems supplied to state Nodal agencies along with copies of purchase orders / contracts.
XIII	Test Certificate of Solar Lantern issued by Solar Energy Centre/MNRE approved testing centres for the test performed ON or AFTER 1st January 2006 as per MNRE specs. 2006-07.
XIV	Technical Particular data sheet of Solar Lantern of Bidder (CFL & LED based)
XV	Photocopy of bank draft submitted as cost of bid document/ JREDA receipt.
XVI	PF Registration Certificate & ESI Registration No.
XVII	A tentative overall schedule in the form of Bar Chart initiating Manufacturing & despatch.
XVIII	A copy of Price Schedule (without prices), duly signed & stamped, as per proforma-VII mentioning “Quoted” word in the column of UNIT rate and Total rate for which

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	price is quoted and mentioning “not quoted” for which price is not quoted.
XIX	Declaration that they have never be de-listed or banned at any time in the past by any State Nodal Agency, State Govt, Public Sector undertaking or Central Govt.
XX	GPS Co-ordinate & address of the registered office and factory of the bidder & photograph.
XXI	No Deviation Confirmation as per Proforma IX
XXII	Bidder shall submit complete bidding document including subsequent amendment, modification and revision, duly signed and stamped as a token of having read, understood and accepted all the terms and condition mentioned therein.
XXIII	Proof of all taxes & duties clearance.

- c) **Please note that this is a zero deviation tender. Bidders are advised to strictly confirm compliance to bid conditions and not to stipulate any deviation / conditions in their offer. Subsequent to bid submission, JREDA may or may not seek confirmations / clarifications and any offer(s) not in line with BID conditions shall be liable for rejection. Bidders are also requested to submit the documents / confirmations strictly as per the check list enclosed above. Any clarification/confirmation bidder may require shall be obtained from JREDA, fifteen days prior to submission of the bid. Any clarification/confirmation bidder may require from JREDA submitted after will not be entertained.**

9.4 Part-III – PRICE

This cover should be sealed and superscripted “PART-III-PRICE BID” to be filled up exactly as per Format given in performa-VII. This shall be filled up in both figures and words and signed on each page with stamp by authorised representative of the Bidder. Prices of each lot shall be mentioned in Words and Figures both. In case of any contradictions between the Prices mentioned in Figures and Words, the Prices mentioned in Words shall be considered final. Also, in case of any arithmetical error in regard to the Total Amount and Individual rates, the Individual rates shall be taken as final and the total amount shall be adjusted accordingly. Price Offer should not contain any technical or commercial offer, likewise, technical or commercial offer should not contain price of any item, such cases, even if found any where, shall not be given cognizance of.

9.5 JREDA shall assume no responsibility for misplacement or pre-mature opening of any part of the bid, in case above instructions are not complied with by the bidder.

9.6 Any offer received after the deadline for submission of offers as specified above, shall be rejected and returned unopened to the bidder.

9.7 All the pages of bid documents, technical specifications, bids, supporting documents, etc. shall be duly signed by the authorised signatory and company seal should be affixed on each page. Any part of the bid, which is not specifically signed by the authorised signatory and not affixed with company seal, shall not be considered for the purpose of evaluation.



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- 9.8 The offer should be signed and sealed with wax by the bidder or his authorized representative. The names and designations of all persons signing shall be typed or printed below the signature.
- 9.9 The offer shall contain no erasures or overwriting except as necessary to correct errors made by bidder. Such corrections, if any, shall be initialed by the person signing the offer.
- 9.10 Failure to furnish all information and documentary evidence as stipulated in the bid document or submission of an offer that is not substantially responsive to the bid document in all respects shall be summarily rejected.

10.0 EARNEST MONEY DEPOSIT (EMD)- To be submitted in Part-I

- 10.1 Bidder shall submit non-interest bearing Earnest Money Deposit (EMD) of Rs. 2,50,000/- (Two Lakh fifty thousand only) for 5000 CFL based Solar Lantern and Rs 40000/- (Rupees Forty Thousand only) for 1,000 LED Solar Lantern in the form of Demand Draft from any Indian Nationalised Bank/ Scheduled Bank, drawn in favour of “Director, JREDA” payable at Ranchi or in the form of Bank Guarantee (enclosed at Proforma-X-A) from any Indian Nationalised Bank/ Scheduled Bank. The Earnest Money submitted in the form of Bank Guarantee shall remain valid for a minimum period of six months after the validity of the offer.
- 10.2 Bidder shall submit additional non-interest bearing EMD of Rs. 50,000 for each additional 1000 CFL based Solar Lantern and Rs 4,000 (Rupees Four Thousand only) for each additional 100 LED based Solar Lantern if the bidder submits their offer for more than 5000 CFL based Solar lantern or more than 1000 LED based Solar Lantern.
- 10.3 Earnest Money submitted in a separate sealed envelope (PART-I) duly superscripted with the Bid Enquiry reference, Bidder’s own names full address and titled “Earnest Money”.
- 10.4 Small Scale Industrial (SSI) Unit registered in Jharkhand shall submit non-interest bearing Earnest Money Deposit of Rs 125,000/- for 5000 CFL based Solar Lantern and Rs 20,000/- (Rupees Twenty Thousand only) for 1,000 LED based Solar Lantern in the form of Demand Draft from any Indian Nationalised Bank/ Scheduled Bank, drawn in favour of “Director, JREDA” payable at RANCHI or in the form of Bank Guarantee (enclosed at Proforma-X-A) from any Indian Nationalised Bank/ Scheduled Bank. Further SSI unit shall submit additional non-interest bearing EMD of Rs. 25,000/- for each additional 1000 CFL based Solar Lantern, and Rs 2,000 (Rs Two Thousand only) for each additional 100 LED based Solar Lantern. if they offer for more than 5000 Solar lanterns CFL based or more than 1,000 LED based Solar Lantern.
- For SSI units registered with Govt of Jharkhand as well as with NSIC:Rs NIL(No EMD is required)**



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However, Bidders seeking concession/exemption from submission of Earnest Money, shall submit valid Registration Certificate in the envelope titled “Earnest Money” failing which the Bid will be treated as rejected. The request for adjustment of earlier dues in place of Earnest Money Deposit shall not be entertained. Bidder those are not registered in Jharkhand as SSI unit shall submit EMD (as per clause no. 10.1 & 10.2) of exact amount in accordance to the quantity quoted failing which bid will be rejected.

The SSI units registered in State of Jharkhand must also furnish an attested photocopy of SSI unit certificate issued by Govt. of Jharkhand (GOJ) along with requisite earnest money as per Clause no 10.4 in this respect. The SSI units registered in GOJ as well as with NSIC must furnish an attested photocopy of registration certificate issued by GOJ and NSIC clearly indicating the validity period.

10.5 Bidder who intends to submit offer for both CFL and LED based Solar Lantern shall submit EMD as defined earlier.

10.6 The Earnest Money shall be returned to all the unsuccessful Bidders, within thirty days from the date of placement of LOI/order to successful bidder.

10.7 In the event the Bid of any party is rejected during the course of Techno-Commercial Scrutiny and Evaluation, the Earnest Money will be returned to such Bidder.

10.8 Earnest Money shall be forfeited if –

- a) Any Bidder withdraws his Bid or resiles from his offer during the validity period.
- b) The successful Bidder fails to furnish his acceptance of the Order or fails to submit the Security Deposit within specified time as per terms of the LOI/Order.

11.0 VALIDITY OF OFFER

The Bid and Price(s) quoted shall remain valid upto 150 days from the due date of submission of offer.

12.0 OPENING AND EVALUATION OF OFFER

12.1 **Part-I & Part-II: EMD and Commercial & Technical Part** will be opened on the date and time mentioned in the Table-I of NIB. at the office of Director, JREDA at Plot No. 328/B, Road No. 4, Ashok Nagar, Ranchi in the presence of bidders, or their authorised representative, who choose to attend the meeting. The representative should produce authorization letter to attend the bid opening meeting as given at Proforma-IV. The representative who does not produce such authorization will not be allowed to attend the bid opening.

