



**BID SPECIFICATION
FOR
SOLAR HOME LIGHTING SYSTEM**



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/2/SHLS/2006-07

Date: 01- 02- 2007

Sealed Bids in three parts separately containing EMD (Part-I), Technical & Commercial Offer (Part-II) and Price Offer (Part-III), are invited from Indian companies / firms by JHARKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY, from reputed, experienced and financially sound parties 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, Supply, Installation, Testing & Commissioning of Indigenous Solar Home Lighting System (SHLS) of Model 2 for Jharkhand Renewable Energy Development Agency's schemes during 2006-07. Tentative quantity of SHLS are as follows; CFL based SHLS: 2,000 Nos. LED based SHLS: 500 Nos. (These quantities may vary)
2.	Minimum Lot Size	Bidder may quote for both type of SHLS or only CFL based SHLS. The minimum quantity quoted should be as indicated below: CFL based SHLS : 500 nos, LED based SHLS: 100 nos. Bidder may also submit their offer for additional quantity in multiples of the quantities as indicated below: CFL based SHLS : in multiple of 250 nos, LED based SHLS: in multiple of 50 nos. The bidder who qualifies in all respect for CFL based SHLS shall only be considered for placement of order for LED based SHLS. Quotation for only LED based SHLS will not be accepted and will be rejected.
3.	Earnest Money Deposit	► Rs. 1,00,000/- (Rupees One lakh only) for 500 CFL based SHLS and Rs. 50,000/- (Rupees Fifty Thousand only) for each additional 250 SHLS ► for SSI units registered in the State of Jharkhand Rs. 50,000/- (Rupees Fifty Thousands only) for 500 SHLS and Rs. 25,000/- (Rupees Twenty five Thousands only) for each additional 250 SHLS ► for SSI units registered with Jharkhand as well as with NSIC - Nil

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

		Bidder who intends to submit offer for both CFL and LED based SHLS shall submit EMD as defined above. No additional EMD is required to be submitted for LED based SHLS.
4.	Cost of Bid document (Non-refundable)	► Rs. 10,000/- (Rupees Ten Thousands only) ► for those SSI units, which are registered in Jharkhand Rs. 5,000/- (Rupees Five Thousands only) ► for SSI units registered with Jharkhand as well as with NSIC - Nil
5.	Time of completion	3 months from the date of order/ order intimation
6.	Date of commencement of issue of bid documents	01 – 02 – 2007 from 10:00 AM to 6:00 PM on all working days
7.	Last date & time of purchase of bid documents	09 – 02 – 2007 till 6:00 PM
8.	Last date & time of submission of bids	12 – 02 – 2007 till 12:00 Noon
9.	Date & time of opening Part-I (EMD) & Part-II of techno-commercial bids	12 – 02 – 2007 at 1:00 PM
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 Phone No. 0651-2246970 FAX No.: 0651-2240665 Website: www.jreda.com E-mail: info@jreda.com

1. Eligibility and Qualification Criteria

The bidder shall meet the following requirements:

(i) The bidder

- should be a reputed supplier of SHLS and who manufactures/assembles at least one or more major sub-systems (viz. PV modules or Storage Battery or Electronics) used in the Solar Home Lighting System.
- should have adequate facilities for testing of the Solar Home Lighting System.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

To meet the requirement under (i), the bidder shall furnish

- i. **Registration certificate clearly indicating that they are supplier / manufacturer / assembler of solar home lighting system including PV module / storage batteries / electronics as applicable.**
- ii. **List of manufacturing and testing facilities along with their photographs.**
 - (ii) The bidder must be in possession of valid test report for the SHLS of **Model 2** either from Solar Energy Centre (SEC), Gurgaon; or Electronics Regional Test Laboratory (East) (ERTL), Kolkata ; or Central Power Research Institute (CPRI), Thiruvananthapuram ; or Energy Conservation and Development Division (ECDD), Bangalore ; or Electronics Test & Development center (ETDC), Bangalore The corresponding test reports clearly marking the validity shall be submitted along with bid. The test certificate issued on or after 1st April 2005 will be eligible for supply for 2006-07 programme subject to meeting eligibility criterion for manufacturer as per Sl. No. 1(i). The SHLS of **Model 2** tested on or after 1st April 2005 must have the specification as per Section 2A (for CFL based SHLS).

To meet the requirement under (ii), the bidder shall submit the valid test certificate issued on or after 1st April 2005 from any aforesaid authorized test centres. Test Certificate issued before 1st April 2005 will not be considered.

- (iii) The bidder should have supplied photovoltaic based solar systems of the value of at least Rupees 2 crore (Rupees 1 crore for any SSI units registered with Govt of Jharkhand) to any State Nodal Agencies during any one of the past three financial years and supplies against such work order should have performed satisfactorily as certified by the concerned State Nodal Agencies.

