

# **Bid Specifications for Remote Village Electrification Programme**

**For the Financial Year 2010-11**

**Sponsored By  
Ministry of New and Renewable Energy  
Government of India**

MNRE Sanction No.

1/12/1/2007-08/RVE, Dt. 21/11/2008 (08 Villages)  
1/12/2/2008-09/RVE, Dt. 22/09/2009 (18 Villages)  
1/12/1/2009-10/RVE, Dt. 24/12/2009 (18 Villages)



**Jharkhand Renewable Energy Development Agency (JREDA)**

328/B, Road No. 4, Ashoknagar, Ranchi. Ph. : 0651-2246970,2247049,  
2240692; Fax : 0651-2240665, E-mail : [info@jreda.com](mailto:info@jreda.com);  
Website : [www.jreda.com](http://www.jreda.com)

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## 1. Bid Details

SI	Description	Details																				
1.	Notice Inviting Bid (NIB) No.	<b>JREDA/RVEP/2010-11/02, Date 04.02.2011</b>																				
2.	Scope of work	<p>Manufacturing, supply, installation, testing &amp; commissioning including 5 years Comprehensive Maintenance Contract (CMC) of Indigenous Solar Home Lighting Systems (SHLSs, Model II) and CFL based Solar Street Lighting Systems (SSLs) under Remote Village Electrification Program on <b>Turnkey Basis</b> for Jharkhand Renewable Energy Development Agency (JREDA) <b>during 2010-11.</b></p> <p>The quantities required are as follows :</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">S.N.</th> <th style="text-align: center;">Particulars</th> <th style="text-align: center;">SHLS</th> <th style="text-align: center;">SSLS</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.</td> <td>8 Villages :</td> <td style="text-align: center;">423</td> <td style="text-align: center;">53</td> </tr> <tr> <td style="text-align: center;">2.</td> <td>18 Villages :</td> <td style="text-align: center;">3779</td> <td style="text-align: center;">439</td> </tr> <tr> <td style="text-align: center;">3.</td> <td>18 Villages :</td> <td style="text-align: center;">1700</td> <td style="text-align: center;">174</td> </tr> <tr> <td style="text-align: center;"><b>Total</b></td> <td><b>44 Villages :</b></td> <td style="text-align: center;"><b>4902</b></td> <td style="text-align: center;"><b>666</b></td> </tr> </tbody> </table> <p>The quantity mentioned above is tentative &amp; is subject to increase or decrease depending on the actual requirement at the time of placing order and resources available.</p>	S.N.	Particulars	SHLS	SSLS	1.	8 Villages :	423	53	2.	18 Villages :	3779	439	3.	18 Villages :	1700	174	<b>Total</b>	<b>44 Villages :</b>	<b>4902</b>	<b>666</b>
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1.	8 Villages :	423	53																			
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3.	18 Villages :	1700	174																			
<b>Total</b>	<b>44 Villages :</b>	<b>4902</b>	<b>666</b>																			
3.	Place of issue & submission of bid documents and address for communication	<p>Jharkhand Renewable Energy Development Agency (JREDA) Plot No. 328/B, Road No. 4, Ashok Nagar, Ranchi, PIN 834 002, Jharkhand.</p> <p>Phone No. : 0651-2246970; Fax No. : 0651-2240665</p> <p>Website : <a href="http://www.jreda.com">www.jreda.com</a> , E-mail : <a href="mailto:info@jreda.com">info@jreda.com</a></p>																				
4.	Period of sale of bid document	<p>Date : <b>From 04.02.2011</b></p> <p>Time : <b>From 10:30 A.M. to 5:00 P.M. on all working days</b></p>																				
5.	Last date & time of submission of bids	<p>Date : <b>14.02.2011</b></p> <p>Time : <b>till 12:00 Noon</b></p>																				
6.	Date & time of opening of Part – I (Technical Bids)	<p>Date : <b>14.02.2011</b></p> <p>Time : <b>at 12.30 P.M.</b></p>																				
7.	Date & time of opening of Part – II (Financial Bids)	<b>Technically qualified bidders will be communicated the date &amp; time of opening of Part-II (Financial Bids) by JREDA</b>																				
8.	Cost of bid document (Non-refundable)	<ul style="list-style-type: none"> <li>➤ For General Category : <b>Rupees Ten Thousand</b></li> <li>➤ For SSI units registered in Jharkhand State : <b>Rupees Five Thousand</b></li> <li>➤ For SSI units registered with Govt. of Jharkhand &amp; NSIC : <b>Nil</b></li> </ul>																				
9.	Earnest Money (Refundable)	<ul style="list-style-type: none"> <li>➤ For General Category : <b>Rs.14,00,000/- (Rupee Fourteen Lakhs)</b></li> <li>➤ For SSI units registered in Jharkhand State : <b>Rs 7,00,000/- (Rupees Seven Lakhs)</b></li> <li>➤ For SSI units registered with Govt. of Jharkhand &amp; NSIC : <b>Nil</b></li> </ul>																				
10.	Minimum lot size	The bidder should quote for the entire requirement indicated above.																				
11.	Time of completion	<b>Within three (3) months from the date of order.</b>																				
12.	Validity of offer	<b>The offer shall remain valid up to 180 days</b> from the due date of submission of offer.																				
13.	Validity of earnest money	The earnest money shall be submitted by the bidder in the form of bank guarantee from any Govt./Nationalized bank. This <b>bank guarantee shall remain valid for 12 months</b> from the last date of submission of bids.																				

## 2. Notice Inviting Bid

NIB No: JREDA/RVEP/2010-11/02

Date: 04.02.2011

To,

M/s .....

.....

.....

.....

**Sub** : Manufacturing, Supply, Installation, Testing & Commissioning, including 5 Years Comprehensive Maintenance Contract (CMC) of Indigenous Solar Home Lighting Systems (SHLSs, Model II) & CFL based Solar Street Lighting Systems (SSLs) under Remote Village Electrification Program on **Turnkey Basis** for Jharkhand Renewable Energy Development Agency during Year 2010-11.

Dear Sir/Madam,

Jharkhand Renewable Energy Development Agency (JREDA), Ranchi has pleasure in inviting offers from eligible Indian bidders for the above work with your best bidding price offer as per our specifications and terms & conditions mentioned in the bid document. Salient features of the bid document are given below:

### 1.0 Bid Document

1.1 **This bid document comprises of total 24 Chapters. In addition, any other documents/ instructions/amendments/revisions/terms & conditions issued by JREDA to the bidders till the due date of opening of the bids shall also be deemed to be integral part of the bid document. Failure to furnish all the information as per the bid document in every respect will be at the bidder's risk.**

### 2.0 Cost of Bid Document

2.1 Bid document can be purchased from JREDA office by producing a Demand Draft drawn in favour of "Director, JREDA" on any Indian Govt./Nationalized Bank, payable at "Ranchi" of requisite value, as applicable, during the time and period mentioned in Chapter-1 (Bid Details).

2.2 Bidders can also download the bid document from JREDA website ([www.jreda.com](http://www.jreda.com)) and submit the cost of the bid document of requisite value, as applicable along with Part – I (Technical Bid) in separate envelope.

2.3 Bid applications without the cost of bid document will be rejected.

### **3.0 Earnest Money**

- 3.1 Bidder shall submit in Part – I (Technical Bid) the earnest money in the form of demand draft/bank guarantee of requisite value as mentioned in chapter 1 (Bid Details). The format for the bank guarantee is given in Chapter-13 (Proforma - 8). The bank guarantee shall be made in favour of “Director, JREDA” payable at Ranchi from any Indian Govt./Nationalized bank.
- 3.2 This bank guarantee shall remain valid for 12 months from the last date of submission of bids.
- 3.3 Bidders seeking concession/exemption from submission of earnest money, will have to submit an attested photocopy of relevant SSI unit certificate issued from the Govt. of Jharkhand and from NSIC (if applicable), in Part – I of the bid application. Bidders failing to submit earnest money or SSI/NSIC registered Units in Jharkhand, not submitting relevant SSI/NSIC registration certificate from the Govt. of Jharkhand and from NSIC (as the case may be), will be rejected.
- 3.4 The attested photocopy of registration certificate issued by Govt. of Jharkhand or NSIC should clearly indicate the validity period. The photocopy of registration certificate should be attested by Gazetted Officer or Notary Public.
- 3.5 The request for adjustment of earlier dues in place of earnest money will not be entertained.
- 3.6 The earnest money shall be returned to all unsuccessful bidders, **within thirty days** from the date of placement of LOI/LOA to the successful bidder(s).
- 3.7 The earnest money shall be forfeited if –
  - a. Any bidder withdraws his bid from his offer during the validity period.
  - b. The successful bidder fails to furnish his Acceptance of the Order within fifteen days of placement of LOI/LOA by JREDA.
  - c. The bidder fails to successfully complete the work within the stipulated time frame. Delay in completion due to extreme and unavoidable situations will have to get approved by Director, JREDA. This approval will also have a cut-off date by which the entire work will have to be completed.

### **4.0 Submission of Bids**

- 4.1 Bidders are advised to submit their bids strictly based on the specifications, terms and conditions contained in the bid document and subsequent revisions/amendments, if any.
- 4.2 The bid shall be prepared and submitted by typing or printing in English with indelible black ink on white paper in consecutively numbered pages duly signed by the authorized signatory with company seal affixed on each page. Any part of the bid, which is not specifically signed by the authorized signatory and not affixed with company seal, shall not be considered for the purpose of evaluation.
- 4.3 Original copy of bid document, amendments/revisions to bid document, including minutes of meeting(s), issued by JREDA, if any, shall be signed and submitted along with the bid.

4.4 Proforma-1 to 7 must be on the bidder's official letterhead. Any change in wording of the Proforma will lead to rejection of the bid application.

4.5 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.

4.6 **Original copy of Bid Document should be submitted in Hard Bond or Spiral Binding otherwise bid will be rejected.**

#### **5.0 Mode of Submission of Bids**

5.1 The Part – I (Technical Bid) and the Part – II (Financial Bid) should be sealed in separate envelopes and both these envelopes should be sealed in a third envelope. The Part – II (Financial Bid) of only such bidders would be opened who qualify in the Part – I (Technical bid).

