

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

**by**

**Solar Home Lighting Systems**

**&**

**Solar Street Lighting Systems**

**Sponsored by :**

**The Ministry of New and Renewable Energy Sources (MNRES),  
Government of India**

**MNRE Sanction No.:1/12/1/2007-08/RVE Dt. 21/11/2008**



**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)

## Contents

1. Bid Details .....	03
2. Notice Inviting Bid .....	05
3. General Terms & Conditions .....	16
4. Technical Specification .....	27
5. Five Years Comprehensive Maintenance Contract (CMC) .....	38
6. Proforma – 1 : Forwarding Letter .....	41
7. Proforma – 2 : Authority Letter for Signing Bid Document & Attending Bid Opening Meeting .....	43
8. Proforma – 3 : Information about the Bidding Firm .....	44
9. Proforma – 4 : Details of Orders Received and Executed in Past 3 Years .....	47
10. Proforma – 5 : No Deviation Certificate .....	48
11. Proforma – 6 : Format for Submitting Bank Guarantee .....	49
in Lieu of Earnest Money	
12. Proforma – 7 : Format for Guarantee Card to be Supplied .....	51
with Each SHLS & SSLs	
13. Proforma – 8 : Format for Certificate from VEC as Proof .....	53
of Compliance by the Bidder	
14. Proforma – 9 : Format for Declaration from Each .....	54
Beneficiary of the Village	
15. Proforma – 10 : Format for Utilization Certificate from .....	55
Each Beneficiary of the Village	
16. Proforma – 11 : Format for Village-wise & Beneficiary-wise .....	57
Detail of the Module, Battery & Charge Controller Utilization Report of SHLSs & SSLs	
17. Proforma – 12 : Format for Village-wise Details of the .....	58
Trainings Organized	
18. Proforma – 13 : Format for Submitting the Price Schedule .....	59
19. Proforma – 14 : Format for Submitting Maintenance report .....	60
20. Proforma---15: Technical Bid Evaluation .....	62
21 Check List & Format for Submission of Bid .....	66

# 1. Bid Details

SI	Description	Details
1.	Notice Inviting Bid (NIB) No.	JREDA/RVEP/2008-09/01 Dt. 24/06/2009
2.	Scope of work	Manufacturing, testing, supplying, installation, & commissioning and field testing including 5 years Comprehensive Maintenance Contract (CMC) of Indigenous Solar Home Lighting Systems (SHLSs) & Solar Street Lighting Systems (SSLs) under Remote Village Electrification Program for Jharkhand Renewable Energy Development Agency (JREDA) during 2008-09. The quantities required are as follows :  SHLS = 423 Nos. SSLs = 53 Nos.
3.	Place of issue & submission of bid documents and address for communication	Jharkhand Renewable Energy Development Agency (JREDA) Plot No. 328/B, Road No. 4, Ashok Nagar, Ranchi, PIN 834 002, Jharkhand. Phone No. : 0651-2246970; Fax No. : 0651-2240665 Website : www.jreda.com , E-mail : info@jreda.com
4.	Period of sale of bid document	Date : 25 <sup>nd</sup> June to 9 <sup>th</sup> July 2009 Time : From 10:30 A.M. to 5:00 P.M. on all working days
5.	Last date & time of submission of bids	10 <sup>th</sup> July 2009 till 12:00 Noon
6.	Date & time of opening of Part – I (Technical Bids)	10 <sup>th</sup> July 2009 at 3.00 P.M.
7.	Date & time of opening of Part – II (Financial Bids)	Technically qualified bidders will be communicated the date & time of opening of Part-II (Financial Bids) by JREDA.
8.	Cost of bid document (Non-refundable)	<ul style="list-style-type: none"> <li>➤ For General Category : Rupees Ten Thousand</li> <li>➤ For SSI units registered in Jharkhand State : Rupees Five Thousand</li> <li>➤ For SSI units registered with: Nil Govt. of Jharkhand &amp; NSIC</li> </ul>
9.	Earnest Money (Refundable)	<ul style="list-style-type: none"> <li>➤ For General Category : Rupees Two Lakhs</li> <li>➤ For SSI units registered in Jharkhand State : Rupees One Lakh</li> <li>➤ For SSI units registered with: Nil Govt. of Jharkhand &amp; NSIC</li> </ul>
10.	Minimum lot size	The bidder should quote for the entire requirement indicated above.
11.	Time of completion	Within 3 (Three) months from the date of order.
12.	Validity of offer	The offer shall remain valid upto 180 days 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 of any Nationalized bank. This bank guarantee shall remain valid for 12 months from the last date of submission of bids.

## 2. Notice Inviting Bid

NIB No. : JREDA/RVEP/2008-09/01

Date : 24.06.2009

To,

M/s .....

**Sub : Manufacturing, Testing, Supplying, Installation, Commissioning and field testing including 5 Years Comprehensive Maintenance Contract (CMC) of Indigenous Solar Home Lighting Systems (SHLs) & Solar Street Lighting Systems (SSLs) under Remote Village Electrification Program for Jharkhand Renewable Energy Development Agency during Year 2008-09**

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 binding price offer as per our specifications and terms & conditions mentioned in the bid document. Salient features of the bid document are given below :

### 1. Bid Document

1.1 This bid document comprises of total 18 chapters. In addition, any other documents/instructions/amendments/revisions 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. 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 Nationalized Bank/Scheduled 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) and submit the cost of the bid document of requisite value, as applicable alongwith Part – I (Technical Bid) in separate envelope.

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

### **3. 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 11 (Proforma - 6). The bank guarantee shall be made in favour of “Director, JREDA” payable at Ranchi from any Indian Nationalized bank/Scheduled 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 self attested photocopy of registration certificate issued by Govt of Jharkhand or NSIC should clearly indicate the validity period.

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 or resiles 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 be got approved by Director, JREDA. This approval will also have a cut-off date by which the entire work will have to be completed.