(This clause will not be applicable for SSI units registered with Govt of Jharkhand 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) Bidder shall furnish up-to-date Sales Tax (S.T) / Value Added Tax (VAT) clearance certificate, EPF No, and Sale Tax /Value Added Tax registration no.
- (v) The bidder should have supplied a minimum lot of 100 nos of CFL based SHLS and which should be in satisfactory working condition for a minimum period of 1 year as on the date of submission of bid.

To meet the requirement under (v) above the Bidder shall submit attested photo copies of certificates from the respective Clients.

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.**

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

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 Nationalised Bank / Scheduled Bank, payable at RANCHI, India. Bidder will purchase bid document from the office of Director, JHARKHAND 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 alongwith 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 hereinabove.
6. All bids will be received in duly Sealed Cover within the due date and time. Bids received after the due date and time are liable for outright rejection.
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 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.
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.
16. Bidder shall submit his Permanent Account Number (PAN) copy and recent passport photographs of Managing Director and other two Directors or CEO 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.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

18. Purchase from the small-scale Industrial units located within the State of Jharkhand shall be as per Industrial Policy of Jharkhand 2001 as detailed in this document.
19. 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

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

SECTION – 1

GENERAL TERMS & CONDITIONS

1.0 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.

2.0 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

3.0 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. 10,000/- (Ten Thousands Rupees only)**

► for those SSI units, which are registered with Govt. of Jharkhand Rs. 5,000/-

► for SSI units registered with Govt. of Jharkhand as well as with NSIC - Nil

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.

4.0 SCOPE OF WORK

The Scope of work for SHLS includes:

Manufacture/assemble, shop testing, packing & forwarding, transportation, transit insurance, supply, installation, testing & commissioning of CFL as well as LED based SHLS system complete in all respects on turnkey basis 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. List of villages will be given before start of dispatch by JREDA.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

5.0 TECHNICAL SPECIFICATION

The general technical specification of SHLS are enclosed at **Section – 2A & Section – 2B**. SHLS offered by the bidder should conform to the Ministry of New and Renewable Energy (MNRE) specification.

The bidder shall submit a "Compliance Certificate for meeting Technical Specifications" along with the Part-II: Technical & Commercial Part, as per Proforma – III for qualification conditions. The bidder shall submit the detailed technical specifications of the SHLS 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; Energy Conservation and Development Division (ECDD), Bangalore ; or Electronics Test & Development center (ETDC), Bangalore that SHLS conform to specification of MNRE, Govt of India for the year 2006-07. Test Certificates issued on or after 1st April, 2005 would be considered valid only if it is as per latest MNRE specification on SHLS **Model 2**, this is detailed in technical specifications Section-2A for CFL based SHLS and Section-2B for LED based SHLS. The test issued prior to 1st April 2005 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 SHLS. The bidders are not allowed to change make / model of any components / items at the time of supply. The test report issued by SEC/ERTL/CPRI/ECDD/ETDC 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 SHLS components in a single test report.

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.**

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.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

- 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

- 9.1 The Bid shall be prepared and submitted by typing or printing in English with indelible black ink on white paper in consecutively numbered pages, each page signed alongwith duly filled in format(s) as per bid document. The bidding document shall comprise the documents as stated in the bid and to specify/confirm the same in the check-list enclose in the bid document.
- 9.2 All original and amendments / revisions to Bid Documents, including minutes of meeting, issued by the JREDA, if any, shall be signed and submitted along with the Bid. The Bid submitted by the Bidder shall take into account all such amendments/revisions and minutes of meeting, if any.
- 9.3 Bidders are advised to submit their Bids strictly based on the specification, terms and conditions contained in the Bid documents and subsequent revisions / amendments, if any, the same shall also be considered as an integral part of the Bid’.
- 9.4 **Bidder shall submit their offer at the office of Director, JREDA, Plot No. 328/B, Road No. 4, Ashok Nagar, Ranchi- 834002, Jharkhand, Phone No. 2246970, FAX: 2240665**

10.0 Mode of Submission

- 10.1 Sealed bid should be submitted in three separate parts, Part-I, Part-II & Part-III. Each envelope should be super-scribed on top left side indicating clearly bid notice no., SPV System nomenclature/type & model, due date of opening as may be, details of EMD, Part (I/II/III), name & address of the bidder, fax & telephone of contact person etc. as required. These envelopes should again be sealed in a covering envelope, along with forwarding letter, super-scribed on top with "Offer for supply of SPV system – SHLS", NIB No., Part-I, Part-II, Price Part (Part-III), Bid Paper Purchase Receipt No., Date of opening of Part – I & II Name & address of bidder, etc. Details of Part-I, II & III given below;

- a) Part-I Earnest Money: To submit in original only.
- b) Part-II Technical & commercial: To submit in original plus two Copies & one soft copy in the form of Compact Disk (CD)
- c) Part-III Price: To submit in original plus one copy

Bid shall be submitted under a covering letter indicating clearly the summary of Bid Chapters with Proforma and subsequent revisions / amendments, if any, schedules of the complete Bid.