5.2 The Part – I (Technical Bid) should be sealed in an envelope super scribed (i) **NIB No : JREDA/RVEP/2010-11/02**, (ii) "Part – I (Technical Bid)", (iii) Name and address of the contact person of the bidding firm, and (iv) should be addressed to Director, JREDA. This envelope should contain the following :

- (i) Cost of bid document (for the bidders who have downloaded the bid document from JREDA web site) or copy of demand draft/money receipt if purchased from JREDA office.
- (ii) Original earnest money in the form of bank guarantee of requisite value (in Proforma 8).
- (iii) Copy of registration certificate of the firm.
- (iv) For availing concession/exemption in submission of cost of bid document and earnest money by SSI Unit registered in Jharkhand, bidder should submit attested copy of relevant SSI registration certificate from Govt. of Jharkhand and from NSIC.
- (v) Properly filled, signed & stamped Proforma - 1, Proforma – 2, Proforma – 3, Proforma – 4 and Proforma – 5.
- (vi) Letter of acceptance to furnish the information in Proforma – 6, Proforma – 10, Proforma – 11, Proforma – 12 and Proforma – 13, Proforma – 14, Proforma–15, Proforma – 16(A), Proforma – 16(B), Proforma – 17 & Proforma – 18 if the bidder is declared successful bidder and is given LOI/LOA by JREDA.

5.3 Part – I (Technical Bid) should not contain price of any item. Such cases, even if found anywhere, shall not be given any cognizance.

5.4 Part – I (Technical Bid) should be submitted in original plus 1 copy (1+1)

5.5 The Part – II (Financial Bid) should be sealed in an envelope super scribed (i) **"NIB No: JREDA/RVEP/2010-11/02"**, (ii) "Part – II (Financial Bid)", (iii) Name and address of the contact person of the bidding firm, and (iv) Should be addressed to Director, JREDA. This envelope should contain the following :

- (i) It should contain only Performa - 7 duly filled-up in both figures and words and signed with stamp by authorized signatory of the bidder.

- (ii) In case of any contradictions between the prices mentioned in figures and words, the prices mentioned in words shall be considered final. Also, in case of any arithmetical error in regard to the total amount and individual rates, the individual rates shall be taken as final and the total amount shall be adjusted accordingly.

5.6 Part – II (Financial Bid) should be submitted in original only (1+0).

5.7 Both, Part – I and Part – II of the bid document should be sealed in a third envelope. The third envelope should be sealed and super scribed (i) **NIB No : JREDA/RVEP/2010-11/02**", (ii) "Offer for manufacturing, supply, installation, testing & commissioning, including 5 years Comprehensive Maintenance Contract (CMC) of Indigenous Solar Home Lighting Systems (SHLSs, Model II) & CFL based Solar Street Lighting Systems (SSLs) on **Turnkey Basis** under Remote Village Electrification Program for Jharkhand Renewable Energy Development Agency (JREDA) during 2010-11", (iii) Name and address of the contact person of the bidding firm, and (iv) Should be addressed to Director, JREDA, Ranchi.

## **6.0 Scope of Work**

6.1 The scope of work shall be as indicated in the Bid Details.

6.2 JREDA reserve absolute rights to distribute the total number of SHLSs(Model II) and CFL based SSLs required to be supplied under the NIB amongst any number of bidders, in the way it deems fit.

6.3 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, the bidder/intending bidder shall have no claim arising out of such action.

6.4 The Bidder shall carefully check the specifications and shall satisfy himself regarding the technical requirements and completeness of the equipment/system.

6.5 Bidder may submit their offer for full quantities.

## **7.0 Price**

7.1 The Bidder shall quote price as per Proforma - 7. Price quoted shall be firm & binding and shall not be subject to any variation whatsoever, on any account.

7.2 The price should be inclusive of all taxes, duties, levies, etc. as on date.

## **8.0 Terms of Payment**

8.1 Subject to any deductions, which JREDA may be authorized to make under the terms of the order, the contract price shall be payable as per general clauses of contract enclosed.

## **9.0 Authority of Person Signing the Documents**

9.1 Authorization letter as per Proforma – 2 with the seal of the company for the person signing the bid document or attending the bid opening meeting should be furnished.

9.2 A person signing the bid document or any document forming part of the bid document shall be deemed to warrant that he has authority to bind such offer/ document and if on enquiry it appears that the person signing had no authority to do so, JREDA may, without prejudice to other civil and criminal remedies, cancel the bid/contract and hold the signatory liable for all costs and damages.

## **10.0 No Claim or Compensation for Submission of Tender**

10.1 The bidder whose bid is not accepted shall not be entitled to claim any costs, charges, expenses of and incidental incurred by him through or in connection with his submission of bid, even though JREDA may decide to withdraw the notice inviting bid.

## **11.0 Eligibility and Qualification Criteria**

11.1 The bidder shall meet the following requirements:

### **For General Bidders**

- (i) The bidder should be a reputed Manufacturer of SHLSs & SSLs who manufactures at least one of the major sub systems (i.e., PV Module or Storage Battery or Electronics) used in the SHLSs & SSLs.
- (ii) The bidder should have adequate facilities for testing of SHLS & SSLs.
- (iii) The bidder shall furnish registration certificate clearly indicating that they are manufacturers of SHLSs & SSLs including PV Module/Storage Battery/ Electronics as applicable.
- (iv) The bidder shall submit list of testing facilities available along with photographs of the testing facilities.
- (v) The bidder must be in possession of valid test report for the SHLS (Model II) & CFL based SSLs from any of the following test centers :
  - Solar Energy Centre Gwalpahari, Gurgaon, Haryana (SEC)
  - Electronics Regional Test Laboratory (East) Bidhan Nagar, Kolkata (ERTL)
  - Central Power Research Institute, Bangalore (CPRI)
- (vi) The test certificates should confirm that SHLS (Model II) & SSLs (CFL based) are as per MNRE specifications 2009-10, which is already available on MNRE website. Test Certificates issued on or after publication of latest MNRE specifications 2009-10 would be considered valid. The bidders shall enclose IEC Certificate for the Module to be supplied.
- (vii) The bidder should have supplied solar photovoltaic systems of the value of at least **Rupees Three Crores** to any State Nodal Agency during any one of the past three financial years (i.e. 2007-08, 2008-09 and 2009-10) and supplies against such work order should have completed satisfactorily as certified by the State Nodal Agency/Govt. Organisation concerned.
- (viii) The bidder shall submit self attested photocopies of purchase orders/contracts from the State Nodal Agencies / Govt. Organisation concerned. Non-submission of above document may result in rejection of bid.
- (ix) The bidder shall also submit attested certificate of satisfactory completion of such work by a State Nodal Agencies/ Govt. Organisation for which the bidder has done work and



mentioned in this bid document. Non-submission of above document may result in rejection of bid.

- (x) The bidder should have supplied, installed and commissioned minimum 2000 nos. SHLSs and 200 nos. SSLs and which should have worked satisfactorily as certified by the concerned Nodal Agency/ Govt. Organisation for a minimum period of 1 year as on the date of submission of bid.
- (xi) The bidder should have registered office/dealer in Jharkhand as per JVAT Act. - 2005 and should have local service set-up for smooth running of CMC.

**For SSI Units Registered with Govt. of Jharkhand/SSI Units Registered with Govt. of Jharkhand and NSIC**

- (i) The bidder should be a reputed manufacturer of SHLS & SSLs and who manufactures at least one of the major sub systems (namely, PV Modules or Storage Battery or Electronics) used in the SHLS & SSLs.
- (ii) The bidder should have adequate facilities for testing of the SHLS & SSLs.
- (iii) The bidder shall furnish registration certificate clearly indicating that they are manufacturers of SHLS & SSLs including PV Module/Storage Battery/ Electronics as applicable.
- (iv) Bidder shall also submit list of testing facilities with it along with photographs of testing facilities.
- (v) The bidder must be in possession of valid test report for the SHLS (Model II) & SSLs (CFL based) from any of the following test centers :
  - Solar Energy Centre Gwalpahari, Gurgaon, Haryana (SEC)
  - Electronics Regional Test Laboratory (East) Bidhan Nagar, Kolkata (ERTL)
  - Central Power Research Institute, Bangalore (CPRI)
- (vi) The test certificates should confirm that SHLS (Model II) & SSLs (CFL based) are as per MNRE specifications 2009-10, which is available on MNRE website. Test Certificates issued on or after publication of latest MNRE specification 2009-10 would be considered valid. The bidders shall enclose IEC Certificate for the Module to be supplied.
- (vii) The bidder should have supplied solar photovoltaic systems of the value of at least Rupees **One and Half Crores** to any State Nodal Agency during any one of the past three financial years (i.e. 2007-08, 2008-09 and 2009-10) and supplies against such work order should have completed satisfactorily as certified by the State Nodal Agency concerned.
- (viii) The bidder shall submit self attested photocopies of purchase orders/contracts received from the State Nodal Agencies/Govt. Organisation. Non-submission of above document may result in rejection of bid.

- (ix) The bidder should have supplied, installed and commissioned minimum 1000 nos. SHLSs and 100 nos. SSLs and which should have worked satisfactorily as certified by the concerned Nodal Agency /Govt. Organisation for a minimum period of 1 year as on the date of submission of bid.
- (x) The bidder shall submit attested photocopy of certificate of satisfactory completion of such work order from a Gazetted Officer/State Nodal Agencies for which the bidder has done work and mentioned in this bid document. Non-submission of above document may result in rejection of bid.

## **12.0 Validity of Offer**

- 12.1 Unless otherwise specified, the bidder shall keep his tender valid initially for a period of 180 days from the due date of submission of the offer.

## **13.0 Other Terms & Conditions**

- 13.1 For availing any concession in the cost of bid document or earnest money, the SSI Unit bidder shall have to furnish attested copies of valid SSI registration certificate issued by the Govt. of Jharkhand and/or from NSIC clearly indicating validity & monetary limit, as applicable.
- 13.2 For availing any concession in the cost of bid document or earnest money, the SSI Unit bidder shall have to furnish a certificate issued from Department of Industries, Govt. of Jharkhand/ NSIC as applicable or the bidder shall submit an affidavit by Notary Public that the unit is functional.
- 13.3 Insertion, post-script, addition and alteration shall not be recognized unless confirmed by bidder's signature and stamp.
- 13.4 Incomplete tender or tenders not submitted as per requirement as indicated in the NIB are likely to be rejected.
- 13.5 Bidders shall submit their offer strictly as per terms and conditions of the tender document without any deviation.
- 13.6 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.
- 13.7 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.
- 13.8 All bids will be received in duly sealed cover within the due date and time. Bids received after the due date and time is liable for outright rejection.
- 13.9 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.
- 13.10 JREDA reserves the right to reject part or whole of the bid/order without assigning any reason thereof.
- 13.11 No postal transaction shall be entertained for obtaining bid documents.