#### **4. Submission of Bids**

- 4.1 Bidders are advised to submit their bids strictly based on the specification, 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 All the Performa must be on the bidder's official letterhead. Any change in wording of the Performa 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.

#### **5. 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 organizations 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/2008-09/01**, (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 – 6).
- (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 – 7, Proforma – 8, Proforma – 9, Proforma – 10, Proforma – 11 and Proforma – 12, 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 any where, 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/2008-09/01”**, (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 - 13 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/2008-09/01**", (ii) "Offer for manufacturing, testing, supplying, installation, & commissioning and field testing including 5 years Comprehensive Maintenance Contract (CMC) of Indigenous Solar Home Lighting Systems (SHLSs) & Solar Street Lighting Systems (SSLs) under Remote Village Electrification Program for Jharkhand Renewable Energy Development Agency (JREDA) during 2008-09", (iii) Name and address of the contact person of the bidding firm, and (iv) Should be addressed to Director, JREDA.

## **5.8 Evaluation Criteria**

### **1. Part 1 (Bid Security)**

Bidders who have submitted the valid bid security as per the format and eligibility shall be considered for further evaluation. Similarly if the bid document fee has not been deposited / submitted in case of downloaded forms the Bid shall be out rightly rejected.

### **2. Opening of Technical Bid**

JREDA (The Purchase Committee) will open envelope containing the Bids in the presence of Bidder's representatives who choose to attend.

The Bidder's representatives, who are present, shall sign a register evidencing their attendance. In the event of the specified day of bid opening being declared holiday for JREDA, the bids shall be opened at the appointed time and location on the next working day. On the basis of evaluation of following, only successful Bidder shall be considered for further evaluation.

### **3. Opening and Evaluation of Technical Bids**

The JREDA / Purchase Committee / Evaluation Committee would evaluate the technical bids. Bidders should be ready to get their unit inspected at a date, time in 2-3 days notice by JREDA. They are expected to reply to all the queries from the Evaluation Committee during the inspection or through email or post.



JREDA may also undertake oral clarifications with the bidders. The primary function of clarifications in the evaluation process is to clarify ambiguities not uncertainties arising out of the evaluation of the bid documents.

In order to facilitate the Technical Bid evaluation, the technical criteria laid down along with the assigned weights have been presented in (Proforma14). The marking scheme presented is an indication of the relative importance of the evaluation criteria.

Bidders securing a minimum of 70% marks in the technical evaluation will only be considered for further financial bid evaluation. Bids which don't secure the minimum specified technical score will be considered technically non-responsive and hence debarred from being considered from Financial evaluation. Scores of technically qualified Bidders shall be weighed prorata on a scale of 70 and shall be carried forward for evaluation together with the scores of Financial evaluation.

#### **4. Opening and Evaluation of Financial Bids**

After evaluating the Technical Bids, JREDA shall notify the bidders whose Technical Bids were considered acceptable to JREDA, indicating the date, time and place for opening of the Financial Bids.

The following points may be noted for the evaluation of the Financial Bid:

- Prices shall be written in both words and figures. In the event of difference, the price in words shall be valid and binding.
- Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If the Bidder does not accept the correction of the errors, its bid will be rejected. If there is a discrepancy between words and figures, the amount in words will prevail.
- Any discrepancy relating to prices quoted in the offer across different sections of the bid, only prices given in the prescribed format given at Profoma 13 of this tender notice shall prevail.

Scores of the Financial evaluation would be weighed prorated on a scale of 30 with the Bidder with the **lowest commercial quote** getting 30. These financial scores would then be added up with the score of the technical evaluation and the Bidder getting the **maximum total score out of 100** would be considered as the successful bidder (i.e. L1 Bidder) and called for negotiations, if required.

**Formula for Final Bid Evaluation is**

$$Bm = .7(TM) + .3(Fn)$$

$$Fn = (Fmin/Fb)*100$$

Where

- Bm is total marks of the bidder in consideration
- Tm is Technical Marks of the bidder in consideration
- Fn is Normalized financial score of the bidder in consideration
- Fb is Evaluated Cost of bidder under consideration
- Fmin is Minimum evaluated cost of any bidder

JREDA reserves the right to negotiate with the Bidder whose proposal has been ranked first on the basis of best value.

**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 and 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 specification and shall satisfy himself regarding the technical requirement and completeness of the equipment/system.
- 6.5 Bidder may submit their offer for minimum lot size defined or additional quantities.

## **7.0 Price**

7.1 The Bidder shall quote price as per Proforma - 13. 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 to incurred by him through or in connection with his submission of bid, even though JREDA may elect to withdraw the notice inviting bid.

## **11.0 Purchase Preference To SSI Units**

11.1 JREDA shall give purchase preference to SSI Units registered with GoJ as per Purchase Policy 2007. The Purchase Policy 2007 can be downloaded from [http://www.jharkhand.gov.in/new\\_depts/indus/indus\\_fr.html](http://www.jharkhand.gov.in/new_depts/indus/indus_fr.html)

## **12.0 Eligibility and Qualification Criteria**

12.1 The bidder shall meet the following requirements :

### **For General Bidders**

- (i) The bidder should be a reputed Bidder of SHLSs & SSLs who manufactures at least one of the major sub systems (namely, PV Module or Storage Battery or Electronics) used in the SHLSs & SSLs.
- (ii) The bidder shall furnish registration certificate clearly indicating that they are bidders of SHLS & SSLs including PV Module/Storage Battery/ Electronics as applicable.
- (iii) The bidder should have adequate infrastructure to manufacture and to test SHLS and SSLs. The bidder shall submit list of testing facilities available with it along with photographs of the manufacturing and testing facilities.
- (iv) The bidder must be in possession of valid test report for the SHLS (Model II) & 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, Thiruvananthpuram (CPRI)
  - Energy Conservation and Development Division, Bangalore (ECDD)
  - Electronics Test & Development center, Bangalore (ETDC)
- (v) The corresponding test reports clearly indicating the validity shall be submitted alongwith bid. The test certificate (of MNES specifications 2006-07) issued on or after 1<sup>st</sup> April 2008 will be eligible for supply for 2008-09 program subject to meeting other eligibility criterion. Test Certificate issued before 1<sup>st</sup> April 2008 will lead to outright rejection of the Bid. The SHLS (Model II) & SSLs tested on or after 1<sup>st</sup> April 2008 must have the technical specification as given in chapter 4.
- (vi) The bidder should have supplied solar photovoltaic systems under RVE Program of the value of at least Rupees Fifty Lacs to any State Nodal Agency during any one of the past three financial years (i.e. 2006-07, 2007-08, and 2008-09) and supplies against such work order should have completed satisfactorily as certified by the State Nodal Agency concerned.