If there will be constraint on part of time during opening of tender document due to which the required documents could not be shown or declared or read then the authorized Representative of the bidder may inspect Techo-Commercial Bids by prior appointment from JREDA.

12.2 If the EMD value submitted by the bidder does not match with the quantity offered, their offer is liable for rejection.



BID SPECIFICATION FOR SOLAR LANTERN



12.3 JREDA, if required, may at its discretion obtain clarifications on offers by requesting clarifications from any or all the bidders at any time prior to price bid opening (Part-III). Such request for clarification and the response shall be in writing.

12.4 JREDA shall examine whether bid is complete in all respect and conform to stipulated requirement of Technical specifications and Tests reports. The bid having material deviation shall be rejected as being non-responsive.

12.5 The Part-III: Price Part of each lot of only those bidders, whose offers are technically and commercially acceptable after evaluation of the Technical and Commercial Part, will be opened and evaluated. The date & time for opening of Part-III: Price Part will be uploaded in JREDA web-site. **Bidders are requested to visit the web-site (www.jreda.com) regularly and keep themselves informed.** The Price Part will be opened at the office of Director, JREDA at Plot No. 328/B, Road No. 4, Ashok Nagar, Ranchi 834002 as intimated, in the presence of eligible bidders or their authorised representative. The authorised representative will be allowed to attend the opening on production of authorization letter.

12.6 The prices shall be evaluated separately for CFL based and LED based systems for the entire quantity quoted by the bidders for the complete scope defined in this document. Unit landed price (inclusive all taxes, duties, freight, insurance etc) for CFL based system will be evaluated and bidders shall be ranked. The bidder who has quoted the lowest evaluated rate shall be offered the quantity quoted. All the other bidders who quoted CFL based system shall also be requested to match the lowest evaluated rate. For the bidders who matched the lowest evaluated rate, the balance quantity (if any) will be distributed amongst them. Similarly for LED based system, unit landed price (inclusive all taxes, duties, freight, insurance etc) will be evaluated and the bidders will be ranked. The bidder who has quoted the lowest evaluated rate for LED based system shall be offered the quantity quoted. All the other bidders who quoted for LED based system, shall also be requested to match the lowest evaluated rate. For the bidders who matched the lowest evaluated rate, the balance quantity (if any) will be distributed amongst them. However, while distributing the quantity to L1 bidder and other bidders (if any), JREDA shall ensure that minimum percentage of the total annual purchase of Solar Lantern shall be from SSI units registered in Jharkhand, as per existing Industrial Policy of Govt of Jharkhand.

12.7 JREDA, if required, may at its discretion extend the scheduled date of opening of Price Part of bids.

13.0 CONTRACT PRICE

13.1 The total contract price & rates of Solar Lanterns in full and complete set including SPV module, control electronics, battery, mechanical components etc. should be quoted in **Proforma -VII** (Price Part). The price shall be inclusive of the total scope as defined in this document.

13.2 For Supply of items in full & good condition at FOR Site / Stores site (door delivery basis) to various consignees across State of Jharkhand. The bidder may arrange transit insurance. Contract Price also includes all charges towards packing & forwarding, inspection Insurance and



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freight including door delivery charges. Contract Price is also inclusive of Excise Duty, CST and Sales Tax / Jharkhand VAT on the finished items, Turn Over Tax (TOT) / Octroi, Professional tax, entry tax etc. as applicable for the supplies and all such taxes / duties will be written separately..

13.3 Contract Price and unit rates shall remain firm and binding and shall not be subject to any variation, whatsoever, on any account except for statutory variation on taxes & duties and materials during contractual completion period as stipulated in Clause no 13.4 below and / or addition or modification of scope of work..

13.4 Various taxes, levies and duties shall be paid against applicable documentary evidence limited to the maximum ceiling as indicated in the price schedule.

The bidder shall indicate various components of taxes and duties, freight, insurance etc that has been considered in the unit rates.

13.5 The Contract price & unit rates includes and covers the cost of all royalty & fees for all articles & processes, protected by letters, patent or otherwise incorporated in or used in connection with the work, also all royalties, rents and other payments in connection with obtaining all the materials for the work and the supplier shall indemnify and keep indemnified the JREDA, which indemnity, the supplier hereby gives against all actions, proceedings, claims, damages, costs and expenses arising from the incorporation in or use of work of any such articles, processes or supplies.

13.6 During the period of the contract, JREDA may order addition / deletion in quantities which supplier shall comply. The adjustment in Contract Price shall be made at the same unit rate as per Price Schedule.

13.7 All applicable charges for taking necessary clearances such as commercial tax, road permit etc., where ever required, are included in the contract price.

14.0 TERMS OF PAYMENT

The terms of Payment for Supply shall be as given below:

a) Subject to deductions as per Clause 19, 98% of the contract price shall be paid subject to availability of fund with JREDA, against delivery of goods in full and good condition on submission of following documents in soft & hard copy.

- Commercial Invoice in triplicate
- Copy of receipted Delivery Challan/ transportation Challan/ Lorry receipt.
- Lantern Serial No., Module Serial No. along with Test Report, Battery No and make & year of manufacture, charge controller No. presented in tabular form.
- Certificate of delivery of the system and delivery of user's instruction cum maintenance manual in terms of the order, issued by deputy commissioner/consignee's and JREDA representative.
- Certificate of training and awareness programme and testing of the solar lantern in terms of the order issued by deputy commissioner/consignee's and JREDA representative.



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b) Balance 2 % shall be paid after completion of Warranty period subject to deduction due to non-performance of the supplier during warranty period and submission of following documents:

- Commercial Invoice in triplicate

However, this 2% payment can be released against a Bank Guarantee (BG) as per JREDA's proforma (enclosed at Proforma-X-C) from any Indian Nationalised Bank/ Scheduled Bank valid till warranty period of solar Lantern. The proforma for BG is enclosed.

c) All payments shall be released by JREDA within 45 days subject to availability of funds with JREDA on submission of stipulated documents through account payee cheque issued in favour of the Supplier and payable at any Indian Nationalised/Scheduled Bank, Ranchi.

d) All the payment shall be paid in the name of only successful bidder not to anyone else.

15.0 INCOME TAX

Without prejudice to the obligations of the Supplier under law, any Income Tax which JREDA may be required to deduct by law/statute, shall be deducted at source and shall be paid to the Income Tax authorities on account of the Supplier. JREDA shall provide the Supplier a certificate for such deduction of tax. .

16.0 STATUTORY VARIATION IN TAXES AND DUTIES

16.1 The adjustment in the Contract Price towards imposition of new taxes or abrogation of existing taxes due to statutory variation shall be applicable only if the new tax is enacted or existing tax is abrogated within Contractual delivery/execution period. For any upward variation due to enactment of new tax or abrogation of existing tax after Contractual delivery / execution period, adjustment in the Contract Price shall not apply, although for any downward variation, JREDA shall make necessary adjustment in the rate of the items.

16.2 The Supplier shall bear and pay all liabilities in respect of statutory variations in taxes and duties and imposition of new taxes and duties that may be imposed after the Contractual delivery / execution dates, as originally stipulated, in case the delivery dates are extended due to reasons attributable to Supplier.

16.3 The adjustment in the Contract Price towards variation in the taxes shall be made by the JREDA on production of the documentary evidences by the Supplier and after completion of delivery.

16.4 The Contract Price shall be adjusted towards variations in taxes in respect of only finished equipment supplied by the Supplier to the JREDA. No adjustment in the Contract price shall be made for variations in the taxes on raw materials, parts, component / intermediate components, assemblies / sub-assemblies, etc.

17.0 TRANSIT INSURANCE

Transit Insurance shall be arranged by the supplier as per dispatch instruction. In case of any damage / loss / pilferage / non-delivery during transit, the supplier shall lodge the claim and settle the claim with the insurance agency. The supplier shall also arrange replacement of the damaged, lost/pilfered items expeditiously pending settlement of commercial implications with insurance agency, if any, so as not to hamper the working of the system. The resultant loss if any due to failure of supplier / sub- supplier to comply with the above shall be to the account of supplier.



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18.0 DESPATCH INSTRUCTIONS

19.1 All the items/Equipments shall be subjected to inspection by JREDA or authorised representative as per relative Standards/ provision approved by JREDA before dispatch of items.