- 13.12 Issuance of bid documents shall not construe that the bidders would be automatically considered qualified.
- 13.13 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.
- 13.14 Bid documents are not transferable.

### 3. General Terms & Conditions

#### 1.0 Scope of Work

1.1 The Scope of work for SHLSs (Model II) & SSLs (CFL based) on **Turnkey Basis** includes — manufacturing, shop testing, packing & forwarding, transportation, transit insurance, supply, installation, testing & commissioning including 5 years Comprehensive Maintenance Contract (CMC) of SHLSs & SSLs complete in all respects along with one set of operational 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 the direction of JREDA. The list of villages will be given to the successful bidder by JREDA before the start of dispatch.

1.2 The manufacturer will have to put up a metal sign board fixed in each village with the legs of the sign board made with GI angles shall be fixed and grouted in the PCC foundation columns made with cement concrete with the following information :

1.3

नवीन और नविकरणीय ऊर्जा मंत्रालय, भारत सरकार तथा झारखण्ड सरकार द्वारा प्रायोजित झारखण्ड रिन्युएबल ईनर्जी डेवलपमेंट एजेन्सी (जेडा) के सुदूर ग्राम विद्युतीकरण कार्यक्रम के तहत प्रघत (वित्तीय वर्ष 2010-11)	
ग्राम का नाम : .....	प्रखंड : ..... जिला : .....
कुल सोलर घरेलू लाईट की संख्या : .....	कुल सोलर स्ट्रीट लाईट की संख्या : .....
निर्माता का नाम : .....	
रख-रखाव करनेवाली संस्था/आपूर्तिकर्ता का नाम, पता एवं फोन न० : .....	
.....	

#### 2.0 Opening and Evaluation of Bids

2.1 The Part – I (Technical Bids) and Part – II (Financial Bids) will be opened on the date and time mentioned in the Bid Details in the office of the Director, JREDA at Plot No. 328/B, Road No. 4, Ashok Nagar, Ranchi in the presence of bidders or their authorized representatives who choose to attend the meeting. The representative should produce authorization letter to attend the bid opening meeting in the Proforma - 2. The representative who does not produce such authorization will not be allowed to attend the bid opening meeting.

2.2 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 Part – II (Financial Bid) opening. Such request for clarification and the response shall be in writing.

2.3 JREDA shall examine whether the bid is complete in all respects and confirm to the stipulated requirement of the technical specifications and tests reports. The bid having material deviation shall be rejected as being non-responsive.

2.4 The Part –II(Financial Bid) of only those bidders, whose Part – I (Technical Bid) are found acceptable after evaluation, will be opened and evaluated. In case of deviation in the date and time of opening of the Part – II (Financial Bid) from what is given in the Bid Detail, the

date & time for opening of the Part –II (Financial Bid) will be uploaded on JREDA website. Bidders are requested to visit the website (www.jreda.com) regularly and keep themselves informed.

2.5 The Part –II (Financial Bid) will be opened in the office of Director, JREDA at Plot No. 328/B, Road No. 4, Ashok Nagar, Ranchi-834002, in the presence of eligible bidders or their authorized representative. The authorized representative will be allowed to attend the price bid opening on production of authorization letter.

2.6 The prices shall be evaluated jointly for SHLSs (Model II) & SSLs (CFL based) and CMC for the entire quantity quoted by the bidders for the complete scope defined in this document. The Landed Price (P) (inclusive all taxes, duties, freight, insurance, etc) for SHLSs & SSLs and CMC will be evaluated as mentioned below :

$$P = (10 \times \text{Unit price of SHLS including 5 yrs CMC as quoted by bidder}) + (1 \times \text{Unit price of SSLs including 5 yrs CMC as quoted by bidder})$$

2.7 The bidders shall be ranked L1, L2, L3 ...as per the Landed Price (P). The Purchase Committee of JREDA will have the discretion to divide the quantity to be supplied among any number of technically qualified bidders at L1 rate. The work order will be issued subject to the acceptance of the bidders to supply at L1 rate.

2.8 The rate quoted by the manufacturer located outside the state of Jharkhand will have to include VAT and other taxes as applicable in Jharkhand.

2.9 JREDA, if required, may at its discretion extend the scheduled date of opening of Part – II (Financial Bid).

### **3.0 Award of Contract/Work Order**

3.1 The contract/work order shall be awarded to the bidder whose Part – I (Technical Bid) was acceptable and who is selected by the Purchase Committee of JREDA to undertake the work at L1 rate.

### **4.0 Quantity of Supply**

4.1 The quantity as given in the Bid Details of Notice Inviting Bid is tentative and is subject to increase or decrease depending upon the actual requirement at the time of placing order and resources available.

### **5.0 Effective Date of Contract**

5.1 The effective date of commencement of execution of the order by the selected contractor shall be the date of issue of the LOI/LOA/Purchase Order whichever is earlier.

### **6.0 Contract Price**

6.1 The total contract price & rates of SHLSs(Model II) & SSLs (CFL based) and 5 years CMC in full and complete set including SPV module, control electronics, battery, mechanical components, etc. should be quoted in Proforma - 7. The price shall be for the total scope as defined in this document.

- 6.2 The contract price includes supply of items in full & good condition at FOR Site/Stores site (door delivery basis) to various consignees across the 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, central sales tax, Jharkhand VAT on the finished items, turnover tax (TOT)/octroi, professional tax, entry tax, etc. as applicable for the supplies.
- 6.3 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 Manufacturer shall indemnify and keep indemnified JREDA, which indemnity, the Manufacturer 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. All applicable charges for taking statutory clearances, wherever necessary, are included in the contract price.
- 6.4 During the period of the contract, JREDA may order addition/deletion in quantities which the Manufacturer shall comply. The adjustment in Contract Price shall be made at the same unit rate as per Price Schedule (Proforma – 7).

## **7.0 Terms of Payment**

7.1 Subject to any deductions which JREDA may be authorised to make under the terms of the order, the Contract Price shall be payable as given below:

(a) 80% of the Contract Price for each village shall be paid against delivery of goods in full and in good condition, installation, testing & commissioning and random verification by JREDA representative after submission of following documents in bound form for each village separately:

1. Supplier's technician name and contact details should be obtained before making of payment.
2. Letter from the Village Energy Committee that all the beneficiaries have been given the guarantee card as specified in Proforma – 6.
3. Certificate from Village Energy Committee as proof of compliance as specified in Proforma – 14.
4. Declaration from each beneficiary of the village as specified in Proforma – 10.
5. Utilization Certificate from each beneficiary of the village as specified in Proforma – 11.
6. Village-wise and Beneficiary-wise detail of the SHLSs and SSLs installed (including module, battery and charge controller number, make & year of manufacture and GPS coordinates) as specified in Proforma – 12.
7. Village-wise detail of the trainings organized as specified in Proforma – 13.
8. Certificate of successful installation of solar lights mentioning the village name and quantity of systems installed from VEC & BDO/CO as specified in Proforma – 15
9. Commercial invoice of the supply made in triplicate.
10. Copy of receipted delivery challan/ transportation challan/lorry receipt.

(b) 10% of the Contract Price for each village shall be paid on completion of third party verification at site. After JREDA gets the third party verification done, the Manufacturer will be asked to submit the following documents :

1. Copy of the commercial invoice of the supply made in triplicate

(c) 2% of the Contract Price shall be paid on completion of every one year period of the 5 year CMC period, after submission of following documents:

1. Copy of the commercial invoice in triplicate.
2. Submission of quarterly reports of CMC undertaken by the manufacturer as given in chapter 5 of this bid document.
3. This payment will be made to the Manufacturer on the basis of the Monitoring & Evaluation Report of the CMC to be undertaken by an authorized agency of JREDA or JREDA officials
4. If the Manufacturer does not undertake proper and regular maintenance work as per the CMC clause, JREDA would be authorized to deduct proportionate amount from the 2% amount payable to the Manufacturer for the year.
5. If even after 1 month of the submission of the quarterly Monitoring & Evaluation Report of the CMC clause as specified in Proforma – 16(A) & (B), the Manufacturer does not undertake proper and regular maintenance work as per the CMC clause, and JREDA gets the repair and maintenance work of the SHLSs and SSLs through any other agency it deems fit, the bill amount of the agency undertaking the repair and maintenance work multiplied by 2 will be deducted from the 2% amount payable to the Manufacturer for the year.
6. All payments shall be released by JREDA within 30 days that shall be reckoned from the date of receipt of all the documents in complete as stipulated against each payment. Only submission of delivery challan/transportation challan/lorry receipt will not be sufficient for the release of payment by JREDA.
7. All payments shall be released by JREDA through account payee cheque issued in favour of the Manufacturer and payable at Ranchi.
8. All the payments shall be paid in the name of only successful bidder not to anyone else.

## **8.0 Income Tax**

8.1 Without prejudice to the obligations of the Manufacturer 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 Manufacturer. JREDA shall provide the Manufacturer a certificate for such deduction of tax.

## **9.0 Statutory Variations in Taxes and Duties**

9.1 No variation in the rates quoted will be entertained despite any change in the taxes applicable during the execution period of the contract.

9.2 The Manufacturer 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 Manufacturer.

#### **10.0 Agreement**

10.1 The Manufacturers have to enter into an agreement within two weeks, in the office of the Director, JREDA in prescribed format before commencement of supply/services.

#### **11.0 Security Deposit**

11.1 The successful tenderer, on award of the contract, shall submit Security Deposit in the form of Bank Guarantee/D.D. from any Govt./Nationalized bank within 15 days from the date of Purchase order valid till CMC period for an amount equal to Five Percent (5%) of the contract value of the order as specified in Proforma – 9. The Security deposit shall be liable for forfeiture by JREDA in case of termination / cancellation of the order or failure of the equipment to deliver satisfactory and acceptable performance. The Security Deposit shall be refunded after expiry of 90 days from the actual date of completion of CMC.

#### **12.0 Inspection of the Factory and Tests**

12.1 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 Part-II (Financial Bid) of the bidders.

12.2 JREDA shall have access and right to inspect the work or any part thereof at any stage.

12.3 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.

12.4 Successful bidder shall inform JREDA at least 25 days in advance of schedule dispatch.

#### **13.0 Dispatch Instructions**

13.1 All items/equipments shall be subjected to pre-dispatch inspection by JREDA or its authorized representative(s) as per relative standards/provisions approved by JREDA before dispatch of items.