10.1.1 Part-I: EARNEST MONEY

This cover should be sealed and super-scribed “PART – I; Earnest Money”. The original EMD and/or registration certificate as applicable, along with a covering letter indicating the quoted quantity, shall be submitted as per Clause No. 11. For availing concession/exemption in EMD by SSI registered in Jharkhand, bidder should submit relevant SSI registration certificate from Govt of Jharkhand and/or from NSIC as applicable. For Bidders not submitting earnest money or SSI

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

Unit registered in Jharkhand not submitting relevant SSI registration certificate from Govt of Jharkhand and/or from NSIC shall be liable for outright rejection.

EMD shall be submitted in the form of Demand Draft from any Indian Nationalised Bank/ Scheduled Bank or Bank Guarantee (as per proforma enclosed at Proforma-X A) from any Indian Nationalised along with bid.

This part shall also contain Cost of Bid Document, as applicable for those bidders, who have downloaded the Bid Document from JREDA web site.

10.1.2 Part-II: TECHNICAL & COMMERCIAL

This cover should be sealed and super-scribed “PART – II; TECHNICAL AND COMMERCIAL BID” followed by the title of work and Enquiry reference.

‘Technical’ and ‘Commercial’ Part of the offer shall be submitted in original plus two copies, each copy shall contain 1 (one) set of the following:

- a) General terms and Conditions of Contract, Proforma, Un-priced Price Schedule, Technical specification 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. A CD shall be submitted for this part.
- b) Check List shall also be submitted with Part-II.

CHECK LIST

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	
VI	Certified copies of 2005–06 Sales Tax Clearance Certificate and Sales Tax Registration Certificate	
VII	Attested Photo-copy of Partnership Deed in case of partnership firm with the photograph & details of each partner.	
VIII	Power of Attorney for authorised signatory in case of companies.	
IX.	Financial capability certificate from Bank/Financial Institution indicating that the manufacturer has the necessary resources for execution of the order.	
X.	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.	
XI	Details of past experience against supply made to different States Nodal Agencies/JREDA: Proforma - VI	
XII	Photocopies of certificate of satisfactory performance of systems supplied to state Nodal agencies along with copies of purchase orders / contracts.	

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

XIII.	Test Certificate of SHLS issued by Solar Energy Centre/MNRE approved testing centres for the test performed ON or AFTER 1 st April 2005 as per MNRE, Govt. of India specifications.
XIV.	Technical Particular data sheet of SHLS of Bidder (CFL & LED based)
XV	Photocopy of bank draft submitted as cost of bid document/ JREDA receipt.
XVI	PF Registration Certificate & PF Registration No.
XVII	A tentative overall schedule in the form of Bar Chart
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 price is quoted and mentioning “not quoted” for which price is not quoted.
XXI	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.
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	Copy of audited Balance Sheet and Profit & Loss Account for last three (3) years
XXV	Proof of all Tax & 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 before submission of the bid.**

10.1.3 Part-III – PRICE

This cover should be sealed and superscripted “PART-III-PRICE BID” to be filled up exactly as per Format given in proforma-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.

- 10.2 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.
- 10.3 Any offer received after the deadline for submission of offers as specified above, shall be rejected and returned unopened to the bidder.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

- 10.4 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.
- 10.5 The offer should be signed and sealed by the bidder or his authorised representative. The names and designations of all persons signing shall be typed or printed below the signature.
- 10.6 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.
- 10.7 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.

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

- 11.1 Bidder shall submit non-interest bearing Earnest Money Deposit (EMD) of Rs. 1,00,000/- (Rupees one Lakh only) for 500 CFL based SHLS 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. The Earnest Money submitted in the form of Bank Guarantee shall remain valid for a minimum period of three months after the validity of the offer.
- 11.2 Bidder shall submit additional non-interest bearing EMD of Rs. 50,000 (Rupees Fifty Thousand only) for **each additional** 250 CFL based SHLS, if the bidder submits their offer for more than 500 SHLS.
- 11.3 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”.
- 11.4 Small Scale Industrial (SSI) Unit registered in Jharkhand shall submit non-interest bearing Earnest Money Deposit of Rs 50,000/- (Rupees Fifty Thousand only) for 500 SHLS 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. Further SSI unit shall submit additional non-interest bearing EMD of Rs. 25,000/-(Rupees twenty fiveThousand only) for each additional 250 SHLS, if the SSI Unit submits their offer for more than 500 SHLSs.