19.2 The equipment shall be dispatched as per the detailed "Despatch Instructions" which will be required to be followed strictly at the time of despatch. However, equipment shall be despatched only after receipt of "Despatch Clearance" from JREDA after inspection and acceptance of the equipment is over. No consignment shall be dispatched without receipt of despatch clearance from JREDA.

19.0 LIQUIDATED DAMAGES FOR DELAY IN COMPLETION

19.1 If the Supplier fails in the due performance of the Contract to deliver any part of the equipment or complete the work within the time fixed under the Contract or any extension thereof granted to him by JREDA and/or to fulfill his obligations in time under the Contract, he shall be liable to pay to the JREDA as pre-agreed liquidated damages a sum equivalent to ½% of total contract value per week of such delay, or part thereof, subject to maximum of 5% of the total contract value.

19.2 The liquidated damages for delayed completion shall be recovered from the Supplier's bill or Security Deposit.

20.0 DELIVERY

The delivery of goods at FOR destination in full as per the terms and conditions of the contract/order shall be completed within 5 (five) months from the earliest date of intimation of the order.

21.0 INSPECTION OF THE FACTORY AND TESTS

21.1 JREDA reserves the right to inspect the manufacturer's works/factory to ascertain the capability/availability of necessary equipment & infrastructure required for manufacture of the item offered before opening of the price offers of the bidders.

21.2 JREDA shall have the right to inspect and test the goods to confirm their conformity to the technical specifications after delivery of goods to consignee.

21.3 Successful Bidder shall inform JREDA for pre-dispatch inspection at least 25 days in advance of schedule dispatch.

22.0 CANCELLATION OF BID / ORDER

The JREDA reserves the right to reject in part or full the awarded contract without assigning any reason of those firms which will be found defaulter for delayed supply or failure to deliver satisfactory performance or supply of substandard materials pursuant to clause 19.0 and 21.0. Non submission of security deposit within stipulated period will result in cancellation of purchase order.

The authority reserves the right to reject part or whole of the bid/order without assigning any reason thereof.



BID SPECIFICATION FOR SOLAR LANTERN



23.0 WARRANTY PERIOD

The manufacturer must provide warranty for a minimum period of two years for the complete system including the battery and minimum ten years for PV modules from the date of supply at site/ demonstration of systems after receipt of the materials by the consignee. Supplier shall without prejudice to any other clauses of the order repair/replace the defective parts and restore the system to satisfactory working/performance within 7 days without any additional cost to JREDA within the period of Warranty.

The PV module will be warranted for a minimum period of 10 years from the date of supply and the solar Lantern(including the battery) will be warranted for a minimum period of two years from the date of supply. The warranty card to be supplied with the system must contain the detail of the system supplied as given in the Proforma VIII. The manufacturers can also provided additional information about the system and condition of warranty as necessary.

23.1 Any minor equipment and material which may not be specifically mentioned in this specification but are required to make the system complete in every respect in accordance with technical specification and guaranteed performance of the equipment shall be deemed to have been covered under the scope of this specification and shall be provided by the tenderer /supplier within the quoted price.

23.2 The Tenderer shall satisfy the purchaser that he possesses the necessary technical experience and has at his disposal suitable facilities and staff to ensure that the contract shall be executed with the best quality material and workmanship within the stipulated time. Necessary particulars in this regard shall be furnished with the Tender.

23.3 The equipment supplied shall be new and best of their kind and of latest technology on the date. All materials and equipment shall comply with the MNRE Standard.

23.4 The equipment shall be designed to have maximum reliability and ease of operation and maintenance as primary consideration. The equipment offered shall be of a family efficiently and reliably under similar climatic and operating condition. Operation feed back for such equipment already supplied shall be attached with the offer. All the equipment supplied shall be guaranteed for quality workmanship and compliance with the specified requirements for integrated proforma.

24.0 TRAINING PROGRAMME, AFTER-SALES SERVICE AND AVAILABILITY OF SPARES

24.1 The responsibility of organizing training programme for Solar Lantern will rest on the manufacturers. The training programme will be organized in consultation with JREDA/ Consignee and Manufacturer of Solar Lantern. The training programme will focus on operation and maintenance of Solar Lantern. Printed leaflet/literature should be made available in Hindi by the manufacturer regarding the operation and maintenance of their Solar Lantern.



BID SPECIFICATION FOR SOLAR LANTERN



24.2 The supplier shall within 7 days from the date of the order depute authorised service engineer and establish sufficient inventory of spares in the state in consultation with JREDA to provide satisfactory and uninterrupted services during warranty period.

24.3 The supplier shall maintain one service center for 1000 solar lantern within the radius of 40 kms or so.

25.0 PERFORMANCE GUARANTEE (SECURITY) DEPOSIT

The successful tenderer shall submit Performance Guarantee (Security) Deposit within 15 days from the date of Letter of award, in the form of Bank Guarantee from any Nationalized bank (as per Proforma-X-B) for a sum equivalent of 5% (Five Percent) of contract price against and the valid till completion of supplies at site. The Performance Security shall be liable for forfeiture by JREDA in case of termination / cancellation of the order / contract pursuant to Clause 22.0 or failure of the equipment to deliver satisfactory and acceptable performance.

For SSI units registered with Jharkhand, this clause is not applicable.

For SSI units registered with Jharkhand as well as with NSIC, this clause is not applicable.

26.0 AWARD OF CONTRACT/ORDER

The contract/order shall be awarded to techno-commercially acceptable and lowest evaluated bidder for the quantity quoted by the bidder

27.0 AGREEMENT / CONTRACT

The suppliers have to enter into an agreement in the office of the Director, JREDA in prescribed format before commencement of supply.

28.0 ARBITRATION

All disputes would be settled within Ranchi Jurisdiction of Court of Law only. All arbitration cases would only be settled under Arbitration and Conciliation Act 1996 but at Ranchi only.

29.0 ASSIGNMENT

The supplier shall not assign, in whole or part, its obligations to perform under the order/contract, without written permission of the JREDA.

30.0 FORCE MAJEURE

30.1 Should at any time during the continuance of the Contract the performance in whole or in part of any obligations by either party under this Contract be held up by reasons of any war, hostility, acts of foreign enemy, civil commotion, sabotage, fires, floods, earthquakes, explosions, epidemics, cyclones, quarantine restrictions, Governmental regulations, law & order and other proclamation etc. (hereinafter referred to as "Events") then, provided notice of the happening of any such eventuality is given by either party to the other within 10 days from the date of occurrence thereof neither party shall, by reasons of such eventuality, be entitled to terminate this Contract, nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance, and the work under this Contract shall be resumed as soon as practicable after such eventuality has come to an end or ceased to exist.



BID SPECIFICATION FOR SOLAR LANTERN



30.2 Should one or both the parties be prevented from fulfilling their contractual obligations by a state of force majeure, lasting continuously for a period of at least four (4) weeks, the two parties should consult each other regarding the further implementation of the Contract with the provision that if no mutually satisfactory arrangement is arrived at within a period of 2 weeks from the expiry of 4 weeks referred to above, the Contract shall be deemed to have expired at the end of the aforesaid 2 months. Such expiry of the Contract will not relieve the parties from the obligations to reach agreement regarding winding up and financial settlement of the Contract.

30.3 The above mentioned force majeure events shall not include constraints, which could prudently be foreseen like shortage of power, non-availability of raw materials, difficulties in making transport arrangement, break down of machines, strikes, lock outs etc.

30.4 The above-mentioned force majeure conditions/clause shall also apply in the works of sub-contractors/suppliers of the contractor.

30.5 However, the Supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination/ cancellation of order/contract if and to the extent



BID SPECIFICATION FOR SOLAR LANTERN



SECTION – 2A

Technical Specification for CFL based Solar Lantern

1.0 DEFINITION

A Solar Photovoltaic Lantern is a lighting system consisting of a lamp, battery and electronics, all placed in a suitable housing, made of metal, plastic or fiberglass, and a PV module. The battery is charged by electricity generated through the PV module. The lantern is basically a portable lighting device suitable for either indoor or outdoor lighting, covering a full range of 360 degrees. A lighting device, which provides only unidirectional lighting, will not be classified as a solar lantern in the present context.