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

#### **14.0 Transit Insurance**

14.1 Transit Insurance shall be arranged by the Manufacturer for his total supplies. In case of any damage/loss/pilferage/non-delivery during transit, the Manufacturer shall lodge the claim and settle the claim with the insurance agency. The Manufacturer 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 Manufacturer to comply with the above shall be to the account of the Manufacturer.



### **15.0 Training Program, After Sales Service and Availability of Spare Parts**

- 15.1 The responsibility of organizing training program for SHLSs & SSLs will rest on the successful bidder. The training program will be organized in consultation with JREDA/Consignee. The training program will focus on operation and maintenance of SHLSs & SSLs. Printed leaflet/literature should be made available in Hindi by the Manufacturer regarding the operation and maintenance of their SHLSs & SSLs. The vendor should develop a cadre of local trained persons from the village along with the installation of systems and the proof of the same should be submitted at the time of payment.
- 15.2 The Manufacturer shall depute authorized Service Engineer within 7 days from the date of the intimation of fault, and establish sufficient inventory of spares in the State in consultation with JREDA to provide satisfactory and uninterrupted services during the guarantee period.

### **16.0 Village & Beneficiary List**

- 16.1 The supplier has to only distribute & install the systems in the listed villages and to the specific beneficiary only as per the list given by JREDA. If there are any alteration found in distribution & installation of system than the list, the payment of those systems will be deducted from his payment.
- 16.2 Any village found to be actually electrified or, is found to be under the process of electrification at the time of installation of solar systems should be excluded from the list of the villages provided by JREDA.
- 16.3 In case of some beneficiary not found or migrated from villages, the same should be notified to JREDA immediately by taking a certificate from all the VEC Members and BDO/CO. After verifying the same JREDA will resurvey in the same villages and send the left out beneficiary list to MNRE for approval. After the MNRE approval of left out beneficiary list, the remaining systems will be distributed in left out houses.

### **17.0 Completion Schedule**

- 17.1 The delivery of goods at FOR destination in full as per the terms and conditions of the contract/order shall be completed within **Three (3) months** from the date of issue of the LOI or LOA whichever is earlier.

### **18.0 Guarantee Period**

- 18.1 The Manufacturer must provide guarantee which include servicing & replacement guarantee for parts and components (such as battery, electronics and luminaries) of Solar Home Lighting Systems and Solar Street Lighting System for 5 (five) years. For PV modules, the replacement guarantee is for 15 (Fifteen) years from the date of commissioning the SHLSs & SSLs at site & demonstration of performance to the consignee/JREDA.
- 18.2 The guarantee card to be supplied with the system must contain the details of the system supplied as given in the Proforma - 6. The manufacturers can also provide additional information about the system and condition of guarantee as necessary.

18.3 Manufacturer 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 of intimation of fault without any additional cost to JREDA within the period of guarantee.

**19.0 Assignment/Sub Letting/Pre Bidding Tie Up**

19.1 The Manufacturer shall not assign or sub let, manufacture, shop testing, packing & forwarding, transportation, transit insurance, supply in whole or part, its obligations to any third party to perform under the order/contract.

19.2 In the event the Manufacturer contravenes this condition, JREDA reserves the right to reject the equipment/work contracted and procure the same from else where at Manufacturer's risk and cost. The Manufacturer shall be solely liable for any loss or damage which JREDA may sustain in consequence or arising out of such replacing of the contract work.

19.3 In case, the installation & commissioning and CMC is planned to be carried out in collaboration with other party, the bidder has to sign MoU with the party on a Non-judicial stamp paper of value not less than Rs. 80/- and submit a copy of the MoU along with the bid. The MoU shall clearly indicate division of scope of work between the prime bidder and his sub-vendor. However, the total responsibility of work will remain with the prime bidder.

**20.0 Liquidated Damages for Delay in Completion**

20.1 The completion period for the assignment must carefully be worked out and all resource & work planning is to be done accordingly with flexibility for adjustments.

20.2 If the Manufacturer fails in the due performance of the contract to deliver and commission any part of the equipment or complete the work within the scheduled date for any reason other than due to Force Majeure conditions or any extension thereof granted to him by JREDA, he shall be liable to pay to JREDA as pre-agreed liquidated damages but not by way of penalty on account of delayed successful commissioning, a sum equal to ½% of total contract value per week of such delay, or part thereof, subject to maximum of 5% of the Total Contract Value.

20.3 The liquidated damages for delayed completion shall be recovered from the Manufacturer's Bill/Bank Guarantee deposited as earnest money.

20.4 Deductions/payment of liquidated damages shall in no way relieve the Manufacturer from his contractual responsibility to complete the works.

**21.0 Cancellation of Order**

21.1 JREDA will be at liberty to terminate in part or full the awarded contract without prejudicing its rights and affecting the obligations of the Contractor by giving seven (7) days notice in writing in the following events:

(a) If the Manufacturer is found defaulter for delayed supply or failure to deliver satisfactory performance or supply of substandard materials pursuant to NIB conditions.

- (b) If the Manufacturer/Vendor fails to comply with the provision(s) of the contract including the responsibilities to fulfill the 5 years comprehensive maintenance contract as per the provisions mentioned in this bid document.
- (c) If the Manufacturer/Vendor is involved in any action of moral turpitude.

**22.0 Arbitration**

- 22.1 All disputes or differences, whatsoever, arising between the parties out of or in relation to the construction, meaning and operation or effect of this contract or breach thereof shall be settled amicably.
- 22.2 If, however, the parties are not able to resolve them amicably, the same shall be settled by arbitration in accordance with the Rules of Arbitration of the Indian Council of Arbitration and Conciliation & Arbitration Act 1996 and the award in pursuance thereof shall be binding on the parties.
- 22.3 The venue of arbitration proceeding shall be within Jurisdiction of Court of Law at Ranchi only.
- 22.4 Work under this contract shall be continued by the Manufacturer during the arbitration proceedings, unless otherwise directed in writing by JREDA or unless matter is such that the work cannot possibly be continued until the decision of the Arbitrator is obtained.

**23.0 Force Majeure**

- 23.1 Should at any time during the continuance of the contract the performance in whole or in part of any obligations by either party under this contract be held up by reasons of any war, hostility, acts of foreign enemy, civil commotion, sabotage, fires, floods, earthquakes, explosions, epidemics, cyclones, quarantine restrictions, Governmental regulations, law & order and other proclamation etc. (hereinafter referred to as "Events") then, provided notice of the happening of any such eventuality is given by either party to the other within 10 days from the date of occurrence thereof neither party shall, by reasons of such eventuality, be entitled to terminate this contract, nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance, and the work under this contract shall be resumed as soon as practicable after such eventuality has come to an end or ceased to exist.
- 23.2 Should one or both the parties be prevented from fulfilling their contractual obligations by a state of force majeure, lasting continuously for a period of at least four (4) weeks, the two parties should consult each other regarding the further implementation of the contract with the provision that if no mutually satisfactory arrangement is arrived at within a period of 2 weeks from the expiry of 4 weeks referred to above, the contract shall be deemed to have expired at the end of the aforesaid 2 months. Such expiry of the contract will not relieve the parties from the obligations to reach agreement regarding winding up and financial settlement of the contract.
- 23.3 The above mentioned force majeure events shall not include constraints, which could prudently be foreseen like shortage of power, non-availability of raw materials, difficulties in making transport arrangement, break down of machines, strikes, lock outs, etc.

- 23.4 The above-mentioned force majeure conditions/clause shall also apply in the works of sub-contractors/Manufacturers of the contractor.
- 23.5 However, the Manufacturer shall not be liable for liquidated damages or termination/cancellation of 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.
- 23.6 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.
- 23.7 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.

## 4. Technical Specification

### Solar Home Lighting System

#### 1.0 Definition

1.1 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 Technical Specification

2.1 The solar home lighting shall be of indigenous make and should confirm to the following model :

Type of SHLS	Components	Specification
Model-II (Two Lights)	PV Module	1 x 37 Wp under STC
	Lamp	2 x CFL, 4 Pin 9W, Base up configuration housed in assembly suitable for indoor use, with reflector in its back
	Battery	1 x 12 V, 40 AH, Tubular Plate, low maintenance type Lead Acid Battery or Gel Type VRLA
	Other Components	Control Electronics, Module mounting hardware, Battery box, Inter-connecting wires/cables, Switches, etc. Operation, Instruction and Maintenance Manual

2.2 SHLSs shall have a socket to provide power for a 12V DC TV set, which can be purchased separately, and another socket (preferred, not mandatory) to facilitate charging of mobile phones.

2.3 A Small white LED may be provided as an optional feature, with an independent switch.

#### 3.0 Duty Cycle

Model No	Average Hours of Operation Per Day
Model-II	2 Lights, 3 - 4 Hours per day

#### 4.0 Lamps

4.1 The lamps will be compact fluorescent (CFL) type, 4-Pin type, with ratings of 9W with a suitable pre-heating circuit.

4.2 The light output from the lamps should be around 550±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).

4.3 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.

#### 5.0 Battery

5.1 The battery will be of flooded electrolyte type, positive tubular plate type, low maintenance lead acid or gel type VRLA conforming to relevant BIS standard.

- 5.3 The battery will have a minimum rating of 12V, 40Ah (at C/10) discharge rate.
- 5.3 75% of the rated capacity of the battery should be between fully charged and load cut off.

## **6.0 Electronics**

- 6.1 The inverter should be of quasi sine wave/sine wave type with a frequency in the range of 20-30 KHz. Half-wave operation is not acceptable.
- 6.2 The total electronic efficiency should be not less than 80%.
- 6.3 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).
- 6.5 The idle current consumption should not be more than 10mA
- 6.5 Electronics shall operate at 12 V and **should have temperature compensation** for proper charging of the battery throughout the year.
- 6.5 Necessary length of wires/cables, switches suitable for DC use and fuses should be provided.

## **7.0 PV Module (s)**

- 7.1 **The PV module(s) shall contain mono/ multi crystalline silicon solar cells. It is preferable to have certificate for the supplied PV module as per IEC 61215(revised) specifications or equivalent National or International Standards. In case if the supplied PV module is not a regular PV module of the manufacturer and does not have certificate as per IEC 61215(revised) specifications ,then the manufacturer should have the required certification for at least one of their regular modules. Further, the manufacturer should certify that the supplied module is also manufactured using same material design and process similar to that of certified PV module.**
- 7.2 The power output of the module under STC should be a minimum of 37 W.
- 7.3 The operating voltage corresponding to power output mentioned above should be 16.4 V.
- 7.4 The open circuit voltage of the PV module under STC shall be at least 21.0 V.
- 7.5 The terminal box on the module should have a provision for opening for replacing the cable, if required.
- 7.6 A strip containing the following details should be **laminated inside** the module so as to be clearly visible from the front side.
- i. Name of the Manufacturer or distinctive logo.
  - ii. Model or Type Number
  - iii. Serial Number
  - iv. Year of Make
- 7.7 Module of reputed make shall be offered.
- 7.8 The manufacturing date of the PV Module should be of current financial year 2010-11.

