

## **Notice Inviting Bid**

**For**

**Design, Manufacture, Testing, Supply, Installation & Commissioning, Operation & Maintenance of 5 Nos. x 100 kWp (Total 500 kWp Capacity) Stand Alone SPV Power Plant and 2500 LED Street Lights (including five years CMC) on Turnkey basis along Deoghar-Basukinath State Highway of Jharkhand**

**Sponsored By**

**Ministry of New & Renewable Energy, New Delhi**

**&**

**JREDA, Government of Jharkhand**



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

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## Notice Inviting Bid

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

**Sub: Design, Manufacture, Testing, Supply, Installation & Commissioning, Operation & Maintenance of 5 Nos. x 100 kWp (Total 500 kWp Capacity) Stand Alone SPV Power Plant and 2500 LED Street Lights including five years CMC on Turnkey basis along Deoghar-Basukinath State Highway of Jharkhand.**

### **Preamble**

As a part of Solar Photovoltaic Programme, JREDA invites bid for “**Design, Manufacture, Testing, Supply, Installation & Commissioning, Operation & Maintenance of 5 Nos. x 100 kWp (Total 500 kWp Capacity) Stand Alone SPV Power Plant and 2500 LED Street Lights including five years CMC on Turnkey basis along Deoghar-Basukinath State Highway of Jharkhand**” for short listing of experienced & eligible bidders to whom work shall be allocated for successful execution of the project in a defined time frame.

### **Part –I Technical Bid:**

The bidder should fulfill the following minimum technical and eligibility conditions. The bidder should submit the check list for this purpose as per the Performa given at **Annexure-2**.

1. The bidder should be MNRE approved Channel Partner/ MNRE approved Manufacturer/ MNRE approved PV System Integrator/A registered manufacturing company/Firm/Corporation in India (Including MSME of Jharkhand) of at least one of the major sub systems namely SPV Cells/ Modules or Battery or PV System Electronics (Confirming to relevant National/ International Standards. The bidder shall furnish either relevant MNRE certificate or concerned Industry Department certificate clearly indicating that they are manufacturers of SPV Systems including SPV Cells/ Modules or Battery or PV System Electronics as applicable. **Authorized dealers and sub-contractors are not eligible to participate.**
2. The bidder should be a functional organization. To substantiate this claim, the bidder should submit the copy of balance sheet for last 3 years or from the date of establishment to 31.03.2012, whichever is applicable indicating clearly the sale and turnover of SPV systems. These balance sheets should be duly certified by the Statutory Auditor with his stamp.
3. Registered Micro, Small & Medium Enterprise (MSME) of Jharkhand should submit the attested copy of Registration given by Industry Department.
4. **Experience Requirement:**  
**For General Bidder:** Bidder should have cumulative experience of executing contracts of at least **125.00 kWp** SPV Systems to any SNA / Govt. Organization / PSU in the last seven years ending up to date of advertisement of this tender.  
**For MSME of Jharkhand:** Bidder should have cumulative experience of executing contracts of at least **50.00 kWp** SPV Systems to any SNA / Govt. Organization / PSU in the last seven years ending up to date of advertisement of this tender. The copy of order and certificate indicating its successful execution should be enclosed with the check list as at **Annexure-2**.

5. The offered PV Modules should be Crystalline Silicon PV Modules as per IEC 61215 Standards or IS14286 and having test certificates prescribed by MNRE. In addition, the modules must conform to IEC 61730 part I – requirement for construction and part – II requirement for testing, for safety qualification or equivalent IS. The valid test certificate should be enclosed along with the check lists at **Annexure-2**.
6. Electronics should conform to relevant Standard for efficiency measurement and should also conform to relevant BIS standard for environmental testing. The inverter should be from Indian Manufacturer. The valid test certificate should be enclosed along with the check lists at **Annexure-2**.
7. Batteries should conform to relevant IEC / IS specifications and should fulfil the requirement as per specification given at Technical Specification for Capacity Test Charge/Discharge efficiency Self-Discharge as per MNRE requirements and valid test reports to be submitted along with the check lists at **Annexure-2**. The certificate should be in a form of an undertaking letter from the manufacturer complying all the technical specifications of battery.
8. The Bidder should have valid CST/State VAT/ TIN registration certificate. A copy of which should be enclosed in the check lists at **Annexure-2**.
9. The bidder should confirm that they have the resources and capability to supply not less than **8%** of the offered quantity per month in the form of an undertaking. The Performa for undertaking is given at **Annexure-3**.
10. **Turnover Requirement:**  
**For General Bidder:** Bidder should have the minimum average Annual Turnover of **Rs. 4.25 Crore** derived from the last three financial years ending on 31.03.2012/2013 on the basis of audited annual accounts for SPV Systems.  
**For MSME of Jharkhand:** Bidder should have the minimum average Annual Turnover of **Rs. 1.70 Crore** derived from the last three financial years ending on 31.03.2012/2013 on the basis of audited annual accounts for SPV Systems.  
The certificate should be as per the Performa given at **Annexure-12**.
11. **Net worth Requirement:**  
**For General Bidder:** Bidder should have the minimum Net Worth of **Rs.1.70 Crore** as on 31.03.2012/2013 on the basis of audited annual accounts for SPV Systems.  
**For MSME of Jharkhand:** Bidder should have the minimum Net Worth of **Rs.0.85 Crore** as on 31.03.2012/2013 on the basis of audited annual accounts for SPV Systems.  
Net worth certificate should be as per the Performa given at **Annexure-13**.
12. The bidder should either purchase the bid document from JREDA office by submitting a demand draft of Rs. 10,000/- (Rupees Ten thousand only) in favour of “Director, JREDA” on any Indian Nationalized Bank/Scheduled Bank, payable at “Ranchi”. Bidders may also download the bid document from JREDA website (www.jreda.com) and submit the cost of the bid document of requisite value in the form of Demand Draft, as applicable along with Part – I (Eligibility Bid).
13. Bidders should submit in Part – I (Technical Bid) the earnest money in the form of Bank Guarantee of requisite value as mentioned in “Particulars of Tender”. The Bank Guarantee shall be made in favour of “Director, JREDA” payable at Ranchi from any Indian Nationalized bank/Scheduled bank. The bank guarantee shall remain valid for 12 months.