2.0 SCOPE OF WORK

The scope of work includes:

Manufacture/assembly, shop testing, packing & forwarding, transportation, transit insurance & supply of CFL based solar lantern system complete in all respect along with one set of operation instruction-cum- maintenance manual in Hindi for each set and delivery on F.O.R destination/site (door delivery) basis across the state of Jharkhand including, demonstration of performance and training at all sites located within the state of Jharkhand as per direction of JREDA.

The solar lantern shall be supplied as per the following specification.

3.0 TECHNICAL SPECIFICATION

The CFL based solar lantern shall be Indigenous make should conform to the following model:

MODEL	LAMP	BATTERY CAPACITY AT C/20 RATE	PV MODULE RATING
MODEL II A	CFL 7W	12V, 7AH	10 to 11.9 Wp.

3.1 DUTY CYCLE

The Solar lantern should provide a minimum of 3/4 hours of lighting per day under average daily solar radiation conditions of 5 kWh/sq.m. on a horizontal surface. The actual duration of lighting may vary depending on the location, season etc.

3.2 LAMPS

- The lamp will be compact fluorescent (CFL) type with a rating of 7W.
- For 4-Pin type CFLs, a suitable pre-heating circuit must be provided.
- The lamp should be preferably mounted in a base up configuration.
- The light output should be $370 \pm 5\%$ lumen for 7W lamp. No blackening or reduction in the lumen output by more than 10% should be observed after 1000 ON / OFF cycles (two minutes ON and four minutes OFF is one cycle).



BID SPECIFICATION FOR SOLAR LANTERN



3.3 BATTERY

- (a) The battery shall be sealed maintenance free lead acid type.
- (b) The capacity of the battery will be a minimum of 7.0AH at 12V at C/20 discharge rate at 27°C.
- (c) 80% of the rated battery capacity (~ 5.6AH at 12V, 27°C) should be between the low voltage and high voltage cut-off points specified in the performance requirements of the electronics used in the solar lantern.

3.4 ELECTRONICS

- (a) The inverter will 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 Half-wave operation is not acceptable.
- (b) The overall efficiency of the control electronics should be more than 80%.
- (c) The idle current (i.e. the current consumed when the lamp is switched OFF and no charging is in progress) should not be more than 1 mA.
- (d) The PCB containing the electronics should be capable of solder free installation and placement.
- (e) The voltage drop from module terminals to the battery terminal should not exceed 0.5 volts including drop across the diode and the cable.
- (f) The low voltage cut off set point will not be lower than 11V and the high voltage cut off should be below 14.3V at 27°C.
- (g) The electronics circuit shall be designed to ensure full charging of the battery under different ambient temperatures (0 – 45°C). Further the electronics circuit should have adequate temperature compensation for proper charging of the battery through out year.

3.5 PV MODULE (S)

- (a) The SPV module to be used with solar lantern must have a minimum of 10 Wp (at least 610mA Load when measured at 16.40 ± 0.2 Volts load condition) under standard test conditions (STC) of measurement.
- (b) The module should preferably have an arrangement (stand) for mounting at the optimum angle in the direction facing the sun.
- (c) In case of thin film solar cell modules, the specified values refer to the stabilized power output after the initial degradation.
- (d) The terminal box on the module should have a provision for opening it for replacing the cables, if required.
- (e) A strip containing the following details should be laminated inside the module so as to be clearly visible from the front side.
 - Name of the Manufacturer or distinctive logo.
 - Model or Type No.
 - Serial No.
 - Year of make
- (f) Models of reputed make shall be offered



BID SPECIFICATION FOR SOLAR LANTERN



JREDA SPECIFICATION

- (a) Monogram of JREDA along with following details translated into Hindi language shall be laminated in Devnagari script on the left hand top corner in the front of each PV module.
- ❖ SPV Programme 2007-08
 - ❖ Not for sale or transfer
 - ❖ Statutory action would be taken by JREDA, if it found sold or transferred under different sections of IPC
- (b) Frame of PV module shall be painted with golden yellow.
- (c) A strip containing the following details should be mentioned in Hindi and pasted in permanent manner at the back of the module:
- (i.) Cost of the system
 - (ii.) State subsidy to different categories viz. SC/ST/primitive
 - (iii) Beneficiary contribution.

3.6 ELECTRONIC PROTECTION

- (a) Adequate protection is to be incorporated under no load conditions (e.g. when the lamp is removed and the lantern is switched ON).
- (b) Battery cut offs & reconnects should be provided to protect it against overcharge and deep discharge condition.
- (c) A fuse should be provided to protect against short circuit conditions.
- (d) A blocking diode, preferably a Schottky diode, should be provided as part of the lantern electronics to prevent reverse flow of current through the PV module, if such a diode is not provided with the module itself.
- (e) Full protection against open circuit, accidental short circuit and reverse polarity should be provided.

3.7 OTHER FEATURES

- (a) Two LED indicators one for a green light to indicate charging in progress, and another red LED to indicate deep discharge conditions of the battery suggesting that load should be switched off and the battery must be charged immediately should be provided on the body of the lantern. The green LED should glow only when the battery is actually being charged.
- (b) The On/Off switch used in the lantern must be suitable for use in DC circuits and be reliable with long life. Use of electronic switch is allowed. A cable (2 core x 1.5 sqmm size) of suitable length (at least 5 meters) should be provided for inter-connection between the module and the lantern.
- (c) The following details should be marked indelibly on the lantern:
- Name of the Manufacturer or Distinctive Logo.
 - Model Number (this refers to Model (s) indicated in Clause 3.0 above)
 - Serial Number.
 - Make and serial number of the PV module used with the lantern.



BID SPECIFICATION FOR SOLAR LANTERN



3.8 DOCUMENTATION

An operation, Instruction Maintenance Manual in Hindi should be provided with the solar lantern. The following minimum details must be provided in the manual:

- (i) About Photovoltaic
- (ii) About Solar Lantern – its components and expected performance.
- (iii) About PV Module.
- (iv) About CFL
- (v) About Battery
- (vi) Clear instructions about mounting of PV module(s)
- (vii) About electronics
- (viii) About charging and significance of indicators.
- (ix) Do's and Don'ts
- (x) Clear instructions on regular maintenance and trouble shooting of solar lantern.
- (xi) Name and address of the person or service center to be contacted in case of failure or complaint
- (xii) Warranty card.

Components and parts used in solar Lantern should confirm to the latest BIS specifications, wherever such specifications are available and applicable.

3.9 WARRANTY

The PV module will be warranted for a minimum period of 10 years from the date of supply and the lantern (including the battery) will be warranted for a minimum period of 2 years from the date of supply. The warranty card to be supplied with the system must contain the detail of the system supplied. The manufacturers can also provide additional information about the system and condition of warranty as necessary.

3.10 Any minor equipment and material which may not be specifically mentioned in this specification but are required to make the system complete in every respect in accordance with technical specification and guaranteed performance of the equipment shall be deemed to have been covered under the scope of this specification and shall be provided by the tender/ supplier within the quoted price.

3.11 The equipment supplied shall be new and best of their kind and latest technology on the date. All materials and equipment shall comply with the MNES/MNRE Standard.

3.12 The equipment shall be designed to have maximum reliability and ease of operation and maintenance as primary consideration. The equipment offered shall be of a family having basic design as per which other equipment have already been supplied and which have operated efficiently and reliably elsewhere at least three years under similar climatic and operating condition. Operation feed back for such equipment already supplied shall be attached with the offer.

All the equipment supplied shall be guaranteed for quality workmanship and compliance with the specified requirements for integrated performance.



BID SPECIFICATION FOR SOLAR LANTERN



SECTION – 2B

Technical Specification for LED based Solar Lantern

1.0 DEFINITION

A Solar Photovoltaic Lantern is a lighting system consisting of a lamp, battery and electronics, all placed in a suitable housing, made of metal, plastic or fiberglass, and a PV module. The battery is charged by electricity generated through the PV module. The lantern is basically a portable lighting device suitable for either indoor or outdoor lighting, covering a full range of 360 degrees. A lighting device, which provides only unidirectional lighting, will not be classified as a solar lantern in the present context.