► **For SSI units registered with Govt of Jharkhand as well as with NSIC:** No earnest money is required to be deposited.

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 S.S.I unit shall submit EMD (as per clause no. 11.1 & 11.2) of exact amount in accordance to the quantity quoted failing which bid will be rejected.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

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 11.4 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.

- 11.5 Bidder who intends to submit offer for both CFL and LED based SHLS shall submit EMD as defined for CFL based SHLS. No additional EMD is required to be submitted for LED based SHLS.
- 11.6 The Earnest Money shall be returned to all the unsuccessful Bidders, within sixty days from the date of placement of LOI/Order to successful bidder.
- 11.7 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.
- 11.8 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.

12.0 VALIDITY OF OFFER

The Bid and Price(s) quoted shall remain valid upto 120 days from the due date of submission of offer.

13.0 OPENING AND EVALUATION OF OFFER

- 13.1 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.
- 13.2 If the EMD value submitted by the bidder does not match with the quantity offered, their offer is liable for rejection.
- 13.3 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.
- 13.4 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.
- 13.5 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

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

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.

- 13.6 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 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 SHLS shall be from SSI units registered in Jharkhand, as per existing Industrial Policy of Govt of Jharkhand.

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

13.8 PURCHASE PREFERENCE TO SSI UNITS

JREDA shall give purchase preference to SSI Units registered within the Jharkhand as per prevailing guidelines of Govt. of Jharkhand.

14.0 CONTRACT PRICE

- 14.1 The total contract price & rates of SHLS 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.
- 14.2 For Supply of items in full & good condition at FOR Site / Stores site (door delivery basis) to various consignees across State of Jharkhand, including transit insurance. Contract Price also includes all charges towards packing & forwarding, inspection Insurance and 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.
- 14.3 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 during contractual completion period as stipulated in Clause no 14.4 below and / or addition or modification of scope of work.
- 14.4 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**

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

components of taxes and duties, freight, insurance etc that has been considered in the unit rates.

- 14.5 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.
- 14.6 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.
- 14.7 All applicable charges for taking statutory clearances, wherever necessary, are included in the contract price.

15.0 TERMS OF PAYMENT

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

- a) Subject to deductions as per Clause 20.0, **95% of the contract price** shall be paid against delivery of goods in full and good condition on submission of following documents:
- Commercial Invoice in triplicate
 - Copy of receipted Delivery Challan/ transportation Challan/ Lorry receipt.
 - 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 installation, testing and commissioning of SHLS in terms of the Order, issued by Deputy Commissioner / Consignee's and JREDA representative.
 - SHLS Serial No., Module Serial No. alongwith Test parameters and other materials supplied.
 - Certificate of training and awareness programme and testing of the SHLS in terms of the Order issued by Deputy Development Commissioner (DDC)/ Consignee's and JREDA representative.
- b) Balance 5% 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 5% payment can be released after release of above 95% payment against a Bank Guarantee (BG) as per JREDA's proforma (enclosed at Proforma-X-C) from any Indian Nationalised Bank, valid till warranty period of SHLS. The proforma for BG is enclosed.
- c) All payments shall be released by JREDA within 30 days of submission of stipulated documents through account payee cheque issued in favour of the Supplier and payable at any Indian Nationalised/Scheduled Bank, Ranchi.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

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

16.0 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.

17.0 STATUTORY VARIATION IN TAXES AND DUTIES

- 17.1 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.
- 17.2 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.
- 17.3 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.
- 17.4 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.

18.0 TRANSIT INSURANCE

Transit Insurance shall be arranged by the supplier for his total supplies.

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.

19.0 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 dispatched only after receipt of "Despatch Clearance" from JREDA after inspection and acceptance of the

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

equipment is over. No consignment shall be dispatched without receipt of despatch clearance from JREDA.

20.0 LIQUIDATED DAMAGES FOR DELAY IN COMPLETION

- 20.1 If the Supplier fails in the due performance of the Contract, to deliver and commission 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 equipment to ½% of total contract value per week of such delay, or part thereof, subject to maximum of 5% of the total contract value.
- 20.2 The liquidated damages for delayed completion shall be recovered from the Supplier's bill or Security Deposit.

21.0 DELIVERY

The delivery of goods at FOR destination in full as per the terms and conditions of the contract/order shall be completed within 3 (three) months from the earliest date of intimation of the order.

22.0 INSPECTION OF THE FACTORY AND TESTS

- 22.1 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.
- 22.2 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.
- 22.3 Successful bidder shall inform JREDA at least 10 days in advance of schedule despatch.

23.0 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 20.0 and 22.0.