7.9 Monogram of JREDA along with following details translated into Hindi language in Devnagari script shall be screen printed in indelible ink or paint on the back side of each PV module :

- Remote Village Electrification Program 2010-11
- Not for sale or transfer
- Statutory action would be taken by JREDA, if it found sold or transferred.

7.10 Frame of PV module shall be painted with **Dark Brown** colour.

#### **8.0 Electronic Protection**

8.1 Adequate protection is to be incorporated under no load conditions, e.g. when the lamps are removed and the system is switched ON.

8.2 Battery cut offs & reconnects should be provided to protect it against overcharge and deep discharge conditions.

8.3 Fuses should be provided to protect against short circuit conditions.

8.4 A blocking diode, should be provided as part of the electronics, to prevent reverse flow of current through the PV module, in case of such a diode is not provided with the PV module.

8.5 Full protection against open circuit, accidental short circuit and reverse polarity should be provided.

#### **9.0 Mechanical Components**

9.1 Metallic frame structure (with corrosion resistance paint) to be fixed on the roof of the house to 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.

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

#### **10.0 Other Features**

10.1 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 LED should glow only when the battery is actually being charged.

10.2 The following details should be marked indelibly on the SHLS.

- i. Name of the Manufacturer or distinctive logo.
- ii. Model or Type Number
- iii. Serial Number
- iv. Year of Make

10.3 Components and parts used in Solar Home Light Systems should conform to the latest BIS specification, wherever such specifications are available and applicable.

10.4 **PV module will be warranted for a minimum period of 15 years from the date of supply and the Solar Home Light System (including the battery) will be warranted**

**for a period of five years from the date of supply.** The Warranty Card to be supplied with the system must contain the details of the system supplied. The manufacturers can also provide additional information about the system and conditions of warranty as necessary.

## **11.0 Documentation**

11.1 An Operation, Instruction and Maintenance Manual, in English & in the local language, should be provided with the Solar Home Light System. The following minimum details must be provided in the Manual :

- (i) About Photovoltaics
- (ii) About Solar Home Light System—its components and expected performance
- (iii) About PV Module
- (iv) About CFL
- (v) About Battery
- (vi) Clear instructions about mounting of PV Module
- (vii) About Electronics
- (viii) About charging and significance of Indicators.
- (ix) DO's and DONT's
- (x) Clear instructions on Regular Maintenance and Trouble Shooting of Solar Home Light System
- (xi) Name and address of the person or service center to be contacted in case of failure or complaint.

11.2 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 specifications 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 Manufacturer within the quoted price.

11.3 The Manufacturer shall satisfy JREDA that the Manufacturer 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.

11.4 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 MNRES Standards.

11.5 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 specifications and which have already been supplied and have operated efficiently and reliably elsewhere at least one year under similar climatic and operating condition. Operation feedback for such equipment already supplied shall also be attached with the offer.

11.6 All equipments supplied shall be guaranteed for quality workmanship and compliance with the specified requirements for integrated performance to deliver rated output.



## Solar Street Lighting System

### 1.0 Definition

1.1 A stand alone Solar Photo Voltaic Street Lighting System comprises of a compact fluorescent lamp, lead acid battery, PV module(s), control electronics, inter connecting wires/cable, module mounting hardware, battery box, operation, instruction and maintenance manual.

### 2.0 Technical Specification

2.1 The solar street lighting shall be of indigenous make and should conform to the following specifications :

Type of SSLS	Components	Specification
(One Light)	PV Module	1 x 74 Wp or 2 x 37 Wp under STC
	Lamp	1 x CFL (11 W), 4 Pin
	Battery	1 x 12 V, 75 AH, Tubular Plate, low maintenance type Lead Acid Battery or Gel type VRLA.
	Other Components	Control Electronics, Module mounting hardware, Battery box, Inter connecting wires/cables, Switches, Operation, Instruction and Maintenance Manual

### 3.0 Duty Cycle

3.1 The system should be designed to automatically switch ON at dusk, operate throughout the night and automatically switch OFF at dawn, under average daily insolation of 5.5 kWh/sq. m on a horizontal surface.

### 4.0 Lamp

4.1 The lamp shall be of compact fluorescent (CFL) of 11W, 4-Pin type, with adequate pre-heating circuit.

4.4 The light output from the lamp should be around 850±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).

4.5 The lamp should be housed in a weather proof assembly suitable for outdoor use, with a reflector on its back. While fixing the assembly, the lamp should be held preferably in a base up configuration.

### 5.0 Battery

5.1 The battery shall be of flooded electrolyte type, positive tubular plate, low maintenance lead acid or gel type VRLA conforming to relevant BIS standard.

5.2 The battery will have a minimum rating of 12V, 75Ah (at C/10) discharge rate.

5.3 75% of the rated capacity of the battery should be between fully charged and load cut off.

### 6.0 Electronics

6.1 The inverter will be of quasi sine wave/sine wave type with a frequency in the range of 20-30 KHz. Half-wave operation is not acceptable.

6.2 The total electronic efficiency should be not less than 80%.

- 6.3 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).
- 6.4 The idle current consumption should not be more than 10mA
- 6.5 Electronics shall operate at 12 V and should have temperature compensation for proper charging of the battery throughout the year.
- 6.6 Necessary length of wires/cables, switches suitable for DC use and fuses shall be provided.
- 6.7 The PV Module itself will be used to sense the ambient light level for switching ON and OFF the lamp.
- 7.0 PV Module(s)**
- 7.1 **The PV module(s) shall contain mono/ multi crystalline silicon solar cells. It is preferable to have certificate for the supplied PV module as per IEC 61215(revised) specifications or equivalent National or International Standards. In case if the supplied PV module is not a regular PV module of the manufacturer and does not have certificate as per IEC 61215(revised) specifications ,then the manufacturer should have the required certification for at least one of their regular modules. Further, the manufacturer should certify that the supplied module is also manufactured using same material design and process similar to that of certified PV module.**
- 7.2 The power output of the module(s) under STC should be a minimum of 74 W. Either two modules of minimum 37 W output each or one module of 74 W output shall be used.
- 7.3 The operating voltage corresponding to power output mentioned above should be 16.4 V.
- 7.4 The open circuit voltage of the PV modules under STC shall be at least 21.0 V.
- 7.5 The terminal box on the module should have a provision for opening for replacing the cable, if required.
- 7.6 A strip containing the following details should be laminated inside the module so as to be clearly visible from the front side.
- i. Name of the Manufacturer or distinctive logo.
  - ii. Model or Type Number
  - iii. Serial Number
  - iv. Year of Make
- 7.6.1 Models of reputed make shall be offered.
- 7.6.2 The manufacturing date of the PV Module should not before April 2009.
- 7.7 Monogram of JREDA along with following details translated into Hindi language in Devnagari script shall be screen printed in indelible ink or paint on the back side of each PV module :
- Remote Village Electrification Program 2010-11
  - Not for sale or transfer
  - Statutory action would be taken by JREDA, if it found sold or transferred.
- 7.7.1 Frame of PV module shall be painted with **Dark Brown** colour.

## **8.0 Electronic Protection**

- 8.1 Adequate protection is to be incorporated under no load conditions e.g. when the lamp is removed and the system is switched ON.
- 8.2 Battery cut offs & reconnects should be provided to protect it against overcharge and deep discharge condition.
- 8.3 Fuses should be provided to protect against short circuit conditions.
- 8.4 A blocking diode, should be provided as part of the electronics to prevent reverse flow of current through the PV module, if such a diode is not provided with the module itself.
- 8.5 Full protection against open circuit, accidental short circuit and reverse polarity should be provided.
- 8.6 Electronics should operate at 12 V and **should have temperature** compensation for proper charging of the battery through out the year.

## **9.0 Mechanical Components**

- 9.1 A metallic frame structure (with corrosion resistance paint) to be fixed on the pole 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 oriented at the specified tilt angle.
- 9.2 The pole should be made of mild steel pipe with a height of 4 meter above the ground level, after grouting and final installation. The pole should have the provision to hold the weatherproof lamp housing. It should be painted with a corrosion resistant paint.
- 9.3 A vented, acid proof and corrosion resistant painted metallic box for outdoor use should be provided for housing the battery.

## **10.0 Other Features**

- 10.1 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 conditions of the battery. The green LED should glow only when the battery is actually being charged.
- 10.2 The following details should be marked indelibly on the SSLS.
  - v. Name of the Manufacturer or distinctive logo.
  - vi. Model or Type Number
  - vii. Serial Number
  - viii. Year of Make
- 10.3 Components and parts used in Solar Street Light Systems should conform to the latest BIS specification, wherever such specifications are available and applicable.
- 10.4 **PV module(s) will be warranted for a minimum period of 15 years from the date of supply and the Solar Street Light Systems (including the battery) will be warranted for a period of five years from the date of supply.** The Warranty Card to be supplied with the system must contain the details of the system supplied. The manufacturers can also provide additional information about the system and conditions of warranty as necessary.
- 10.5 Necessary lengths of wires/cables and fuses should be provided.

## **11.0 Documentation**

- 11.1 An Operation, Instruction and Maintenance Manual in English & in the local language, should be provided with the Solar Street Light System. The following minimum details must be provided in the Manual:
- (xii) About Photovoltaics
  - (xiii) About Solar Street Light System – its components and expected performance
  - (xiv) About PV Module
  - (xv) About CFL
  - (xvi) About Battery
  - (xvii) Clear instructions about erection of pole and mounting of PV Module(s) and lamp housing assembly on the pole.
  - (xviii) About Electronics
  - (xix) About Charging and Significance of Indicators.
  - (xx) DO's and DONT's
  - (xxi) Clear instructions on Regular Maintenance and Trouble Shooting of Solar Street Light System
  - (xxii) Name and address of the person or service center to be contacted in case of non-functionality of the system or complaint.
- 11.7 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 Manufacturer within the quoted price.
- 11.8 The Manufacturer shall satisfy JREDA that the Manufacturer 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.
- 11.9 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 Standards.
- 11.10 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 specifications and which have already been supplied and have operated operated efficiently and reliably elsewhere at least one year under similar climatic and operating condition. Operation feedback for such equipment already supplied shall be attached with the offer.
- 11.11 All equipments supplied shall be guaranteed for quality workmanship and compliance with the specified requirements for integrated performance to deliver rated output.