2.0 SCOPE OF WORK

The scope of work includes Manufacture/assembly, shop testing, packing & forwarding, transportation, transit insurance & supply of LED based solar lantern system complete in all respects along with one set of operation instruction-cum- maintenance manual (both English and Hindi) for each set and delivery on FOR destination/site (door delivery) basis across the State of Jharkhand including, demonstration of performance and training at all sites located within the state of Jharkhand as per direction of JREDA. The solar lantern shall be supplied as per the following specification.

3.0 TECHNICAL SPECIFICATION

The LED based solar lantern shall be Indigenous make should conform to the following specification:

ELECTRICAL

- ❖ Input Voltage: 12.00V (Nominal)
- ❖ Input Current: < 200 mA
- ❖ Input Power: < 2.5 W
- ❖ Output power: > 2.0 W
- ❖ Efficiency: $\geq 80\%$
- ❖ Load disconnect battery voltage: $11.20 \pm 0.1V$
- ❖ Load reconnect battery voltage: $12.50 \pm 0.1V$
- ❖ High Voltage Cut-Off :- < 13.4 V



BID SPECIFICATION FOR SOLAR LANTERN



ILLUMINANCE

Sl. No	Measurement from a distance away from the centre point of bottom of lantern in the same plane of horizontal.	Illuminance required	
		When detector is in Horizontal	When detector is at right angle
1	1 feet	14.00 Lux	55 Lux
2	2 feet	3.00 Lux	20 Lux
3	3 feet	2.00 Lux	12 Lux
4	4 feet	1.5Lux	8 Lux

3.1 Duty Cycle

The Solar lantern should provide a minimum of 3/4 hours of lighting per day under average daily solar radiation conditions of 5 kWh/sq.m. on a horizontal surface. The actual duration of lighting may vary depending on the location, season etc.

3.2 Lamps

- The lamp will be 5mm White Light Emitting Diode (W-LED) diffused and soothing to eyes.
- The luminous performance of LEDs used should not be less than 30 lumen watt.
- Use of LEDs, which emit ultraviolet light, shall be avoided.
- The light output from the light source should be constant during the specified duration.
- The lamp should be held preferably in a base up configuration.
- The make, model number and technical characteristic of lamp shall be furnished.

3.3 Battery

- The battery shall be sealed maintenance free (SMF) make or equivalent confirming to latest BIS standard or international standard. A copy of the test certificate should be furnished along with offer.
- The capacity of the battery will be a minimum of 2.30 AH at 12V at C/20 discharge rate at 27°C.
- 75% of the rated capacity of the battery should be between fully charged & load cut off condition.

3.4 Electronics

- The total electronic efficiency should be at least 80%.
- The idle current consumption in the charge controller should not be more than 1 mA.
- Electronics should operate at 12V and should have temperature compensation for proper charging of the battery through out the year.
- The light output should remain constant with variation of the battery voltage.
- Necessary lengths of wire/cables (5 meters), switches suitable for DC use and fuses should be provided.



BID SPECIFICATION FOR SOLAR LANTERN



3.5 PV Module(s)

- (a) The PV module shall contain crystalline silicon solar cells or thin film solar cell modules. In case of thin film solar cell modules the specified values refer to stabilized power output after initial degradation.
- (b) Should be more than 2.5W at 17.0 V
- (c) The module should preferably have an arrangement (stand) for mounting at the optimum angle in the direction facing the sun.
- (d) The terminal box on the module should have a provision for opening it for replacing the cables, if required.
- (e) A strip containing the following details should be laminated inside the module so as to be clearly visible from the front side.
 - Name of the Manufacturer or distinctive logo.
 - Model or Type No.
 - Serial No.
 - Year of make
- (f) Models of reputed make shall be offered.

JREDA SPECIFICATION

- (a) Monogram of JREDA along with following details translated into Hindi language shall be laminated in Devnagari script on the left hand top corner in the front of each PV module.
 - ❖ SPV Programme 2007-08
 - ❖ Not for sale or transfer
 - ❖ Statutory action would be taken by JREDA, if it found sold or transferred under different sections of IPC
- (b) Frame of PV module shall be painted with golden yellow.
- (c) A strip containing the following details should be mentioned in Hindi and pasted in permanent manner at the back of the module:
 - (i) Cost of the System
 - (ii) State subsidy to different categories viz. SC/ST/primitive.
 - (iii) Beneficiary contribution.

3.6 Electronic Protection

- (a) Adequate protection is to be incorporated under no load conditions (e.g. when the lamp is removed and the lantern is switched ON).
- (b) Battery cut offs & reconnects should be provided to protect it against overcharge and deep discharge condition.
- (c) A fuse should be provided to protect against short circuit conditions.
- (d) A blocking diode, preferably a Schottky diode, should be provided as part of the lantern electronics to prevent reverse flow of current through the PV module, if such a diode is not provided with the module itself.
- (e) Full protection against open circuit, accidental short circuit and reverse polarity should be provided.



BID SPECIFICATION FOR SOLAR LANTERN



3.7 Other Features

(a) Two LED indicators one for a green light to indicate charging in progress, and another red LED to indicate deep discharge conditions of the battery suggesting that load should be switched off and the battery must be charged immediately should be provided on the body of the lantern. The green LED should glow only when the battery is actually being charged.

(b) The On/Off switch used in the lantern must be suitable for use in DC circuits and be reliable with long life. Use of electronic switch is allowed. A cable (2 core \times 1.5 sq mm)of suitable length(at least 5 meters) should be provided for inter-connection between the module and the lantern.

(c) The following details should be marked indelibly on the lantern;

- Name of the Manufacturer or Distinctive Logo.
- Model Number
- Serial Number
- Make and serial number of the PV module used with the lantern.

3.8 Documentation

An operation, Instruction Maintenance Manual in English & in the local language should be provided with the solar lantern. The following minimum details must be provided in the manual:

(ii) About Photovoltaic

(iii) About LED Solar Lantern – its components and expected performance.

(iv) About PV Module. — In case of imported modules it is mandatory to provide a copy of the international product qualification certificates.

(v) About LED lights, the make model no, country of origin and technical characteristic of LEDs should be stated

(vi) About Battery

(vii) Clear instructions about mounting of PV module(s)

(viii) About electronics

(ix) About charging and significance of indicators.

(x) Do's and Don'ts

(xi) Clear instructions on regular maintenance and trouble shooting of solar lantern.

(xii) Name and address of the person or service center to be contacted in case of failure or complaint.

3.9 Quality and warranty:

(i) Components and parts used in LED solar lantern should confirm to the latest BIS/ International specification, wherever such specification are available and applicable. A copy of the test report/certificate stating conformity of BIS / International standard must be submitted to the test centre.

(ii) The PV module will be warranted for a minimum period of 10 years from the date of supply and the LED solar lantern including battery shall be warranted for a period of at least 2 years from the date of supply.



BID SPECIFICATION FOR SOLAR LANTERN



3.10 Any minor equipment and material which may not be specifically mentioned in this specification but are required to make the system complete in every respect in accordance with technical specification and guaranteed performance of the equipment shall be deemed to have been covered under the scope of this specification and shall be provided by the tender/ supplier within the quoted price.

3.11 The tender shall satisfy the purchaser that he possesses the necessary technical experience and has at disposal suitable facilities and staff to ensure that the contract shall be executed with the best quality material and workmanship with the stipulated time. Necessary particulars in this regard shall be furnished with the tender.

3.12 The equipment supplied shall be new and best of their kind and latest technology on the date. All materials and equipment shall comply with the MNES/MNRE Standard.

3.13 The equipment shall be designed to have maximum reliability and ease of operation and maintenance as primary consideration. The equipment offered shall be of a family having basic design as per which other equipment have already been supplied and which have operated efficiently and reliably elsewhere at least three years under similar climatic and operating condition. Operation feed back for such equipment already supplied shall be attached with the offer.

All the equipment supplied shall be guaranteed for quality workmanship and compliance with the specified requirements for integrated performance.