- (vii) The bidder shall submit attested photocopies of purchase orders/contracts from the State Nodal Agencies concerned. Non-submission of above document may result in rejection of bid.
- (viii) The bidder shall submit attested certificate of satisfactory completion by 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.
- (ix) The bidder should have supplied, installed and commissioned minimum 200 nos. SHLSs and 40 nos. SSLs in minimum 04 villages under RVE Program and which should have worked satisfactorily for a minimum period of 2 years as on the date of submission of bid.

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

- (i) The bidder should be a reputed bidder 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 shall furnish registration certificate clearly indicating that they are bidders of SHLS & SSLs including PV Module/Storage Battery/ Electronics as applicable.
- (iii) The bidder should have adequate infrastructure to manufacture and to test SHLS and SSLs. The bidder shall submit list of testing facilities available with it along with photographs of the manufacturing and testing facilities.
- (iv) The bidder must be in possession of valid test report for the SHLS (Model II) & 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, Thiruvananthapuram (CPRI)
  - Energy Conservation and Development Division, Bangalore (ECDD)
  - Electronics Test & Development center, Bangalore (ETDC)
- (v) The corresponding test reports clearly indicating the validity shall be submitted alongwith bid. The test certificate (of MNES specifications 2007-08) issued on or after 1st April 2008 will be eligible for supply for 2008-09 program subject to meeting other eligibility criterion. Test Certificate issued before 1st April 2008 will lead to outright rejection of the Bid. The SHLS (Model II) & SSLs tested on or after 1st April 2008 must have the technical specification as given in chapter 4.

- (vi) The bidder should have supplied solar photovoltaic systems of the value of at least Rupees 25 Lacs to any State Nodal Agency during any one of the past three financial years (i.e. 2006-07, 2007-08, and 2008-09) and supplies against such work order should have completed satisfactorily as certified by the State Nodal Agency concerned. SSI Units registered with Govt. of Jharkhand & NSIC shall be exempted from turnover clause
- (vii) The bidder shall submit attested photocopies of purchase orders/contracts from the State Nodal Agencies concerned. Non-submission of above document may result in rejection of bid.
- (viii) The bidder shall submit attested photocopy of certificate of satisfactory completion from the 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.

### **13.0 Validity of Offer**

- 13.1 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.

### **14.0 Other Terms & Conditions**

- 14.1 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 (all pages) issued by the Govt. of Jharkhand and/or from NSIC clearly indicating validity & monetary limit, as applicable.
- 14.2 Insertion, post-script, addition and alteration shall not be recognized unless confirmed by bidder's signature and stamp.
- 14.3 Incomplete tender or tenders not submitted as per requirement as indicated in the NIB are likely to be rejected.
- 14.4 Bidders shall submit their offer strictly as per terms and conditions of the tender document without any deviation.
- 14.5 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.
- 14.6 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.
- 14.7 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.

- 14.8 If it happens to be holiday on the date of submission/opening of bids then same shall be submitted/opened on next working day at the same time & at the same venue.
- 14.9 JREDA reserves the right to reject part or whole of the bid/order with or without assigning any reason thereof.
- 14.10 No postal transaction shall be entertained for obtaining bid documents.
- 14.11 Issuance of bid documents shall not construe that the bidders would be automatically considered qualified.
- 14.12 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.
- 14.13 Bid documents are not transferable.

### 3. General Terms & Conditions

#### 1.0 Scope of Work

- 1.1 The Scope of work for SHLS & SSLs includes — manufacturing, shop testing, packing & forwarding, transportation, supply, installation, commissioning & field testing 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 or Hindi or local Language as may be communicated by JREDA) 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 bidder 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 :

<b>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 प्रधत (वित्तीय वर्ष 2008-09)</b>	
ग्राम का नाम :	.....
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 – 2 (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 conform 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 – 2 (Financial Bid) of only those bidders, whose Part – 1 (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 – 2 (Financial Bid) from what is given in the Bid Detail, the date & time for opening of the Part – 2 (Financial Bid) will be uploaded in JREDA website. Bidders are requested to visit the website ([www.jreda.com](http://www.jreda.com)) regularly and keep themselves informed.
- 2.5 The Part – 2 (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 & SSLs 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 bidder located outside the state of Jharkhand will have to include 4% VAT as applicable in Jharkhand.
- 2.9 JREDA, if required, may at its discretion extend the scheduled date of opening of Part – 2 (Financial Bid).

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

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

### **4.0 Quantity of Supply**

4.1 The quantity required 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.

4.2 Bidders may submit their offer for minimum lot size and additional quantities as defined in the Bid Details.

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

### **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 & SSLs and 5 years CMC in full and complete set including SPV module, control electronics, battery, mechanical components, etc. should be quoted in Proforma -13. The price shall be for the total scope as defined in this document.

6.2 For supply of items in full & good condition at FOR Site/Stores site (door delivery basis) to various consignees across the State of Jharkhand, preferably 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 Bidder shall indemnify and keep indemnified JREDA, which indemnity, the Bidder 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 Bidder shall comply. The adjustment in Contract Price shall be made at the same unit rate as per Price Schedule (Proforma – 13).