## **5. Five Years Comprehensive Maintenance Contract (CMC)**

### **1.0 The Comprehensive Maintenance Contract (CMC)**

**The tender cost of Solar Lighting Systems includes the provision of 5 Years mandatory Comprehensive Maintenance Contract (CMC). To ensure long term sustainability of the solar systems the vendor should provide his representatives name, full address, mobile number and photographs to JREDA with one hard copy and soft copy. As well as the names and contact details of all technicians should also be provided.**

1.1 The Comprehensive Maintenance Contract shall include servicing & replacement guarantee for parts and components (such as battery, electronics and Luminaries) of Solar Home Lighting Systems and Solar Street Lighting Systems for five years from the date of installation. For PV modules, the replacement guarantee is for fifteen (15) years.

1.2 The maintenance service provided shall ensure proper functioning of the system as a whole. All preventive/routine maintenance and breakdown/corrective maintenance required for ensuring maximum uptime shall have to be provided by the Manufacturer. Accordingly, the Comprehensive Maintenance Contract (CMC) shall have two distinct components as described below.

### **2.0 Preventive/Routine Maintenance**

This shall be done by the company at least once in a every three months and shall include activities such as, cleaning and checking the health of the SPV system, cleaning of module surface, topping up of batteries, tightening of all electrical connections, changing of tilt angle of module mounting structure, cleaning & greasing of battery terminals and any other activity that may be required for proper functioning of the SPV system as a whole. The maintenance record should be maintained properly as per specified Proforma – 16(B) and to be deposited time to time at JREDA office.

### **3.0 Breakdown/Corrective Maintenance**

3.1 Whenever a complaint is lodged by the user, the bidder shall attend to the same within a reasonable period of time (7 days) and in any case the breakdown shall be corrected within a period not exceeding ten days from the date of complaint. If more than 10 days are taken after registering of complaint, then Manufacturer has to pay Rs. 20/- for each system for each month till the problem is rectified. This money shall be deposited to the account of Village Energy Committee.

3.2 For carrying out the CMC effectively, the Bidder/Manufacturer shall establish Common Energy Service Centre (CESC) near the villages. Training to the CESC people for carrying out CMC effectively will be given by the supplier. The required fund will be paid by the supplier.

3.3 There should be provision of one representative of vendor within 500-1000 systems depending upon geographical dispersal of the beneficiaries.

- 3.4 The bidder shall maintain the following facilities at the local Service Centre for ensuring highest level of services to the end user :
1. Adequately trained manpower, specifically trained by the bidder for carrying out the service activities.
  2. Adequate provisions for record keeping, which shall inter-alia, include the following :
    - (a) Details of system supplied within the command area of the service station including full name and address of end user, system and sub-system serial numbers and records of routine maintenance carried out (duly signed by the end user). These records shall include voltage, current, specific gravity, indicator charge, CFL full glow, charge controller operation, electronics, etc.
    - (b) History record sheets of maintenance done.
  3. Adequate spares for ensuring least downtime of an individual system.
  4. The Service Center shall send summary service reports to JREDA on quarterly basis as specified in Proforma – 16(A). These reports shall include the following information :
    - (a) Number of systems covered by the Service Center
    - (b) Number of systems working satisfactorily on the reporting date
    - (c) Number of complaints received during the period of reporting
    - (d) Number of complaints attend during the period of reporting
    - (e) Major cause of failure, as observed
    - (f) Major replacement made during the reporting period

Separate report shall be submitted for each type of systems manufacture wise in case the service center caters to the requirement of more than one manufacture.

- 3.5 The records maintained at the Service Center shall be available for scrutiny to authorized representatives of JREDA or MNRE.
- 3.6 The date of CMC maintenance period shall begin on the date of actual commissioning of the SPV systems.
- 3.7 Bidder shall furnish details of infrastructure that are presently available for establishing of Service Centers.
- 3.8 This is mandatory to the bidder to submit the quarterly CMC report in JREDA office. If any defaulter found in depositing the papers properly the payment of CMC will not be released to the bidder.
- 3.9 If the system found damage / defective due to non maintenance, the cost for correcting the breakdown system will be deducted from bidder payment / security deposit.
- 3.10 The quality/level of service provided by the Manufacturer would form the basis for determining eligibility of the Manufacturer to participate in the subsequent programs of JREDA.

## 6. Proforma – 1

### Forwarding Letter

NIB No : JREDA/RVEP/2010-11/02

Date :

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

**Sub : Offer In Response to Notice Inviting Bid No. JREDA/RVEP/2010-11/02 for Manufacturing, Supply, Installation, Testing & Commissioning Including 5 Years Comprehensive Maintenance Contract (CMC) of SHLSs(Model II) & SSLs (CFL based) Under Remote Village Electrification Program on Turnkey Basis**

Sir,

With reference to the above we are submitting this offer 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 document. This offer is hereby submitted in two different envelopes sealed inside a third envelope duly marked and sealed as indicated below:

Part – I (Technical Proposal): Submitted in original plus one copy (1+1)  
Part – II (Financial Proposal): Submitted in one original copy only (1+0)

We also confirm that:

2. We are an Indian company/firm.
3. The components of SPV systems shall be indigenously manufactured.
4. We have never been debarred from executing similar type of work by any Central/ State/Public Sector Undertaking/Department/Nodal Agency.
5. The Bid Document is purchased from JREDA office/downloaded from JREDA website (strike whichever is not applicable) and necessary document in support is enclosed.
6. We shall execute the offer/work order as per specifications, terms & conditions of the Bid Documents on award of work.
7. Our offer shall remain valid for placement of purchase orders up to 180 days from the due date of submission of offer.
8. If at any time, any of the declarations submitted by us is found to be false, our offer or order is liable to rejection.

Yours faithfully,

(Signature of Authorized Signatory)

Name :

Designation :

Company Seal :

## 7. Proforma – 2

Authority Letter for Signing Bid Document & Attending Bid Opening Meeting
---

NIB No: JREDA/RVEP/2010-11/02

Date :

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

**Sub : Authority Letter for Signing Bid Document & Attending Bid Opening Meeting**

I hereby authorize ..... (Name & Designation) to sign the Bid Document and attend the Bid Opening Meeting to be held on ..... at JREDA on behalf of our company.

He is also authorized to provide clarifications/confirmations, if any, and such clarifications/confirmations shall be binding on the company. The specimen signature of ..... is attested below.

.....	.....
(Specimen Signature)	(Signature of Authorized Signatory)
Name : .....	Name : .....
Designation : .....	Designation : .....
	Company Seal :

Yours faithfully,

(Signature of Authorized Signatory)

Name :

Designation :

Note :

1. To be submitted by bidders on official letter head of the company.
2. Authorization can be for more than one persons



## 8. Proforma – 3

<b>Information about the Bidding Firm</b>
---

BID No: JREDA/RVEP/2010-11/02

Date :

Sl.	Particulars	
1.	Name & Address of the Bidder with telephone no., Fax no. & E-mail.	
2.	Address of registered office	
3.	Address of works	
4.	GPS Co-ordinate of Registered Office	
5.	GPS Co-ordinate of Factory Campus	
6.	Name & Designation of Authorized Signatory for Correspondence	
7.	Nature of Firm (Proprietorship/Partnership /Pvt. Ltd./Public Ltd. Co./Public Sector)	
8.	Permanent Account Number (PAN)/TIN	
9.	Firm's Registration Number	
10.	EPF Registration No. (if applicable)	
11.	Sales Tax/Value Added Tax Registration Number	
12.	Specify the Item Originally Manufactured	
13.	Year of Starting of Manufacturing of PV Component(s)	
14.	International Certification Awarded (if any)	
15.	Installed Capacity for Solar Products/ Components	

16.	Production and Sale of Solar Components in the Last Three Years (in thousand units)			<b>Production</b>	<b>Sales</b>
			2007-08		
			2008-09		
			2009-10		
17.	Total Production and Sale of PV Products During the Last Three Years (in Rupees)		2007-08	<b>Production</b>	<b>Sales</b>
			2008-09		
			2009-10		
18.	Name of Material and Model Type Offered				
19.	Name of Manufacturer of SHLS/SSLS with Full Address				
	1.	SPV SHLS & SSLS			
	2.	PV Module (Attach IEC Certificate)			
	3.	Control Electronics/Charge Controller			
	4.	Battery			
20.	Particulars of Earnest Money				
21.	Quantity Quoted for this Bid				
	1.	Solar Home Light Systems (SHLSs)			
	2.	Solar Street Light Systems (SSLs)			
22.	Whether manufacturer is permanently registered as an SSI Unit of Jharkhand and/or with NSIC Unit for SPV system				
23.	Place where Materials will be Manufactured				
24.	Place where Materials will be Available for Inspection				
25.	Whether the Bidder has submitted details with regard to supplies made to important organizations.				

26.	Details of any existing service network in Jharkhand (Name & address of service centre, year of opening)	
27.	Name of MNRE approved test center from where testing of SHLS and SSLS have been performed.	
28.	Test Certificate no. and date of test.	
29.	MNRE Specifications as reported in the test certificate.	
30.	Other details and remarks (if any)	

Yours faithfully,

(Signature of Authorized Signatory)

Name :

Designation :

Company seal :

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

## 9. Proforma – 4

### Details of Orders Received and Executed in Past 3 Years

**BID No : JREDA/RVEP/2010-11/02**

**Date :**

Details of Orders Received & Executed by the Manufacturer/Supplier for Supply of SHLSs & SSLs to SNAs/ Govt. Organization during Last Three Years.

SI.	Name of Agency/ Organization	Purchase Order No., Date & Ordered Qty.	Name of Model	Delivery Schedule	Qty. Supplied Within Delivery Schedule	Qty. Supplied After Delivery Schedule	Date of Full Supply

Yours faithfully,

Note:

- (a) Attach Photocopies of Purchase Orders
- (b) Attach Photocopies of Certificate of Satisfactory Performance of the system Issued by Concerned Nodal Agency/Govt.Organization
- (c) Separate sheet may be used for giving detailed information duly signed. This bid proforma must also be submitted duly signed in case separate sheet is submitted

(Signature of Authorized Signatory)

Name :

Designation :

Company seal :

## 10. Proforma – 5

<b>No Deviation Certificate</b>
---------------------------------

NIB No : JREDA/RVEP/2010-11/02

Date :

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

Dear Sir,

We understand that any deviation/exception in any form in our bid against the above mentioned reference number may result in rejection of our 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.