**BID SPECIFICATION
FOR
SOLAR LANTERN**



Proforma – I

**Jharkhand Renewable Energy Development Agency
NIB No.JREDA/SPV/1/SL/2007-08
Bid Proforma - Solar Lantern
Technical & Commercial Part: Part –II
Format for Forwarding Letter**

(To be submitted by bidders on official letter-head of the company)

No..... Dated

To,
The Director
Jharkhand Renewable Energy Development Agency
Plot No. 328/B, Road No. 4,
Ashok Nagar,
Ranchi – 834002

**Sub: Offer in response to Notice Inviting Bid No..... for manufacture/
assembly & supply of Solar Photovoltaic Systems –Solar Lantern. Quantity Offered-----
-----No**

Sir,

We are hereby submitting our offer in compliance with the terms and conditions of the Notice Inviting Bid No. As specified, the offer has been submitted in two different envelopes duly marked and sealed. The offer is submitted in triplicate. We also further declare:

- a) That we are submitting this offer under the above mentioned notice after having fully read and understood the nature of the work and having carefully noted all the specifications, terms & conditions laid down in the bid documents.
- b) That we shall execute the offer/work as per specifications, terms & conditions of the Bid Documents and in exact configuration of the sample submitted on award of work.

Yours faithfully,

(Authorized Signatory)
Name
Designation
Company Seal

Proforma – II

Prepared by Dr. R.P.Sharma | Checked by Dr. Arbind Kumar



**BID SPECIFICATION
FOR
SOLAR LANTERN**



**In Sealed Cover
Part – II**

**Jharkhand Renewable Energy Development Agency
NIB No. JREDA/SPV/1/SL/2007-08
Bid Proforma – Solar Lantern**

Technical & Commercial Part: Part - II

Format for confirmation of Minimum Eligibility Condition

(To be submitted by bidders on official letter-head of the company)

No.....

Dated

To,
The Director,
Jharkhand Renewable Energy Development Agency
Plot No. 328/B, Road No. 4,
Ashok Nagar,
Ranchi. - 834002

Subject: **Confirmation of meeting the Minimum Eligibility Condition for NIB No..... for Solar Lantern**

Sir,

Having examined the Bid documents of NIB No., we hereby confirm the following towards the minimum eligibility conditions to participate in the bid for Manufacture /assembler & Supply of Solar Photovoltaic Systems – Solar Lantern

- 1) We are indigenous manufacturers / assembler of sub-systems of SPV Systems (SPV Module, battery, electronics)
- 2) We have valid test certificates from _____ (Solar Energy Centre (SEC) Gurgaon or Electronics Regional Test Laboratory (East) (ERTL), Kolkata or Central Power Research Institute (CPRI), Thiruvananthapuram or Electronics Test and Development Centre (ETDC), Bangalore) tested on or after 1st January 2006 for the Model IIA and LED based Solar Lantern to be supplied.
- 3) We confirm that these systems have been working satisfactorily since supply. Certificate to this effect from the concerned State Nodal Agency and other organisations are enclosed.
- 4) If any time, any of declaration is found to be false, our offer or order is liable to rejection.

Yours faithfully,
Encl. attached.
(Authorized Signatory)
Name
Designation
Company Seal

Prepared by Dr. R.P.Sharma | Checked by Dr. Arbind Kumar



**BID SPECIFICATION
FOR
SOLAR LANTERN**



Proforma – III

In Sealed Cover Part – II

**Jharkhand Renewable Energy Development Agency
NIB No JREDA/SPV/1/SL/2007-08
Bid Proforma – Solar Lantern**

Technical & Commercial Part: Part - II

**Format for Compliance Certificate for meeting Technical Specifications -
(To be submitted by bidders on official letter-head of the company)**

No..... . Dated

To,
The Director
Jharkhand Renewable Energy Development Agency
Plot No. 328/B, Road No. 4,
Ashok Nagar,
Ranchi. - 834002

Subject: Compliance Certificate for meeting Technical Specifications – Solar Lantern

Sir,

Having examined and understood fully the contents of the Bid document of NIB No., we hereby confirm that the Solar Lantern offered by us herein meet the technical specifications and scope of work in to without any deviation whatsoever from those specified in the bid documents towards fulfilling the eligibility criteria & qualifications.

Yours faithfully,

(Authorized Signatory)
Name
Designation
Company Seal

Proforma – IV

Prepared by Dr. R.P.Sharma | Checked by Dr. Arbind Kumar



**BID SPECIFICATION
FOR
SOLAR LANTERN**



In Sealed Cover Part – II

Jharkhand Renewable Energy Development Agency

NIB No JREDA/SPV/1/SL/2007-08

Bid Proforma: Solar Lantern

**Technical & Commercial Part: Part – II / Format for authorizing for attending Bid
Opening Meeting**

(To be submitted by bidders on official letter-head of the company)

No.....

Dated

To,
The Director
Jharkhand Renewable Energy Development Agency
Plot No. 328/B, Road No. 4, Ashok Nagar,
Ranchi. - 834002

**Subject: Authorizing letter for attending Bid Opening Meeting of Notice Inviting Bid
No..... for bid on Solar Lantern**

Sir,

We hereby authorize (Name & Designation) to attend the
Bid Opening Meeting to be held on at JREDA on behalf of our company. He is also
authorized to provide any clarification, if any, and signing of documents, etc. at the time of
opening and such clarification/ documents shall be binding on us. The specimen signature of
authorized person is as follows:

(Specimen Signature)
Name & Designation
Yours faithfully,
(Authorized Signatory)/ CEO
Name
Designation
Company Seal



**BID SPECIFICATION
FOR
SOLAR LANTERN**



Proforma – V

**Jharkhand Renewable Energy Development Agency
NIB No JREDA/SPV/1/SL/2007-08
Bid Proforma – Solar Lantern
Part – I: Technical & Commercial Part**

-
1. (a) Name of the manufacturer / supplier :
(b) Postal Address :
(c) Telephone No., Fax No., E-mail :
(d) GPS Co-ordinate of registered office, Factory :
campus and photographs of registered office &
Factory.
 2. Name and designation of the authorized signatory :
to whom reference shall be made.
 3. Nature of firm (individual/Partnership/Pvt.Ltd./ :
Public Ltd. Co./ Public Sector) :
[Attach attested copy] and photographs of MD or
Directors of the company.
 4. Registration No. :
 5. Financial capability :
(Attach certificate of financial capability from
Bank/Financial Institution)
 6. Specify the item originally manufactured :
 7. % Growth in Net Worth in last three years :
 8. Name of govt. agencies to whom the manufacturer :
supplied during last 3 years (with supporting
document)
 9. Performance Certificate from Govt. agency :
 10. Year of starting of manufacturing of PV component :
 11. International standard awarded :
(Attach photocopy of certificate)
 12. Installed capacity for solar product /component :
 13. Production and sales of solar component in last :
three years
 14. Total sales of PV product during the last three :
years.
 15. Name of material and model type offered :
 16. Name of the work :
 17. Name of manufacturer of Solar Lantern with full :
address :
(i) SPV SL
(ii) PV Module
(iii) Control Electronics/Charge Controller
(iv) Battery
 18. Quantity offered: CFL based Solar Lantern :..... Nos.
-

Prepared by Dr. R.P.Sharma | Checked by Dr. Arbind Kumar



**BID SPECIFICATION
FOR
SOLAR LANTERN**



	LED based Solar Lantern	:..... Nos.
19.	Acceptance of terms of payment	:
20.	Acceptance of penalty clause	:
21.	Validity of the offer is valid up to	: 150 days from the due date of submission of offers.
22.	Particulars of Earnest Money Deposit [Amount, Bank Draft No. (Attach evidence)]	:
23.	Particulars of payment for purchase of bill of quantity & specification (Attach evidence)	:
24.	Indicate delivery period	:
25.	Acceptance of the technical specifications. (If not accepted, attach relevant technical specification duly approved and certified by designated competent authority)	:
26.	Whether attested photocopy of BIS Certificate and/or Test Certificate issued by MNRE Approved Institution/Centres attached.	:
27.	Whether manufacturer is permanently registered as SSI unit of Jharkhand and/or with NSIC . (Attach photocopy)	:
28.	Place Where materials will be manufactured/assembled and place where materials will be available for inspection.	:
29.	Details of any existing service network in Jharkhand (Name & Address of service centre, year of opening)	:
30.	Other details and remarks, if any	:

(Specimen Signature)
Name & Designation
Yours faithfully,

(Authorized Signatory)/ CEO
Name
Designation
Company Seal

(Separate sheet may be used for giving detailed information in seriatim duly signed. This bid proforma must be submitted duly signed in case separate sheet is submitted).