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

24.0 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 commissioning the SHLS at site & demonstration of performance to the consignee/ JREDA. 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.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

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

- 25.1 The responsibility of organizing training programme for SHLS will rest on the manufacturers/ contractor. The training programme will be organized in consultation with JREDA/ Consignee. The training programme will focus on operation and maintenance of SHLS. Printed leaflet/ literature should be made available in Hindi by the contractor regarding the operation and maintenance of their SHLS.
- 25.2 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.

26.0 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 10% (Ten 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 23.0 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.

27.0 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

28.0 AGREEMENT / CONTRACT

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

29.0 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.

30.0 ASSIGNMENT

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

31.0 FORCE MAJEURE

- 31.1 Notwithstanding the provisions of Clauses 20.0 and 26.0, the Supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination/ cancellation of

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

order/contract if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

- 31.2 For purposes of this clause, “Force Majeure” means an event beyond the control of the Supplier and not involving the Supplier’s fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the JREDA in its sovereign capacity, wars or revolutions, strikes and riots, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 31.3 If a Force Majeure situation arises, the Supplier shall promptly notify the JREDA in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

SECTION – 2A

Technical Specification for CFL based SHLS

1.0 DEFINITION

A Solar Home Lighting System (SHLS) aims at providing solar electricity for operating lights and/or fan or energizing a DC operated portable TV sets for specified hours of operation per day.

2.0 SCOPE OF WORK

The scope of work for includes:

Manufacture/assemble, shop testing, packing & forwarding, transportation, transit insurance, supply, installation, testing & commissioning of CFL based SHLS system complete in all respects on turnkey basis 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. List of villages will be given before start of dispatch by JREDA.

The solar home lighting shall be supplied as per the following specification.

3.0 TECHNICAL SPECIFICATION

The CFL based solar home lighting shall be Indigenous make should conform to the following model:-

Type of HLS	Components	Specification
Model 2 Two Lights	PV Module	1x37 Wp under STC
	Lamp	2xCFL, 4-Pin 9W, Base up configuration housed in assembly suitable for indoor use, with reflector in its back.
	Battery	1x12V, 40AH, Tubular Plate, low maintenance type Lead Acid Battery,
	Other Components	Control electronics – Module mounting hardware, Battery box, Inter connecting wires/cables, Switches, Operation, Instruction and Maintenance Manual.

All models shall have a socket to provide power for a 12V DC TV set, which is purchased separately.

Small white LED shall be provided as an optional feature, with an independent switch.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

3.1 DUTY CYCLE

Model No	Average Hours of Operation Per Day
Model 2	2 Light, 3-4 Hours

3.2 LAMPS

- (a) The lamps shall be compact fluorescent (CFL) type, 4 – Pin, with rating of 9 W. A suitable pre-heating circuit must be provided.
- (b) The light output from the lamps should be around 600 \pm 5% lumens. No blackening or reduction in the lumen output by more than 10% should be observed after 1000 ON/OFF cycles (two minutes ON followed by four minutes OFF is one cycle).
- (c) The lamps should be housed in an assembly suitable for indoor use, with a reflector on its back. While fixing the assembly, the lamp should be held preferably in a base up configuration.

3.3 BATTERY

- (a) The battery shall be of flooded electrolyte type, positive tubular plate, and maintenance free lead acid battery conforming to relevant BIS standards
- (b) The battery will have a minimum rating of 12V, 40Ah (at C/10) discharge rate
- (c) 75% of the rated capacity of the battery should be between fully charged and load cut off

3.4 ELECTRONICS

- (a) The inverter will be of quasi sine wave/sine wave type with a frequency in the range of 20-35 KHz. Half-wave operation is not acceptable.
- (b) The total electronic efficiency shall be at least 80%
- (c) No blackening or reduction in the lumen output by more than 10% should be observed after 1000 ON/OFF cycles (two minutes ON followed by four minutes OFF is one cycle).
- (d) The idle current consumption should not be more than 10mA
- (e) Electronics shall be operate at 12 V and should have temperature compensation for proper charging of the battery through out the year.
- (f) Necessary length of wires/cables, switches suitable for DC use and fuses shall be provided.

3.5 PV MODULE(S)

- (a) The PV Module(s) shall contain crystalline silicon solar cells.
- (b) The power output of the module(s) under STC should be a minimum of 37W.
- (c) The operating voltage corresponding to power output mentioned above should be 16.4V.
- (d) The open circuit voltage of the PV module under STC hall be at least 21.0V.
- (e) The terminal box on the module should have a provision for opening for replacing the cable, if required.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

- (f) 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
- (g) Models of reputed make shall be offered.
- (h) Monogram of JREDA along with following details translated into Hindi language shall be embossed in Devnagari script on the left hand top corner of each PV module.
- General Programme 2006- 07
 - Not for sale or transfer
 - Statutory action would be taken by JREDA, if it found sold or transferred.
 - Back side and frame of PV module shall be painted with colour as per direction of JREDA.