Yours faithfully,

(Signature of Authorized Signatory)

Name :

Designation :

Company seal :

Note : This “No Deviation Certificate” should be written on the letter head of the bidder indicating BID No. duly signed and stamped with date by a competent person and having the power of attorney to bind the bid.

## 11. Proforma – 6

Format for Guarantee Card to be Supplied with Each SHLS & SSLs

NIB No : JREDA/RVEP/2010-11/02

Date :

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

### Guarantee Card

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) Guarantee Valid Up To	
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 27 <sup>o</sup> C	
	(g) Guarantee Valid Up To	
6.	Details of Electronics & Other BOS Items	
	(a) Name of the Manufacturer	
	(b) Make	
	(c) Model	
	(d) Serial No(s).	
	(e) Month & Year of Manufacture	
	(f) Guarantee Valid Up To	
7.	Designation & Address of the Person to be Contacted for Claiming Guarantee Obligations	

(Signature of Authorized Signatory)

Name :

Designation :

Company seal :

**Filling Instructions:**

1. The SHLS and SSLs components will be generally guaranteed as per point 17 of General Terms & Conditions. The manufacturer can also provide additional information about the system and conditions of Guarantee as necessary. The Guarantee card to be supplied with the system must contain the details of the system supplied as per format given above.
2. During the Guarantee period JREDA/users reserve the right to cross check the performance of the systems for their minimum performance levels specified in the MNRE specifications.

## 12. Proforma – 7

<b>Format for Submitting the Price Schedule</b>
---

BID No : JREDA/RVEP/2010-11/02

Date :

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

### Price Schedule

Sl.	Item	Total Bid Quantity	Price in Rupees	
			Unit Price	Total Price
1	2	3	4	5 = 3 x 4
A	Supply of Solar Home Light Systems (SHLSs) Model - II 37Wp as per the Bid Document including CMC			
B	Supply of Solar Street Light Systems (SSLs) 74Wp as per the Bid Document including CMC			
<b>Total Price (A+B)</b>				

- Note :**
- 1 Above quoted price for SHLS & SSLs are 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. FOR destination at any site in Jharkhand and inclusive of installation, testing, commissioning, performance testing and training.
  - 2 Certified that rates quoted for SHLS & SSLs are as per specifications, terms & conditions mentioned in the bid document.

Yours faithfully,

(Signature of Authorized Signatory)

Name :

Designation :

Company seal :



### 13. Proforma – 8

<b>Format for Submitting Bank Guarantee in Lieu of Earnest Money</b>
--

NIB No: JREDA/RVEP/2010-11/02

Date:

(To be submitted on Rs. 50/- Non-Judicial Stamp Paper to be purchased in the name of the issuing bank)

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

WHEREAS ..... (Manufacturer’s name)  
(thereinafter referred to as “Manufacturer”), a company registered under the Companies Act, 1956  
and having its registered office at ..... is required to  
deposit with you, the Purchaser, by way of Earnest Money Rs. ....  
(Rupees ..... only) in connection with its tender for the  
work with reference to Notice Inviting Bid (NIB) No. .... dated  
..... as per specification and terms and conditions enclosed therein.

WHEREAS the Manufacturer as per “Notice Inviting Bid, point no. 9 Earnest Money” has agreed to  
establish a Bank Guarantee in Your favour through us valid up to .....  
(date) instead of deposit of earnest money in cash.

WHEREAS you have agreed to accept a Bank Guarantee from us in ..... instead of  
earnest money in cash from the Manufacturer.

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 Manufacturer/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 the Manufacturer/Tenderer for the work under “Notice Inviting Bid Ref. No. :  
JREDA/RVEP/2010-11/02 dated 00.00.2011”.
2. Your decision as to whether the Manufacturer/Tenderer has resiled from or has withdrawn his  
offer or has modified the terms and conditions thereof 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 Manufacturer/Tenderer for the work under "Notice Inviting Bid Ref. No. : JREDA/RVEP/2010-11/02 dated 00.00.2011" in this regard, shall be final and binding on us and we shall not be entitled to question the same.

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 ..... (date) 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 Manufacturer/Tenderer or yourselves or ourselves but shall ensure 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 ..... Bank.

(Banker's Name)

Name of Bank Manager : .....

Address .....

.....

## 14. Proforma – 9

### **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.....2010

### **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 JREDA 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 JREDA stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by JREDA 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 JREDA any money so demanded notwithstanding any dispute or disputes raised by the contractor(s)/supplier(s) in any suit or proceeding pending before any court or Tribunal or arbitration relating thereto our liability under these presents being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under 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 JREDA under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till JREDA \_\_\_\_\_ 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 JREDA 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 JREDA or any indulgences by JREDA 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 JREDA 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 JREDA in writing.
9. We have power to issue this guarantee under our Memorandum and Articles of Association and the undersigned has full powers to sign this guarantee on our behalf under power of Attorney dated ..... granted to his and/or the resolution dated ..... passed by our Company of Directors in accordance with our constitution.

Dated the.....day of..... 2011

For (indicate the name of Bank).

Signature \_\_\_\_\_

Name \_\_\_\_\_

Designation \_\_\_\_\_

Authorisation No \_\_\_\_\_

In presence of

1. \_\_\_\_\_

2. \_\_\_\_\_

**Note:** Validity of BGs shall be 5 years from the date of receipt of last material at site

Date & Place \_\_\_\_\_

Bankers' Seal

## 15. Proforma – 10

### Format for Declaration from Each Beneficiary of the Village

BID No : JREDA/RVEP/2010-11/02

Date :

### जेडा एवं अपारम्परिक ऊर्जा स्रोत मंत्रालय प्रायोजित ग्राम विद्युतीकरण कार्यक्रम

### सहमति – पत्र

मैं श्री/श्रीमति ..... पिता/पति ..... ग्राम ..... पंचायत .....  
..... थाना ..... जिला ..... का/की निवासी हूँ। जेडा, राँची एवं अपारम्परिक  
ऊर्जा स्रोत मंत्रालय, भारत सरकार, नई दिल्ली द्वारा ग्राम विद्युतीकरण कार्यक्रम अन्तर्गत मेरे घर में लगाये गये सोलर  
घरेलू लाईट मोडेल-2 जो झारखंड सरकार की संपत्ति है को सुरक्षित रखने की गारंटी देता/देती हूँ। मैं इस उपस्कर को  
विक्रय/हस्तानान्तरण नहीं करूँगा/करूँगी। विक्रय या हस्तानान्तरण पाए जाने पर मुझ पर संवैधानिक कार्यवाई की  
जायगी।

.....  
लाभार्थी का हस्ताक्षर/अंगूठा का निषान

.....  
अध्यक्ष  
ऊर्जा समिति

.....  
सचिव  
ऊर्जा समिति

.....  
कोषाध्यक्ष  
ऊर्जा समिति

### प्रमाणित

उपर्युक्त उल्लेखित सभी बातें लाभार्थी की ज्ञात भाषा में स्पष्ट रूप से समझा दी गई हैं एवम लाभार्थी ने सभी नियमों के  
अनुसार विद्युतीकरण कार्यक्रम में सम्मिलित होने की पूर्ण सहमति देने के पश्चात् लाभार्थी ने अपना हस्ताक्षर/अंगूठा का  
निषान दिया है।

मैं एतद् द्वारा धोषणा करता हूँ कि लाभार्थी द्वारा धोषित स्वीकृति एवम विवरणी मेरे स्वयं की जानकारी व विष्वास के  
अनुसार पूर्ण सत्य है।

.....  
इन्ट्रोड्यूसर का पूर्ण हस्ताक्षर

## 16. Proforma – 11

<b>Format for Utilization Certificate from Each Beneficiary of the Village</b>
--

BID No. : JREDA/RVEP/2010-11/02

Date :

### लाभार्थी एवं ऊर्जा समिति द्वारा प्राप्त उपयोगिता प्रमाण पत्र

कार्यान्वयन एजेन्सी : झारखंड रिन्युएबुल इनर्जी डेवलपमेन्ट एजेन्सी (जेडा)  
झारखंड सरकार का एक अभिकरण (ऊर्जा विभाग)

निर्माता/आपूर्तिकर्ता : .....

लाभार्थी का नाम : ..... पिता का नाम : .....

गाँव : ..... प्रखंड : ..... जिला : .....

#### लाभार्थी के घर में लगाये गये सोलर उपस्करों की विवरणी

क्र०	सोलर उपस्कर का नाम	सोलर घरेलू लाईट (37 वाट मोडेल, 2 सी. एफ.एल., 9 वाट)	सोलर स्ट्रीट लाईट (74 वाट, 1 सी. एफ. एल. 11 वाट)
1.	मॉड्यूल		
	(क) मॉड्यूल नं०		
	(ख) मॉड्यूल मेक्		
	(ग) मॉड्यूल उत्पादन वर्ष		
2.	इलेक्ट्रॉनिक्स		
	(क) इलेक्ट्रॉनिक्स नं०		
	(ख) इलेक्ट्रॉनिक्स मेक्		
	(ग) इलेक्ट्रॉनिक्स उत्पादन वर्ष		
3.	बैट्री		
	(क) बैट्री नं०		
	(ख) बैट्री मेक्		
	(ग) बैट्री उत्पादन वर्ष		
4.	अधिष्ठापन की तिथि		
5.	उपस्कर कार्यरत है या नहीं		
6.	अभियुक्ति		

सोलर स्ट्रीट लाईट सामुहिक उपयोग हेतु अधिष्ठापित किया गया है।

सौर ऊर्जा समिति एवं लाभार्थी प्रमाणित करते हैं कि सोलर उपस्करों के देख-रेख की सम्पूर्ण जानकारी निर्माता/आपूर्तिकर्ता द्वारा प्रदत्त की गयी है। लाभार्थी उपकरणों का रख-रखाव प्रदत्त जानकारी के अनुसार करेंगे। उपस्करों को कभी भी किसी को भी नहीं बेचेंगे एवं किसी दूसरे व्यक्ति को नहीं देंगे। यदि ऐसा मेरे द्वारा किया जाता है, तो मुझ पर संवैधानिक कार्यवाही की जायगी।

उपस्करों के लम्बे अवधि तक कार्यरत रखनें एवम् 5 साल बाद बैटरी बदलनें हेतु आरंभ में रूपया दौ सौ (रू0 200/—) मात्र एक बार तथा रूपया चालिस (रू0 40/—) मात्र प्रतिमाह ग्राम ऊर्जा समिति को ससमय भुगतान करनें का वचन देता हूं।

.....  
आपूर्तिकर्ता के  
अधिकृत व्यक्ति का  
हस्ताक्षर एवं मोहर

.....  
(अध्यक्ष/सचिव)  
ऊर्जा समिति का हस्ताक्षर  
एवं मोहर

.....  
लाभार्थी का हस्ताक्षर

## 17. Proforma – 12

**Format for Village-wise and Beneficiary-wise Detail of the Module, Battery & Charge Controller  
Utilization Report of SHLs & SSLs Installed Under Remote Village Electrification Program (RVEP)**

BID No : JREDA/RVEP/2010-11/02

Date :

Name of Manufacturer/Supplier : .....