## **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. Letter from the Village Energy Committee that all the beneficiaries have been given the guarantee card as specified in Proforma – 7.
2. Certificate from Village Energy Committee as proof of compliance as specified in Proforma – 8.
3. Declaration from each beneficiary of the village as specified in Proforma – 9.
4. Utilization Certificate from each beneficiary of the village as specified in Proforma – 10.
5. 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 – 11.
6. Village-wise detail of the trainings organized as specified in Proforma – 12.
7. Commercial invoice of the supply made in triplicate.
8. 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 Bidder will be asked to submit the following documents :

1. Commercial invoice of the supply made in triplicate (after deducting the cost of systems not found during the third party verification)

(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. Commercial invoice in triplicate.
2. Submission of quarterly reports of CMC undertaken by the bidder as given in chapter 5 of this bid document.

3. This payment will be made to the Bidder on the basis of the Monitoring & Evaluation Report of the CMC to be undertaken by an authorized agency of JREDA.
4. If the Bidder does not undertake proper and regular maintenance work as per the CMC, and JREDA is not able to get the repair and maintenance work of the SHLSs and SSLs through any other agency it deems fit, JREDA would be authorized to deduct proportionate amount from the 2% amount payable to the Bidder for the year.
5. If even after 1 month of the submission of the quarterly Monitoring & Evaluation Report of the CMC, the Bidder does not undertake proper and regular maintenance work as per the CMC, 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 Bidder 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 Bidder and payable at Ranchi or through RTGS if the bidder furnishes details of banking channel
8. All the payments shall be paid in the name of only successful bidder not to anyone else.

## **8.0 Income Tax/ VAT**

- 8.1 Without prejudice to the obligations of the Bidder 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 appropriate Tax authorities on account of the Bidder. JREDA shall provide the Bidder 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 except any change in the taxes/duties applicable during the execution period of the contract.

9.2 The Bidder 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 Bidder.

#### **10.0 Agreement**

10.1 The Bidders have to enter into an agreement within two weeks or as may be decided by JREDA, in the office of the Director, JREDA in prescribed format before commencement of supply/services.

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

11.1 JREDA reserves the right to inspect the bidder'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.

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

11.3 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.

11.4 Successful bidder shall inform JREDA at least 10 days in advance of schedule dispatch.

#### **12.0 Dispatch Instructions**

12.1 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.

12.2 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.

### **13.0 Transit Insurance**

- 13.1 Transit Insurance shall be arranged by the Bidder for his total supplies. In case of any damage/loss/pilferage/non-delivery during transit, the Bidder shall lodge the claim and settle the claim with the insurance agency. The Bidder 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 Bidder/Sub- Bidder to comply with the above shall be to the account of the Bidder. JREDA will issue letter of recommendation to the insurance company if need be.

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

- 14.1 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 Bidder regarding the operation and maintenance of their SHLSs & SSLs.
- 14.2 The Bidder 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.

### **15.0 Completion Schedule**

- 15.1 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.

### **16.0 Guarantee Period**

- 16.1 The Bidder must provide guarantee which include servicing & replacement guarantee for parts and components (such as battery, electronics, CFL lamps and luminaries, etc) of Solar Home Lighting Systems and Solar Street Lighting System for 5 (five) years. For PV modules, the replacement guarantee is for 10 (ten) years from the date of commissioning the SHLSs & SSLs at site & demonstration of performance to the consignee/JREDA.
- 16.2 The guarantee card to be supplied with the system must contain the details of the system supplied as given in the Proforma - 7. The bidders can also provide additional information about the system and condition of guarantee as necessary.

16.3 Bidder 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.

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

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

17.2 In the event the Bidder contravenes this condition, JREDA reserves the right to reject the equipment/work sub-contracted and procure the same from elsewhere at Bidder's risk and cost. The Bidder 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.

17.3 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.

**18.0 Liquidated Damages for Delay in Completion**

18.1 The completion period for the assignment has been worked out and all resource & work planning is to be done accordingly with flexibility for adjustments.

18.2 If the Bidder 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.

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

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

## **19.0 Cancellation of Order**

19.1 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 Bidder is found defaulter for delayed supply or failure to deliver satisfactory performance or supply of substandard materials pursuant to NIB conditions.
- (b) If the Bidder/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 Bidder/Vendor is involved in any action of moral turpitude.

## **20.0 Arbitration**

20.1 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.

20.2 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.

20.3 The venue of arbitration proceeding shall be within Jurisdiction of Court of Law at Ranchi only.

20.4 Work under this contract shall be continued by the Bidder 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.

## **21.0 Force Majeure**

21.1 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.

- 21.2 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.
- 21.3 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.
- 21.4 The above-mentioned force majeure conditions/clause shall also apply in the works of sub-contractors/Bidders of the contractor.
- 21.5 However, the Bidder 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.

## 4. Technical Specification

### A. 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 conform 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
	Other Components	Control Electronics – Module mounting hardware, Battery box, Inter connecting wires/cables, Switches, Operation, Instruction and Maintenance Manual

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

2.3 Small white LED shall 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 shall be compact fluorescent (CFL) type, 4-Pin, with rating of 9 Wp. A suitable pre-heating circuit must be provided.

4.2 The light output from the lamps should be around 600±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 shall be of flooded electrolyte type, positive tubular plate and maintenance free lead acid battery conforming to relevant BIS standard.

5.2 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 will be of quasi sine wave/sine wave type with a frequency in the range of 20-35 KHz. Half-wave operation is not acceptable.

6.2 The total electronic efficiency shall be at least 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.

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

7.1 The PV Module(s) shall contain crystalline silicon solar cells.

7.2 The power output of the module(s) 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 Bidder or distinctive logo.
- ii. Model or Type Number
- iii. Serial Number
- iv. Year of Make

- 7.7 Models of reputed make shall be offered.
- 7.8 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 2008-09
- Not for sale or transfer
- Statutory action would be taken by JREDA, if it found sold or transferred.