**BID SPECIFICATION
FOR
SOLAR LANTERN**



Proforma – VI

JHARKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY

NIB No. JREDA/SPV/1/SL/2007-08

Bid Proforma – Solar Lantern

Part –II: Technical & Commercial Part

Information in Support of Meeting Eligibility Condition

Details of orders received & executed by manufacturer/supplier for supply of Solar Lantern to different Govt. Organisation/JREDA/ Other Nodal Agency/Important Organisation & Institution during last three years.

Sl No.	Name of Agency/ Organisation	P.O. No./date Ordered Qty	Name of Model	Delivery schedule	Qty. supplied within delivery schedule Qty	Qty. supplied within delivery schedule Qty	Date of full supply
1	2	3	4	5	6	7	8

Note: (1) Attach Photocopies of Purchase Orders
(2) Attach Photocopies of certificate of satisfactory performance issued by concerned Agency/Organisation

Signature of Authorised Signatory
Name _____
Designation _____
Company Seal _____

(Separate sheet may be used for giving detailed information in seriatim duly signed. This bid proforma must be submitted duly signed in case separate sheet is submitted).



**BID SPECIFICATION
FOR
SOLAR LANTERN**



Proforma - VII

JHARKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY

NIB No JREDA/SPV/1/SL/2007-08

Bid Proforma – Solar Lantern

Format for Price

Sl. No.	Item	UNIT Prices inclusive of all taxes and duties, transportation, testing, etc.	Total Quantity Offered	Total price offered inclusive of all taxes and duties, transportation, testing etc. (Rupees)
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
A	Supply of CFL based Solar Lantern as per scope			
B	Supply of LED based Solar Lantern as per scope			

Note:

1. Price quoted for Solar Lantern complete in all respect as per Technical Specifications inclusive of all Central / State / Local taxes & duties, packing, forwarding, transit insurance, loading & unloading, transportation & other charges etc. F.O.R. destination at any site in Jharkhand and inclusive of performance testing and training. **Percentage/amount of various factor considered in the unit price shall be mentioned here.**

2. Certified that rates quoted for Solar Lantern are as per specifications, terms & conditions mentioned in the bid document.

Signature of Authorised Signatory

Name _____

Designation _____

Company Seal _____

(Separate sheet may be used for giving detailed information in seriatim duly signed. This bid proforma must be submitted duly signed in case separate sheet is submitted).

Prepared by Dr. R.P.Sharma | Checked by Dr. Arbind Kumar



**BID SPECIFICATION
FOR
SOLAR LANTERN**



Proforma – VIII

Jharkhand Renewable Energy Development Agency

NIB No.: JREDA/SPV/1/SL/2006-07

Bid Proforma – Solar Lantern

Technical & Commercial Part: Part – I

Format for Warranty Card to be supplied with each Solar Lantern

(To be supplied by bidders on official letter-head of the company)

WARRANTY CARD

Solar Lantern

1. Name & Address of the Manufacturer/Supplier of the System:
2. Name & Address of the Purchasing Agency :
3. Date of supply of the system :
4. Details of PV module(s) supplied in the system :
 - a) Name of the Manufacturer :
 - b) Make :
 - c) Model :
 - d) Serial No. :
 - e) Wattage of the PV Module(s) under STC :
 - f) Warranty valid upto :
5. Details of Battery :
 - a) Name of the Manufacturer :
 - b) Make :
 - c) Model :
 - d) Batch/Serial No(s) :
 - e) Month & year of Manufacture :
 - f) Rated V & AH capacity at C/20 or C/10 rated at 27⁰C
 - g) Warranty valid upto :
6. Details of Electronics & other BOS item :
 - a) Name of the Manufacturer :
 - b) Make :
 - c) Model :
 - d) Serial No(s) :
 - e) Month & year of Manufacture :
 - f) Warranty valid upto :
7. Designation & Address of the person to be contacted for claiming Warranty obligations:

Place & Date:

(Signature)

Name & Designation

Name & Address of the Manufacturer / Supplier, (SEAL)



**BID SPECIFICATION
FOR
SOLAR LANTERN**



Proforma – IX

**Jharkhand Renewable Energy Development Agency
NIB No.: JREDA/SPV/1/SL/2006-07
Bid Proforma – Solar Lantern
Technical & Commercial Part: Part – I
Format for No Deviation Confirmation
NO DEVIATION CONFIRMATION
(Bid Document No. _____)**

To,
The Director,
Jharkhand Renewable Energy Development Agency
Plot No. 328/B, Road No. 4, Ashok Nagar,
Ranchi. - 834002

Dear Sir,

We understand that any deviation/ exception in any form may result in rejection of bid. We, therefore, certify that we have not taken any exceptions/ deviations anywhere in the bid and we agree that if any deviation is mentioned or noticed, our bid may be rejected.

Note: This NO DEVIATION CONFIRMATION should be written on the letterhead of the bidder indicating tender ref. no. duly signed and stamped with date by a person competent and having the power of attorney to bind the bidder.

Signature of Authorised Signatory
Name _____
Designation _____
Company Seal _____



**BID SPECIFICATION
FOR
SOLAR LANTERN**



Proforma – X A

**PROFORMA FOR BANK GUARANTEE IN LIEU OF EARNEST MONEY DEPOSITE
(TO BE SUBMITTED IN Rs. 50/- NON-JUDICIAL STAMP PAPER TO BE PURCHASED IN
THE NAME OF THE ISSUING BANK.**

No. Date:.....

To,
.....
.....
.....

WHEREAS (Supplier’s name) (hereinafter referred to as “Supplier”), a Company registered under the Companies Act., 1956 and having its registered office atis required to deposit with you, the Purchaser, by way of Earnest Money. Rs.(Rupees only) in connection with its Tender for the work was reference to Tender Enquiry No. datedas per specification and terms and conditions enclosed therein AND. WHEREAS the Supplier as per Clause No. of Instructions to Bid has agreed to establish a Bank Guarantee in Your favour through us valid up to (date) instead of deposit of Earnest Money in cash AND.

WHEREAS you have agreed to accept a Bank Guarantee from us in instead of Earnest Money Deposit in cash from the Supplier.

1. We (Bank) hereby agree and undertake to pay you on demand the said amount of Rs. (Rupees only) without any protest or demur in the event the Supplier / Tenderer after submission of his Tender, resiles from or withdraws his offer or modifies the terms and conditions thereof in a manner not acceptable to you or expresses his unwillingness to accept the order placed and/ or letter of intent issued on you on the Supplier/Tenderer for the work under. Tender Enquiry No. date

2. Your decision as to whether the Supplier/tenderer has resiled from or has withdraw his offer or has modified the terms and conditions there of in a manner not acceptable to you or has expressed his unwillingness to accept the order placed and/or Letter of Intent issued by you on the Supplier/Tenderer for the work under Enquiry No.dated in this regard, shall be final and binding on us and we shall not be entitled to question the same.

Prepared by Dr. R.P.Sharma | Checked by Dr. Arbind Kumar



**BID SPECIFICATION
FOR
SOLAR LANTERN**



3. Notwithstanding anything contained in the foregoing, our liability under this Guarantee shall be restricted to Rs. (Rupees only).
4. This Guarantee shall remain valid and in full force and effect upto and shall expire thereafter unless an intimation is given to the Bank by you earlier in writing discharging us from our obligation under this Guarantee.
5. We shall not revoke this Guarantee during its currency except by your consent in writing.
6. This Guarantee shall not be affected by any change in the Constitution of the Supplier/Tenderer or yourselves or ourselves but shall enure to your benefit and be enforceable against our legal successors or assignees by you or your legal successors.
7. Notwithstanding anything contained herein above unless a demand or claim under this Guarantee is made on us in writing within six months from the date of expiry of this Guarantee we shall be discharged from all liabilities under this Guarantee thereafter.
8. We have power to issue this Guarantee under our Memorandum and Articles of Association and the undersigned who is executing this Guarantee has the necessary power to do so under a duly executed Power of Attorney granted to him by the Bank.