Village : ..... Census Code : ..... Panchayat : .....

Thana No. : ..... Block Name : ..... District : .....

**(A) Solar Home Lighting Systems (Model-II)**

Sl.	Name of Beneficiary	Father's Name	Module			Battery			Charge Controller			Identification			Date of Installation	Tola	Altitude	Latitude	Longitude	
			Number	Make	Year of Manufac ture	Number	Make	Year of Manufa cture	Number	Make	Year of Manufa cture	Ration Card No.	Voter Card No.	Others No.						

**(B) Solar Street Lighting Systems**

Sl.	Name of Beneficiary	Father's Name	Module			Battery			Charge Controller			Identification			Date of Installation	Tola	Altitude	Latitude	Longitude		
			Number	Make	Year of Manufa cture	Number	Make	Year of Manufa cture	Number	Make	Year of Manufa cture	Ration Card No.	Voter Card No.	Others No.							



## 18. Proforma – 13

### Format for Village-wise Details of the Trainings Organized

BID No : JREDA/RVEP/2010-11/02

Date :

Name of Manufacturer : ..... Date of Training : .....

Village : ..... Census Code : ..... Panchayat : .....

Thana No. : ..... Block Name : ..... District : .....

Sl.	Name of the Participant	Father's Name	Name of Tola	Signature or Thumb Print of the Participant

.....  
अध्यक्ष  
ऊर्जा समिति

.....  
सचिव  
ऊर्जा समिति

.....  
कोषाध्यक्ष  
ऊर्जा समिति

**Note:** Digital photograph of each training program certified by the village energy committee must be enclosed with this proforma.

## 19. Proforma – 14

**Format for Certificate from Village Energy Committee (VEC)  
As Proof of Compliance by the Manufacturer**

NIB No : JREDA/RVEP/2010-11/02

Date :

### प्रमाण पत्र

ग्राम ऊर्जा समिति का नाम : .....

प्रमाणित किया जाता है कि ग्राम ..... प्रखण्ड ..... जिला ..... में सुदुर ग्रामीण विद्युतीकरण कार्यक्रम के अन्तर्गत अपारम्परिक ऊर्जा स्रोत मंत्रालय, भारत सरकार एवं जेडा द्वारा अनुदान के तहत सोलर घरेलू लाईट एवं सोलर स्ट्रीट लाईट की अधिष्ठापन की गई है।

प्रमाणित किया जाता है कि इस ग्राम में सोलर होम लाईट सिस्टम (मोडेल-2) कुल ..... घरों में अधिष्ठापन की गई है।  
प्रमाणित किया जाता है कि इस ग्राम में कुल ..... सोलर स्ट्रीट लाईट सिस्टम अधिष्ठापन की गई है।

इन सोलर उपस्करों की आपूर्ति, अधिष्ठापन एवं कमीशनिंग मेसर्स ..... द्वारा की गई है।

.....  
अध्यक्ष  
ग्राम ऊर्जा समिति

.....  
सचिव  
ग्राम ऊर्जा समिति

कार्यकारी सदस्यगण ग्राम ऊर्जा समिति

- |         |          |
|---------|----------|
| 1. .... | 2. ....  |
| 3. .... | 4. ....  |
| 5. .... | 6. ....  |
| 7. .... | 8. ....  |
| 9. .... | 10. .... |

## 20. Proforma – 15

<b>Format for Solar Light Installation Certificate from VEC &amp; BDO/CO</b>
--

BID No : JREDA/RVEP/2010-11/02

Date :

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

### Declaration of Solar Light Installation

Sl. No.	Village Name	Block Name	District	SHLS	SSLS	Signature of Technician
01.						
02.						
03.						
04.						
05.						
06.						
07.						
08.						
09.						
10.						

### Declaration

#### Signature of Village Energy Committee

1. President \_\_\_\_\_
2. Secretary \_\_\_\_\_
3. Members \_\_\_\_\_
4. Members \_\_\_\_\_
5. Members \_\_\_\_\_
6. Members \_\_\_\_\_

This is to certify that the above information/statement is verified & found Correct.

**Signature of  
Block Development Officer/  
Circle Officer with Official Seal**

## 21. Proforma – 16(A)

### Report of Preventive/Routine Maintenance & Break down/ Corrective Maintenance

Name of Supplier:.....

Work Order No.....

Name of Technicians & Phone No.: .....

Month of Maintenance:.....

Village:.....,

Panchayat:.....,

Block:.....,

District:.....

The Service Centre shall send summary service reports to JREDA on interval of three months basis. These reports shall include the following information:

Number of systems covered by the service station	Number of systems working satisfactory on the reporting date	Number of complaint received during the period of reporting	Number of complaint attended during the period of reporting	Major cause of failure, as observed	Major replacement made during the reporting period	No. of systems attended during Routine Maintenance

Signature of Supplier

Signature of Technicians

Signature of Incharge  
Common Energy Service Centre

Signature of  
Village Urja Committee

## 21. Proforma – 16(B)

### Beneficiary / Village wise Record sheet of Preventive / Routine Maintenance & Break Down / Corrective Maintenance

Name of Supplier:.....

Work Order No.....

Name of Technicians & Phone No.: .....

Month of Maintenance:.....

Village:..... Panchayat:....., Block:..... District:.....

Sl. No.	Name of Beneficiary	Module No.	Battery No.	Battery Status			Charge Controller Status			Date of Break Down	Date of Repairing	Date of Inspection of Regular Maintenance	Signature of Beneficiary	Present Status	Remarks
				Voltage	Current	Specific Gravity	Indicator Charge	CFL Full Glow	Charge Controller Operation						
1.															
2.															
3.															
4.															
5.															
6.															
7.															
8.															
9.															
10.															

Signature of Supplier

Signature of Technicians

Signature of Incharge  
Common Energy Service Centre

Signature of  
Village Urja Committee

## 22. Proforma – 17

Format for Representatives Details for 5yrs. CMC

Sl. No.	Name	Address	Contact No.	Photographs

## 23. Proforma – 18

Format for Technicians Details Responsible for CMC

Sl. No.	Name	Address	Contact Nos.

## 23. Check List & Format for Submission of Bid

Sl.	Details	Reference Page No.
1.	Demand Draft for cost of bid document/Photocopy of Demand Draft or money receipt if bid document is purchased from JREDA Office	
2.	Bank guarantee for earnest money in Proforma – 8	
3.	Security deposit for performance guarantee in shape of Bank Guarantee in Proforma – 9	
4.	Bidders seeking concession/exemption from submission of earnest money, will have to submit an attested photocopy of relevant SSI unit certificate issued from the Govt of Jharkhand and from NSIC (if applicable)	
5.	Attested photocopy of registration certificate issued by Govt of Jharkhand or NSIC should clearly indicating the validity period. The photocopy of registration certificate should be attested by Gazetted Officer or Notary public	
6.	Proforma – 1 (Forwarding Letter)	
7.	Proforma – 2 (Authority Letter for Signing Bid Document & Attending Bid Opening Meeting)	
8.	Proforma – 3 (Information about the Bidding Firm)	
9.	Proforma – 4 (Details of Orders Received and Executed in Past 3 Years)	
10.	Proforma – 5 (No Deviation Certificate)	
11.	Letter of acceptance to furnish the information in Proforma – 6, Proforma – 10, Proforma – 11, Proforma – 12 and Proforma – 13, Proforma – 14, Proforma–15, Proforma – 16(A & B), Proforma – 17 & Proforma – 18 (1 hard copy and 1 soft copy in CD) if the bidder is declared successful bidder and is given LOI/LOA by JREDA.	
12.	List of testing facilities available. Test certificate of SHLS & SSLs issued by Solar Energy Centre/MNRE approved testing centers for the test performed as per MNRE 2009-10 specifications.	
13.	Self attested photocopies of purchase orders/contracts received from the State Nodal Agencies. The bidder should have supplied solar photovoltaic systems of the value of at least Rupees Three Crores (Rupees One & Half Crores in case of SSI Units & SSI Units registered with NSIC) to any State Nodal Agency during any one of the past three financial years (i.e. 2007-08, 2008-09 and 2009-10).	
14.	Satisfactory completion of work certificate from the State Nodal Agencies for which the bidder has done work and mentioned in this bid document.	
15.	General bidders should have supplied, installed and commissioned minimum 2000 nos. SHLSs and 200 nos. SSLs (1000nos. SHLSs and 100nos. SSLs incase of SSI Units / SSI Units registered with NSIC) and which should have worked satisfactorily for a minimum period of 1 year as on the date of submission of bid	
16.	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.	
17.	Certified/Attested copies of latest Sales Tax/VAT Clearance Certificate and Sales Tax/VAT Registration Certificate	
18.	Attested Photo-copy of Proprietor's affidavit/Partnership Deed in case of Proprietor firm/partnership firm with the photograph & details of Proprietor/partners.	
19.	Photographs of MD or Two Directors (in case of Ltd. Company.)	
20.	Copy of MoU signed for Pre-bid tie-up	
21.	Financial capability/Solvency Certificate from bank/Financial Institution (indicating BG Limit, Cash Credit Limit, Overdraft limit & Cheque Purchase Limits)	



22.	Technical Particular data sheet of SHLS (Model II) & SSLS (CFL based) of Bidder	
23.	PF Registration Certificate & PF Registration No./Affidavit for non-applicability of PF rules	
24.	Copy of audited Balance Sheet and Profit & Loss Account for last 3 (three) years	
25.	Photographs of Registered Office & Factory attested by Gazetted Officer or Notary Public	
26.	A tentative overall supply schedule in the form of Bar Chart	

**Please Ensure:**

1. That all information is provided strictly in the order mentioned in the check list mentioned above.
2. 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.
3. That any clarification/confirmation bidder may require shall be obtained from JREDA before submission of the bid.
4. That 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.

\* \* \* \* \*