## **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 lantern is switched ON).
- 8.2 Battery cut offs & reconnects should be provided to protect it against overcharge and deep discharge condition.
- 8.3 A fuse should be provided to protect against short circuit conditions.
- 8.4 A blocking diode, should be provided as part of the lantern electronics to prevent reverse flow of current through the PV module, if such a diode is not provided with the module itself.
- 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 (MS Flat/MS Angle of minimum size 25 mm x 3 mm) to hold the SPV module(s). The frame structure shall have provision to adjust its angle of inclination to the horizontal between 0 and 45, so that it can be installed at the specified tilt angle.
- 9.2 A vented metallic box of MS (0.70 mm minimum thickness) with acid proof corrosion resistance, painted as per relevant BIS for housing the storage battery indoors shall be provided. The box can be of injection moulded plastic/ acrylic/polymer of 2.5 mm minimum thickness. The material used should be 100 % acid proof, rust proof and good electrical insulator. The box should have grid structure at the base for proper strength.

## **10.0 Other Features**

- 10.1 Two LED indicators one for a green light to indicate charging in progress and another red LED to indicate deep discharge conditions of the battery. The green LED should glow only when the battery is actually being charged.
- 10.2 The following details should be marked indelibly on the SHLS.
- i. Name of the Bidder 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 confirm to the latest BIS specification, whichever such specifications are available and applicable.

## **11.0 Documentation**

- 11.1 An operation, instruction, maintenance manual in English or Hindi or 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 Photovoltaic
  - (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(s)
  - (vii) About Electronics
  - (viii) About Charging and Significance of Indicators.
  - (ix) Do's and Don'ts
  - (x) Clear instructions on Regular Maintenance and Trouble Shooting of Solar Home 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 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 Bidder within the quoted price.
- 11.3 The Bidder shall satisfy JREDA that the Bidder 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 MNRE Standards and test certificate so issued by the appropriate certification Agency/ Lab by the MNRE.
- 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 which other equipment have already been supplied and which have operated efficiently and reliably elsewhere at least three years or as may be applicable under eligibility criteria, similar climatic and operating condition. Operation feedback for such equipment already supplied shall 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.

## B. 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
	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 shall be designed to automatically switch on at dusk, operate throughout the night and automatically switch off at dawn, under average daily insolation of 5 KWH/Sq. M on a horizontal surface.

### 4.0 Lamps

4.1 The lamps shall be compact fluorescent (CFL) type, 4-Pin, with rating of 11 Wp. A suitable pre-heating circuit must be provided.

4.2 The light output from the lamps should be around 900±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 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 and low maintenance lead acid battery 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 20-35 KHz. Half-wave operation is not acceptable.
- 6.2 The total electronic efficiency shall be at least 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 P V Module shall 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 crystalline silicon solar cells.
- 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 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 Bidder or distinctive logo.
  - II. Model or Type Number
  - III. Serial Number
  - IV. Year of Make



- 7.7 Models of reputed make shall be offered.
- 7.8 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 2008- 09
- Not for sale or transfer
- Statutory action would be taken by JREDA, if it found sold or transferred.

## **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 lantern is switched ON).
- 8.6 Battery cut offs & reconnects should be provided to protect it against overcharge and deep discharge condition.
- 8.7 Fuses should be provided to protect against short circuit conditions.
- 8.8 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.
- 8.9 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 pole to hold the SPV module(s). 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 The pole should be made of mild steel pipe with a height of 4 meters above ground level, after grouting and final installation. The pole should be either in one piece with uniform diameter of 76mm OD or swaged type with 76 OD in lower portion and 60mm OD in upper portion or 76 mm OD throughout. The pole should have minimum thickness of 3mm and have the provision to hold the weather proof lamp housing. It should be duly primered (2 coats) and painted with a corrosion resistant paint colour of Golden Yellow.

9.3 The Battery Box should be vented metallic box with acid proof and corrosion resistant painted for outdoor use as per relevant BIS standard for housing the storage battery. Thickness of battery box shall be minimum 0.70 mm made of MS sheet. It would be preferred to have battery box of plastic/Acrylic/Polymer of minimum 2.5 mm thickness. The material used should be 100% acid proof, rust proof and good electrical insulator. The box should have grid structure at its base for proper strength.

#### **10.0 Other Features**

10.1 Two LED indicators one for a green light to indicate charging in progress and another red LED to indicate deep discharge conditions of the battery. The green LED should glow only when the battery is actually being charged.

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

- i. Name of the Bidder or distinctive logo.
- II. Model or Type Number
- III. Serial Number
- IV. Year of Make

10.3 Components and parts used in Solar Street Light Systems should confirm to the latest BIS specification, whichever such specifications are available and applicable.

#### **11.0 Documentation**

11.1 An operation, instruction, maintenance manual in English & Hindi or in the local language should be provided with the Solar Street Light System. The following minimum details must be provided in the manual :

- I. About Photovoltaic
- II. About Solar Street 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(s)
- VII. About Electronics
- VIII. About Charging and Significance of Indicators.
- IX. Do's and Don'ts
- X. Clear instructions on Regular Maintenance and Trouble Shooting of Solar Street 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 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 Bidder within the quoted price.
- 11.3 The Bidder shall satisfy JREDA that the Bidder 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 MNRE Standards and test certificate so issued by the appropriate certification Agency/Lab by MNRE
- 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 which other equipment have already been supplied and which have operated efficiently and reliably elsewhere at least three years under similar climatic and operating condition. Operation feedback for such equipment already supplied shall 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.

# 5. Five Years Comprehensive Maintenance Contract (CMC)

## 1.0 The Comprehensive Maintenance Contract (CMC)

- 1.1 The Comprehensive Maintenance Contract shall include servicing & replacement guarantee for parts and components (such as battery, electronics, CFLs, Luminaries, etc) 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 ten 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 Bidder. Accordingly, the Comprehensive Maintenance Contract (CMC) shall have two distinct components as described below.