SIGNED AND DELIVERED

For and on behalf of above named Bank. For and on
behalf of (Banker's Name)

MANAGER

Address
.....



**BID SPECIFICATION
FOR
SOLAR LANTERN**



Proforma-X B

**PROFORMA FOR BANK GUARANTEE TOWARDS PERFORMANCE GUARANTEE
(SECURITY) DEPOSIT**

(To be executed on non-judicial stamp paper of appropriate value)

Name of the Bank.....Bank Limited
Address.....Guarantee
No.....A/c Messrs.....Date
of Expiry.....limit to liability Rs.....
Contract No.....
For (Name of Work).....
Subject : Security Deposit
Date.....2007

GUARANTEE BOND

1. In consideration of the JHARKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY (JREDA)(hereinafter called the Company) having agreed to exempt _____ (hereinafter called the said contractor(s) from the demand under the terms and conditions of an Agreement dated _____ made between _____ and _____ for _____ (hereinafter called the said Agreement) of security deposit for the due fulfillment by the said contractor(s) of the terms and conditions contained in the said Agreement, on production of a bank guarantee for Rs. _____ (Rupees _____ only) we _____ (indicate Name of the Bank) (hereinafter referred to as the Bank) at the request of _____ (Contractor(s)) do hereby undertake to pay to the Company an amount not exceeding Rs. _____ against any loss or damage caused to or suffered or would be caused to or suffered by the Company by reason of any breach by the said contractor(s) of any of the terms or conditions contained in the said Agreements.

2. We _____ (indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Company stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Company by reason of breach by the said contractor(s) of any of the terms or conditions contained in the said Agreement or by reason of the contractor(s) failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs _____.

3. We undertake to pay to the Company any money so demanded notwithstanding any dispute or disputes raised by the contractor(s)/supplier(s) in any suit or proceeding pending before any court or Tribunal or arbitration relating thereto our liability under these presents being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the contractor(s)/supplier(s) shall have no claim against us for making such payment.

Prepared by Dr. R.P.Sharma | Checked by Dr. Arbind Kumar



BID SPECIFICATION FOR SOLAR LANTERN



4. We, _____ (indicate the name of the bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Company under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till the Company _____ certified that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the _____ (date) we shall be discharged from all liability under this guarantee thereafter.

5. We, _____ (indicate the name of the Bank) further agree that the Company shall have the fullest liberty without or consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Company against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act or omission on the part of the Company or any indulgences by the company to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the bank or the Contractor(s)/supplier(s).

7. We, _____ (the name of the Bank) further undertake to extend the validity of this guarantee beyond the period stated in hereinabove or as extended from time to time, for such further period as may be required by the Company in writing before the expiry of this guarantee and upon such extension(s), all terms and conditions of this guarantee shall remain in full force till the expiry of the extended period(s).

8. We, _____ (indicate the name of bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Company in writing.

9. We have power to issue this guarantee under our Memorandum and Articles of Association and the undersigned has full powers to sign this guarantee on our behalf under power of Attorney dated granted to his and/or the resolution dated passed by our Company of Directors in accordance with our constitution.

Dated the.....day of..... 2007.

For (indicate the name of Bank).

Signature-----

Name -----

Designation.....

Authorisation No.....

Date & Place -----

Banker's Seal

In presence of

1. -----

2. -----



**BID SPECIFICATION
FOR
SOLAR LANTERN**



Proforma-X C

PROFORMA FOR BANK GUARANTEE TOWARDS RELEASE OF LAST 2% PAYMENT

(To be executed on non-judicial stamped paper of appropriate value)

B.G. No. Dated

1. WHEREAS JHARKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY (JREDA) having its office at (hereinafter referred to as “The Company/ Purchaser” which expression shall unless repugnant to the subject or context include its legal representatives, successors and assigns) has entered into a contract with M/s / has placed a Contract on M/s (hereinafter referred to as “Contractor(s)/Supplier(s) which expression shall unless repugnant to the subject or context include their legal representatives, successors and assigns) for on the terms and conditions as set out interalia, in the Company’s contract No. / P.O No. dt and various documents forming part thereof hereinafter referred to as the “said contract” which expression include all amendments, modifications and/or variations thereto and where as the Contractor(s)/Supplier(s) has agreed for due execution of the entire contract and guarantees its performance including any parts executed through any other agencies/subcontractors.

AND WHEREAS one of the conditions of the “said contract” is that “Contractor(s) shall furnish to the Purchaser a Bank Guarantee from a bank for% (..... Percent) of the total value of the “said contract” towards due and faithful performance of their obligations under the “said contract” including “warranty/defect liability obligations” and the performance guarantee obligations of the Contractor(s)/Supplier(s) for execution/supplies made under the “said contract” and also in consideration of release of penultimate/final% payment to the Contractor(s)/Supplier(s) by the Purchaser.

2. We Bank having its branch office at do hereby agree and undertake to pay the amount due and payable under this guarantee without any demur merely on a demand from the Company stating that in the opinion of the Company, which is final & binding, the amount claimed is due by reason of default made by the Contractor(s)/Supplier(s) in performing any of the terms & conditions of the said Contract including warranty/defect liability obligations, in fulfilling the performance guarantee and/or warranty/defect liability obligation or loss or damage caused to or would be caused to or suffered by the Company by reason of any breach by the said Contractor(s)/Supplier(s) of any of the terms & conditions of the Contract. Any such demand made on the Bank by the Purchaser shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to Rs. (Rupees only).

3. We undertake to pay to the Company any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s)/Supplier(s) in any suit or proceeding pending before any office, court or tribunal relating thereto, our liability under this present guarantee being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under. Our liability to pay is not dependent or conditional on the Purchaser proceeding against the Contractor(s)/Supplier(s).

Prepared by Dr. R.P.Sharma | Checked by Dr. Arbind Kumar



**BID SPECIFICATION
FOR
SOLAR LANTERN**



4. The guarantee herein contained shall not be determined or affected or suspended by the liquidation or winding up, dissolution or constitution or insolvency of the said Contractor(s)/Supplier(s) but shall in all respect and for all purposes be binding and operative until payment of all money due or liabilities under the said Contract(s)/Order(s) are fulfilled.

5. We Bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for performance of the said Contract(s)/Order(s) and that it shall continue to be enforceable till all the dues of the Company under or by virtue of the said Contract(s)/Order(s) have been fully paid and its claims satisfied or discharged or till a duly authorized officer of the Company certifies that the terms and conditions of the said Contract(s)/Order(s) have been fully and properly carried out by the said Contractor(s) and accordingly discharges the guarantee.

6. We Bank further agree with the Company that the company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract(s)/Order(s) or to extend the time of performance by the said Contractor(s)/Supplier(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Company against the said Contractor(s)/Supplier(s) and to forbear or enforce any of the terms and conditions relating to the said Contract(s)/Order(s) and we shall not be relieved from our liability by reason of any such variations, or extension being granted to the said Contractor(s)/Supplier(s) or for any forbearance, act or omissions on the part of the Company or any indulgence by the Company to the said Contractor(s)/ Supplier(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have affect of so relieving us.

7. Notwithstanding any thing contained herein before, our liability shall not exceed Rs. (Rupees only) and shall remain in force till Unless a demand or claim under this Guarantee is made on us within three months from the date of expiry we shall be discharged from all the liabilities under this guarantee.

8. We Bank, lastly undertake not to revoke this guarantee during its currency except with the previous consent of the company in writing. We further undertake to keep this Guarantee renewed from time to time on the request of the Contractor(s)/Supplier(s).

Date : Bank

Corporate Seal of the Bank By its constitutional Attorney

Signature of duly
Authorized person
On behalf of the Bank
With seal & signature code