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, 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 MECHANICAL COMPONENTS:

Metallic frame structure (with corrosion resistance paint) to be fixed on the roof of the house to hold the SPV module(s). The frame structure shall have provision to adjust its angle of inclination to the horizontal between 0 and 45, so that it can be installed at the specified tilt angle.

A vented metallic / plastic / wooden box with acid proof corrosion resistance paint for housing the storage battery indoors shall be provided.

3.8 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. The green LED should glow only when the battery is actually being charged.
- (b) The following details should be marked indelibly on the SHLS.
- Name of the Manufacturer or distinctive logo.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

- ii. Model or Type No.
- iii. Serial No.
- iv. Year of make

(c) Components and parts used in solar home systems should confirm to the latest BIS specification, whichever such specifications are available and applicable.

3.9 Documentation:

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

- (i) About Photovoltaic
- (ii) About solar home system – 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 home system.
- (xi) Name and address of the person or service center to be contacted in case of failure or complaint.

3.10 WARRANTY

The PV module will be warranted for a minimum period of 10 years from the date of supply and the solar home system (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.

- 3.11 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.
- 3.12 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.
- 3.13 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.
- 3.14 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

	<p style="text-align: center;">BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM</p>	
--	--	--

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 performa.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

SECTION – 2B

Technical Specification for LED based SHLS

1.0 DEFINITION

Light Emitting Diode (LED) is a device, which emits light when an electric current passes through it. A LED based solar street lighting systems aims at providing solar electricity for operating LED for dusk to dawn operation per day.

2.0 SCOPE OF WORK

The scope of work for includes:

Manufacture/assemble, shop testing, packing & forwarding, transportation, transit insurance, supply, installation, testing & commissioning of LED based SHLS system complete in all respects on turnkey basis 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. List of villages will be given before start of dispatch by JREDA.

3.0 BROAD PERFORMANCE PARAMETERS

The broad performance specification of a White Light Emitting Diode (W-LED) light source based solar street lighting system are given below:

Light source	White Light Emitting Diode (W-LED)
Light output	White colour, minimum six lux when measured from a height of about 8 ft and illuminated over an area of at least eight ft dia. Higher light output will be preferred.
Mounting of light	Wall or ceiling
PV Module	Six Wp under STC, measured at 16.4 V as Vload module Voc minimum of 21V.
Battery	Sealed maintenance free, 12V-7AH@C/20,MAx DoD 75%.
Electronics	Min 72% total efficiency.
Average duty cycle	4 hours a day
Autonomy	Minimum of 3 days.

Other Details

3.1 DUTY CYCLE

The LED solar street lighting system should be designed to operate from dusk to dawn, under average daily insulation of 5KWh/ sq. m. on a horizontal surface.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

3.2 LIGHT SOURCE

- (i) The light source will be of white LED type. Single lamp or multiple lamps can be used. Wider view angles preferred. The luminous performance of LEDs used should not be less than 30 lumen/watt. Use of LEDs, which emit ultraviolet light, should be avoided.
- (ii) The light output should remain constant with variations in the battery voltages.
- (iii) The lamps should be housed in an assembly suitable for outdoor use. While fixing the assembly the lamp should be held in a base up configuration.
- (iv) The make, model number, country of origin and technical characteristics of LEDs should be furnished to the test centers.

3.3 PV MODULE

- (a) The PV module shall contain crystalline silicon solar cells.
- (b) The operating voltage corresponding to the power output mentioned above should be 16.4 V.
- (c) The open circuit voltage of the PV modules under STC should be at least 21.0 Volts.
- (d) The terminal box on the module should have a provision for opening for replacing the cable, if required.
- (e) A strip containing the following details
 - (i) Name of the Manufacturer or distinctive logo
 - (ii) Model or type number.
 - (iii) Serial no.
 - (iv) Year of make.
- (f) Models of reputed make shall be offered.
- (g) Monogram of JREDA along with following details translated into Hindi language shall be embossed in Devnagari script on the left hand top corner of each PV module.
 - General Programme 2006- 07
 - Not for sale or transfer
 - Statutory action would be taken by JREDA, if it found sold or transferred.
 - Back side and frame of PV module shall be painted with colour as per direction of JREDA.

3.4 BATTERY

- (i) Flooded lead acid maintenance free battery. Battery should confirm to latest BIS standards or International standards. A copy of the test certificate should be provided to the test center.
- (ii) 75% of the rated capacity of the battery should be between fully charged & load cut off conditions.

3.5 ELECTRONICS

- (i) The total electronic efficiency should be at least 72%.
- (ii) Electronics should operate at 12V and should have temperature compensation for proper charging of the battery through out the year.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

- (iii) The light output should remain constant with variations in the battery voltages.
- (iv) Necessary length of wires /cables, switches suitable for DC use and fuses should be provided.