## 2.0 Preventive/Routine Maintenance

- 2.0 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.

## 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 Bidder 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/Bidder shall establish at least one Service Center for every 500 Solar PV Systems, deployed within a specified geographical area.

3.3 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 down time of an individual system.
4. The Service Center shall send summary service reports to State Nodal Agency on quarterly basis. 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.

3.4 The records maintained at the Service Center shall be available for scrutiny of authorized representatives of the concerned State Nodal Agencies or MNRE.

3.5 The bidder shall ensure adequate insurance of SPV systems against robbery, theft, burglary and acts of God such as natural calamities, flood, etc.

- 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 The Bidder should pay Re. 1 (One) to the agent (appointed by Village Energy Committee) per light/month for the services of topping up and general maintenance during CMC. The agent will also carry out the liaisoning activity amongst the Bidder, VEC and the beneficiaries.
- 3.9 The quality/level of service provided by the Bidder would form the basis for determining eligibility of the Bidder to participate in the subsequent programs of JREDA.

## 6. Proforma – 1

<b>Forwarding Letter</b>
--------------------------

NIB No. : JREDA/RVEP/2008-09/01

Date : 24.06.2009

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/2008-09/01 for Manufacturing, Testing, Supply, Installation, Commissioning & Field Testing Including 5 Years Comprehensive Maintenance Contract (CMC) of SHLSs & SSLs Under Remote Village Electrification Program**

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

<b>Authority Letter for Signing Bid Document &amp; Attending Bid Opening Meeting</b>
--

NIB No. : JREDA/RVEP/2008-09/01

Date : 20.06.2009

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)

Name : .....

Designation : .....

.....

(Signature of Authorized Signatory)

Name : .....

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

### Information about the Bidding Firm

BID No. : JREDA/RVEP/2008-09/01

Date : 20.06.2009

Sl.	Particulars	
1.	Name of the Bidder	
2.	Address of Bidder	
3.	Telephone No.	
4.	Fax No.	
5.	E-mail Address	
6.	GPS Co-ordinate of Registered Office	
7.	GPS Co-ordinate of Factory Campus	
8.	Name & Designation of Authorized Signatory for Correspondence	
9.	Nature of Firm (Proprietorship/Partnership /Pvt. Ltd./Public Ltd. Co./Public Sector)	
10.	Permanent Account Number (PAN)/TAN	
11.	Firm's Registration Number/ ROC	
12.	EPF Registration No. (if applicable)	
13.	Sales Tax/Value Added Tax Registration Number/TIN	
14.	Specify the Item Originally Manufactured	
15.	Year of Starting of Manufacturing/	

	Assembling of PV Component(s)			
16.	International Certification Awarded (if any)			
17.	Installed Capacity for Solar Products/ Components			
18.	Production and Sale of Solar Components in the Last Three Years (in thousand units)		<b>Production</b>	<b>Sales</b>
		2006-07		
		2007-08		
		2008-09		
19.	Total Production and Sale of PV Products During the Last Three Years (in Rupees)	2006-07	<b>Production</b>	<b>Sales</b>
		2007-08		
		2008-09		
20.	Name of Material and Model Type Offered		<b>As per Test Certificate</b>	<b>As being offered</b>
21.	Name of Bidder of SHLS/SSLS with Full Address			
	1.	SPV SHLS & SSLS	<b>As per Test Certificate</b>	<b>As being offered</b>
	2.	PV Module		
	3.	Control Electronics/Charge Controller		
	4.	Battery		
22.	Particulars of Earnest Money			
23.	Quantity Quoted for this Bid			
	1.	Solar Home Light Systems (SHLSs)		
	2.	Solar Street Light Systems (SSLSs)		

24.	Whether bidder is permanently registered as an SSI Unit of Jharkhand and/or with NSIC Unit for SPV system	
25.	Place where Materials will be Manufactured	
26.	Place where Materials will be Available for Inspection	
27.	Whether the Bidder has submitted details with regard to supplies made to important organizations.	
28.	Details of any existing service network in Jharkhand (Name & address of service centre, year of opening)	
29.	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 in seriatim 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/2008-09/01

Date : 20.06.2009

Details of Orders Received & Executed by the Bidder/Supplier for Supply of SHLSs & SSLs to different Govt. Organization/JREDA/ Other Nodal Agencies/Important Organization & Institutions during Last Three Years.

Sl.	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,

(Signature of Authorized Signatory)

Note:

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

Name :  
Designation :  
Company seal :

# 10. Proforma – 5

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

NIB No. : JREDA/RVEP/2008-09/01

Date : 20.06.2009

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 from 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 person competent and having the power of attorney to bind the bidder.

# 11. Proforma – 6

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

NIB No. : JREDA/RVEP/2008-09/01

Date : 20.06.2009

(To be submitted in 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 ..... (Bidder's name)  
(thereinafter referred to as "Bidder"), 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 Bidder 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 Bidder.

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 Bidder/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 Bidder/Tenderer for the work under "Notice Inviting Bid Ref. No. : JREDA/RVEP/2008-09/01 dated 20.06.2009".

2. Your decision as to whether the Bidder/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 Bidder/Tenderer for the work under "Notice Inviting Bid Ref. No. : **JREDA/RVEP/2009-20/01 dated 20.06.2009**" 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 Bidder/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 .....

.....



## 12. Proforma – 7

<b>Format for Guarantee Card to be Supplied with Each SHLS &amp; SSLS</b>
---

NIB No. : JREDA/RVEP/2008-09/01

Date : 20.06.2009

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

### Guarantee Card

1.	Name & Address of the Bidder/ 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 Bidder	
	(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 Bidder	
	(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°C	
	(g) Guarantee Valid Up To	

6.	Details of Electronics & Other BOS Items	
(a)	Name of the Bidder	
(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 / SSSLs components will be generally guaranteed as per point 17 of General Terms & Conditions. The bidder 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 MNRES specifications.

## 13. Proforma – 8

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

NIB No. : JREDA/RVEP/2008-09/01

Date : 20.06.2009

### प्रमाण प्रत्र

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 उपकरणों 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. ....

## 14. Proforma – 9

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

BID No. : JREDA/RVEP/2008-09/01

Date : 20.06.2009

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

#### सहमति – पत्र

मै 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 निशान

#### प्रमाणित

.....  
अध्यक्ष  
ऊर्जा समिति

.....  
सचिव  
ऊर्जा समिति

.....  
कोषाध्यक्ष  
ऊर्जा समिति

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

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

.....  
इन्द्रोडयुसर का पूर्ण हस्ताक्षर

## 15. Proforma – 10

**Format for Utilization Certificate from Each Beneficiary of the Village**

BID No. : JREDA/RVEP/2008-09/01

Date : 20.06.2009

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

कार्यान्वयन एजेन्सी : झारखंड रिन्युएबल 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 मेक	
	(ग)	मॉड्यूल उत्पादन वर्ष	
2.	इलेक्ट्रॉनिक्स		
	(क)	इलेक्ट्रॉनिक्स नं०	
	(ख)	इलेक्ट्रॉनिक्स मेक	
	(ग)	इलेक्ट्रॉनिक्स उत्पादन वर्ष	
3.	बैट्री		
	(क)	बैट्री नं०	
	(ख)	बैट्री मेक	
	(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

## 16. Proforma – 11

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

BID No. : JREDA/RVEP/2008-09/01

Date : 20.06.2009

Name of Bidder/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 Manufacture	Number	Make	Year of Manufacture	Number	Make	Year of Manufacture	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 Manufacture	Number	Make	Year of Manufacture	Number	Make	Year of Manufacture	Ration Card No.	Voter Card No.	Others No.							

# 17. Proforma – 12

<b>Format for Village-wise Details of the Trainings Organized</b>
---

BID No. : JREDA/RVEP/2008-09/01

Date : 20.06.2009

Name of Bidder : ..... 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

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



# 18. Proforma – 13

## Format for Submitting the Price Schedule

BID No. : JREDA/RVEP/2008-09/01

Date : 20.06.2009

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) as per the Bid Document including CMC			
B	Supply of Solar Street Light Systems (SSLs) as per the Bid Document including CMC			
Total Price (A+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 :

## 19. Proforma – 14 (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 State Nodal Agency 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 satisfactorily on the reporting date	Number of complaint received during the period of reporting	Number of complaint attend during period of reporting	Major cause of failure, as observed.	Major replacement made during the reporting period.	No. of Systems attend during Routine Maintenance

Signature of Supplier

Signature of Technicians

Signature of  
Village Urja Committee

## 19. Proforma – 14 (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.			Charge Controller No.			Date of breakdown	Date of repairing	Date of inspection for Regular Maintenance	Signature of Beneficiary	Present Status	Latitude	Longitude	Remarks
			Voltage	Current	Specific gravity	Indicator charge	CFL full glow	Charge controller operation								

Signature of Supplier

Signature of Technicians

Signature of  
Village Urja Committee

20. PROFORMA 15

Technical Bid Evaluation Criteria

Criteria/Sub Criteria and Point system for the evaluation of Technical proposals					
Sl. No.	Criteria/Sub Criteria	Description	Point System	Max Criteria/ Sub Criteria Points	Page No. in the Bidders Proposal
1.	<b>Past Experience of the Bidder</b>			<b>20</b>	
a.	<b>Turnover</b>	(i) All completed / ongoing order/ project together (with each having a minimum value of 50 Lakhs) for the last three years to be looked at	>50 lacs = 10 points >45 lacs = 8 points >40 lacs = 6 points >30 lacs = 4 points >25 lacs = 2 points Else 0	10	
		or (ii) SSI in Jharkhand and NSIC Regn.	>2 years = 10 points >1 year = 8 points	10	
b.	<b>Works Order</b>	(i) Whether the Firm has delivered order of Similar Capacity in last 3 yr.	>50 lacs = 10 points >45 lacs = 8 points >40 lacs = 6 points >30 lacs = 4 points >25 lacs = 2 points else 0	5	
		or (ii) SSI in Jharkhand/NSIC Regn.	>2 years = 5 points >1 year = 3 points <1 year = 2 points	5	
c.	<b>Turnover</b>	(i) SSI in Jharkhand	>25 lacs = 4 points >20 lacs = 3 points >15 lacs = 2 points >10 lacs = 1 points else 0	5	
		or (ii) SSI in Jharkhand / NSIC Regn.	>2 years = 5 points >1 year = 3 points <1 year = 2 points	5	

<b>2.</b>	<b>Solution proposed for the product by the Bidder or Consortium (with MOU)</b>		<b>55</b>	
a.	<b>Infrastructure</b>	Requirement addressed as mentioned in different parts of the bid and the quality of the bid	Evaluation Committee will evaluate whether all the points / requirements mentioned in the bid are addressed well and award points accordingly, the important parameters being : 1.Manufacturing infrastructure i.e. shop, floor, Test Room, Store, Packing, Quality Control. 2.Testing Methodology • Equipments • Test Bench • Quality Control Procedure suggested by Bidders.	<b>25</b>  15  10
b.	<b>Mechanical</b>	Description of the overall implementation methodology for mechanical structure and civil work	Evaluation Committee will evaluate whether the manufacturing and testing methodology is in line with the requirement i.e. MNES Spec./ Test Certificate. The important parameters being: • Accessibility Similarity of the system. • Manpower capacity • Suggested adaptability by the unit • Plan for meeting the specification norms • Spare parts / equipments availability plans	<b>10</b>  1  5 2 1  1
c.	<b>Compliance of the components offered for the product</b>	The compliance with the technical specifications of the product as per the requirements mentioned in	Though 100 % compliance is expected from the Bidder and any major deviation from requirement shall lead to disqualification of the bid however small	<b>10</b>