3.6 ELECTRONIC PROTECTION

- (i) Adequate protection is to be incorporated under no load conditions, e.g. when the lamps are removed and the system is switched ON.
- (ii) The system should have protection against battery overcharged and deep discharge conditions. The numerical values of the cut off limits must be specified, while submitting the samples for the testing purposes.
- (iii) Fuses should be provided to protect against short circuit conditions.
- (iv) A blocking diode should be provided as part of the electronics, to prevent reverse flow of current through the PV module(s), in case such a diode is not provided with the PV module(s).
- (v) Full protection against open circuit, accidental short circuit and reverse polarity should be provided.

3.7 MECHANICAL COMPONENTS

- (i) Metallic frame structure (with corrosion resistance paint) to be fixed on the top of the pole hold the SPV module. The frame structure should have provision to adjust its angle of inclination to the horizontal between 0 and 45, so that it can be installed at the specified tilt angle.
- (ii) It should be possible to mount the light source on metallic arm attached to the pole. The metallic arm for holding the light assembly will be extended at least 4 ft from the pole and set at a suitable tilt angle to provide uniform illumination over the specified area.
- (iii) A vented metallic / plastic / wooden box with acid proof corrosion resistance paint for housing the storage battery indoors should be provided.

3.8 OTHER FEATURES

- (i) The system should be provided with 2 LED indicators: a green light to indicate charging in progress and a red LED to indicate deep discharge condition of the battery. The green LEDs should glow only when the battery is actually being charged.
- (ii) There will be a Name plate on the system which will give:
 - (a) Name of the Manufacturer or distinctive logo
 - (b) Model or type number.
 - (c) Serial no.
 - (d) Year of make.

3.9 DOCUMENTATION

An operation, instruction and Maintenance Manual, in English and the local languages should be provided with the solar home system.

The following minimum details must be provided in the manual:

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

- (a) About Photovoltaic
- (b) About LED solar home system - its components and expected performances.
- (c) About PV module: In case of imported modules it is mandatory to provide a copy of the international product qualification certificate to the test centre.
- (d) About LED lights: The make, modal number, country of origin and technical characteristics of LEDs should be stated in the product data sheet and furnished to the test centre.
- (e) About battery.
- (f) Clear instructions about mounting of PV module.
- (g) About electronics.
- (h) About charging and significance of indicators.
- (i) Do's and Don'ts
- (j) Clear instructions on regular maintenance and trouble shooting of solar home system.
- (k) Name and address of the person or service center to be contacted in case of failure or complaint.

3.10 QUALITY AND WARRANTY

- (i) Components and parts used in LED solar home system should conform to the latest BIS/ international specifications, wherever such specifications are available and applicable. A copy of the test report / certificate stating conformity of BIS/ international standards 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 home system including the battery, will be warranted for a period of at least 2 years from the date of supply.
- 3.11** 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.
- 3.12** 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.
- 3.13** 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.
- 3.14** 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

	<p style="text-align: center;">BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM</p>	
--	--	--

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 performa.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

**In Sealed
Cover
Part – II**

Jharkhand Renewable Energy Development Agency

NIB No. JREDA/SPV/2/SHLS/2006-07

Bid Proforma - SHLS

Technical & Commercial Part: Part – I / Price Part: Part – II

Proforma – I

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, supply, installation, testing and commissioning of Solar Photovoltaic Systems –SHLS.**

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 envelops duly marked and sealed. The offer is submitted in triplicate.

We also further declare:

- 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.
- That we have never been debarred from executing similar type of work by any Central / State / Public Sector Undertakings / Departments.
- 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.
- That our offer shall remain valid for placement of purchase orders up to 120 days from the due date of submission of offer.

Yours faithfully,

(Authorized Signatory)

Name

Designation

Company Seal

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

Proforma – II

In Sealed Cover Part – II
--

Jharkhand Renewable Energy Development Agency
NIB No. JREDA/SPV/2/SHLS/2006-07
Bid Proforma – SHLS
Technical & Commercial Part: Part - I

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 SHLS

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, supply, installation, testing and commissioning of Solar Photovoltaic Systems – SHLS

- 1) We are indigenous manufacturers 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 or Energy Conservation & Development Division, Bangalore) tested on or after 1st April 2005 for the Model –2 of SHLS 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

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

Proforma – III

**In Sealed
Cover
Part – II**

Jharkhand Renewable Energy Development Agency
NIB No JREDA/SPV/2/SHLS/2006-07
Bid Proforma – SHLS
Technical & Commercial Part: Part - I

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 – SHLS

Sir,

Having examined and understood fully the contents of the Bid document of NIB No., we hereby confirm that the SHLS/ products 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