		the bid.	deviation from tender specification will be permitted by the evaluation committee and deduction of marks will be as follows: 1. Deviation in specification of SPV – deduction of 3 marks. 2. Deviation in specification of Battery – deduction of 2 marks. 3. Deviation in specification of BOS – deduction of 1 mark. 4. Any other type of Deviation in bid – deduction of 4 marks.		
d.	<b>Training Awareness</b> /	Proposed Training and change Management plan description to be looked into	Subjective Criteria – The Evaluation Committee will evaluate on the basis of • Proposed Training Schedule • Areas/domains covered • Number of personnel to be deployed for training with location of training (to be clarified if not mentioned)	<b>5</b>	
e.	<b>Formation of Service Centre</b>	Proposed methodology of formation of the service centre	Subjective Criteria – The Evaluation Committee will evaluate on the basis of • Proposed Staff details Areas/domains covered	<b>3</b>	
f.	<b>Technical bid</b>	Technical bid to be looked into	The bidder's clarity of the total scope of work, approach and methodology and the quality weightage of the inspection shall be considered, if called for	<b>2</b>	
<b>3.</b>	<b>Work Plan approach and proposed methodology</b>			<b>10</b>	
a.	<b>Compliance with the timelines/Deliveries</b>	The order implementation to be looked into	1. 30 days or less additional days for the timelines as mentioned in the bid – deduction 3 points 2. 60 days or less additional days for the timelines as mentioned in the bid	<b>5</b>	

			– deduction 2 points 3. 60 days or less additional days for the timelines as mentioned in the bid – deduction 5 points		
b.	<b>Detailed Work Plan (Bar Chart)</b>	The description and quality of the work plan to be looked into	Subjective Criteria: The detailed Project Plan including day wise, week wise activities with manufacturing, testing and Breakdown Structures, milestones etc	5	
<b>4.</b>	<b>Solvency</b>			<b>15</b>	
a.	<b>Bank</b>	Name of the bank and address and sanctions limits	>25% of project cost = 5 marks >15% of project cost = 3 marks >05% of project cost = 2 marks <02% of project cost = 0 marks	5	
b.	<b>Self Finance</b>	Available average surplus as per B/S of last three years	>05% of project cost = 5 marks >03% of project cost = 3 marks >01 % of project cost = 2 marks <01% of project cost = 0 marks	5	
c.	<b>Institutional Support like NSIC/Industries Depts.</b>	B.G. / LC Support, Raw material, Bank etc	NSIC = 05 marks Technical Institutions = 3 marks Others = 02 marks Private = 0 marks	5	
			<b>TOTAL</b>	<b>100</b>	

## 21. 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 - 6	
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)	
4.	Attested photocopy of registration certificate issued by Govt of Jharkhand or NSIC should clearly indicate the validity period.	
5.	Proforma – 1 (Forwarding Letter)	
6.	Proforma – 2 (Authority Letter for Signing Bid Document & Attending Bid Opening Meeting)	
7.	Proforma – 3 (Information about the Bidding Firm)	
8.	Proforma – 4 (Details of Orders Received and Executed in Past 3 Years)	
9.	Proforma – 5 (No Deviation Certificate)	
10.	Test certificate of SHLS & SSLs issued by Solar Energy Centre/MNRE approved testing centres for the test performed on or after 1 <sup>st</sup> April 2007 as per MNRE, Govt. of India specifications.	
11.	Attested photocopies of purchase orders/contracts from the State Nodal Agencies concerned. The bidder should have supplied solar photovoltaic systems under RVE Program of the value of at least Rupees Fifty Lacs (Rupees Twenty Five Lacs in case of SSI Units) to any State Nodal Agency during past three financial years (i.e. 2005-06, 2006-07, and 2007-08).	
12.	Satisfactory completion of work certificate from the State Nodal Agencies for which the bidder has done work and mentioned in this bid document.	
13.	General bidders should have supplied, installed and commissioned minimum 200 nos. SHLSs and 40 nos. SSLs in minimum 04 villages under RVE Program and which should have worked satisfactorily for a minimum period of 1 year as on the date of submission of bid	
14.	Proof of annual turnover for past 3 years for SPV systems including details of manufacturing capacity/facility alongwith testing facilities and list of items/products manufactured in house and bought-out items.	
15.	Attested copies of Sales Tax/ TIN/ VAT Current Clearance Certificate and Sales Tax/VAT Registration Certificate/ PAN/ TAN	
16.	Attested Photo-copy of Proprietor's affidavit/Partnership Deed in case of Proprietor firm/partnership firm and ROC in case of company	
17.	Copy of MoU signed for Pre-bid tie-up	
18.	Financial capability/Solvency Certificate from bank/Financial Institution (indicating BG Limit, Cash Credit Limit, Overdraft limit & Cheque Purchase Limits)	
19.	Technical Particular data sheet of SHLS (Model II) & SSLs of Bidder	
20.	PF Registration Certificate & PF Registration No./Affidavit for non-applicability of PF rules (if applicable)	
21.	Copy of audited Balance Sheet and Profit & Loss Account for last 3 (three) years	
22.	Photographs of Registered Office & Factory along with manufacturing and testing facility	
23.	A tentative overall supply schedule in the form of Bar Chart	



Please Ensure:

1. Please ensure that all information is provided strictly in the order mentioned in the check list mentioned above.
2. Note that this is a zero deviation tender. Bidders are advised to strictly confirm compliance to bid conditions and not to stipulate any deviation/conditions in their offer. Subsequent to bid submission, JREDA may or may not seek confirmations/clarifications and any offer(s) not in line with Bid conditions shall be liable for rejection.
3. Any clarification/confirmation bidder may require shall be obtained from JREDA before submission of the bid.
4. 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.

\* \* \* \* \*