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

Proforma – IV

Jharkhand Renewable Energy Development Agency

NIB No JREDA/SPV/2/SHLS/2006-07

Bid Proforma: SHLS

Technical & Commercial Part: Part – I / Price 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 SHLS**

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 HOME LIGHTING SYSTEM	
--	---	--

Proforma – V

In Sealed Cover Part – II
--

Jharkhand Renewable Energy Development Agency

NIB No JREDA/SPV/2/SHLS/2006-07

Bid Proforma – SHLS

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 authorised 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
Two 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 four years
15. Name of material and model type offered :
16. Name of the work :



BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM



17. Name of manufacturer of SHLS with full address :
(i) SPV SHLS
(ii) PV Module
(iii) Control Electronics / Charge Controller
(iv) Battery
18. Quantity offered: CFL based SHLS : Nos.
LED based SHLS : Nos.
19. Acceptance of terms of payment :
20. Acceptance of penalty clause :
21. Validity of the offer is valid up to : 120 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. (i) Whether attested photocopy of BIS Certificate :
and/or Test Certificate issued by MNRE
Approved Institution/ Centres attached.
(Certificate shall be as required by MNRE)
(ii) Whether proof of enlistment with MNRE :
attached.
(iii) Give Registration no. & other details on above, :
if any
27. Performance guarantee :
(Give details and period of guarantee)
28. Warranty details must be mentioned for each type of :
material and sub-system
(a) SHLS & Control Electronic

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

(b) PV Module

(c) Battery

29. Whether manufacturer is permanently registered as :
an SSI UNIT of Jharkhand and/or with NSIC UNIT
for SPV system (attach Photostat of certified copy)
30. Place where materials will be manufactured and :
place where materials will be available for
inspection.
31. Whether the bidder has submitted details with regard :
to supplies made to important organisations.
32. Any deviations made from the technical : No deviation
specifications and general terms & conditions of bid
(Give details, if any)
33. Whether up-to-date income tax and sales tax :
clearance certificate submitted (Give details)
34. Details of any existing service network in Jharkhand
(Name & address of service centre, year of opening)
35. Other details and remarks, if any :

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 HOME LIGHTING SYSTEM	
--	---	--

Proforma – VI

JHARKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY

NIB No. JREDA/SPV/2/SHLS/2006-07

Bid Proforma – SHLS

Part –I: Technical & Commercial Part

Information in Support of Meeting Eligibility Condition

In Sealed
Cover
Part – II

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

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

- 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 HOME LIGHTING SYSTEM	
--	---	--

Proforma – VII

JHARKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY

NIB No **JREDA/SPV/2/SHLS/2006-07**

Bid Proforma – SHLS
Format for Price

In Sealed Cover Part – III

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 SHLS as per scope			
B	Supply of LED Based SHLS as per scope			

Note: 1. Price quoted for SHLS 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 installation, testing, commissioning, performance testing and training. **Percentage/amount of various factor considered in the unit price shall be mentioned here separately.**

2. Certified that rates quoted for SHLS 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).

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

Proforma – VIII

Jharkhand Renewable Energy Development Agency

NIB No.: JREDA/SPV/2/SHLS/2006-07

Bid Proforma – SHLS

Technical & Commercial Part: Part – I

Format for Warranty Card to be supplied with each SHLS

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

WARRANTY CARD

SHLS

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)

	<p style="text-align: center;">BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM</p>	
--	--	--

Filling Instructions:

- (1) The SHLS components will be generally warranted as per clause 24 of General Terms & Conditions covering the MNRE specified warranty. The manufacturer can also provide additional information about the system and conditions of warranty as necessary. The warranty card to be supplied with the system must contain the details of the system supplied as per format given above.
- (2) During the warranty period JREDA/ users reserve the right to cross check the performance of the systems for their minimum performance levels specified in the MNRE specifications.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

Proforma – IX

Jharkhand Renewable Energy Development Agency

NIB No.: JREDA/SPV/2/SHLS/2006-07

Bid Proforma – SHLS

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.

(SEAL AND SIGNATURE OF BIDDER)

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

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.

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

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 HOME LIGHTING SYSTEM	
--	---	--

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

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

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.

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

	<p style="text-align: center;">BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM</p>	
--	--	--

..... granted to his and/or the resolution datedpassed by our Company of Directors in accordance with our constitution.

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

For (indicate the name of Bank).

Signature-----

Name -----

In presence of

1.-----

Designation -----

2.-----

Authorisation No -----

Validity of BGs shall be 90 days beyond date of receipt of last material at site

Date & Place -----

Bankers' Seal

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

Proforma-X C

PROFORMA FOR BANK GUARANTEE TOWARDS RELEASE OF LAST 5% PAYMENT

(To be executed on non-judicial stamp 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 Contract(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

	BID SPECIFICATION FOR SOLAR HOME LIGHTING SYSTEM	
--	---	--

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).

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