### **Particulars of Bid**

#### **NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

Eligible and prospective Bidders may quote their offers as per details mentioned below:

1.	Name of work	<b>Design, Manufacture, Testing, Supply, Installation &amp; Commissioning, Operation &amp; Maintenance of 5 Nos. x 100 kWp (Total 500 kWp Capacity) Stand Alone SPV Power Plant and 2500 LED Street Lights including five years CMC on Turnkey basis along Deoghar-Basukinath State Highway of Jharkhand.</b>
2	Tentative Quantity	5 Nos. x 100 kWp and 2500 Nos. LED Street Lights The estimated cost is about <b>Rs.17.00 Crores</b> as per the MNRE bench mark rate & past rate of JREDA.
3	Cost of Bid document (Non-refundable)	❖ Rs.10, 000/- (Rupees Ten Thousands only) for General Bidder. ❖ Rs. Nil for MSME of Jharkhand.
4	Earnest Money Deposit	For General Bidder: <b>Rs. 34.00 Lakh</b> For MSME of Jharkhand: <b>Nil.</b>
5	Time of completion	Twelve months from the date of issue of purchase order/ intimation.
6	Validity of offer for acceptance	Six months from the last date of submission of Bid.
7	Date of commencement and time of Issue of bid documents	From <b>29.04.2013</b> .
8	Last date & time of submission of bids document	<b>23.05.2013 up to 3.00 PM.</b>
9	Date & time of opening Eligibility bid Part-I	<b>23.05.2013 at 3.30 PM.</b>
10	Date & time of opening Technical bid Part-II	Shall be intimated in due course on website & letter.
11	Date & time of opening Financial bid Part-II	Shall be intimated in due course on website & letter.
12	Place of issue and submission of bid documents and address for communication	Jharkhand Renewable Energy Development Agency(JREDA) Plot No. 328/B, Road No.4,Ashok Nagar Ranchi- 834002. Ph.No: 2246970,Fax No: 0651-2240665 Web site: <a href="http://www.jreda.com">www.jreda.com</a> E-mail: <a href="mailto:info@jreda.com">info@jreda.com</a>

**Instruction to Bidder**

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

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

**1. Bid Document**

1.1 This bid document comprises of total **37 Pages**. In addition, any other documents/instructions/amendments/revisions issued by JREDA to the bidder 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 submitting a Demand Draft of Rs. 10,000/- only drawn in favor 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 "Particulars of Tender".

2.2 Bidders may also download the bid document from JREDA website (www.jreda.com) and submit the cost of the bid document of requisite value in the form of Demand Draft, as applicable along with **Part – I (Technical Bid)**.

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

**3. Earnest Money**

3.1 Bidders shall submit in **Part – I (Technical Bid)** the earnest money in the form of Bank Guarantee of requisite value as mentioned in "Particulars of Tender". The Bank Guarantee shall be made in favor of "Director, JREDA" payable at Ranchi from any Indian Nationalized bank/Scheduled bank.

3.2 The bank guarantee shall remain valid for 12 months.

3.3 Bidders seeking concession/exemption from submission of cost of bid document and/or earnest money, shall have to submit an attested photocopy of relevant MSME of Jharkhand certificate as applicable, in Part – I of the bid application. ***Non submission of relevant certificate will lead to rejection of bid.***

3.4 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).

3.5 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 shall have to get approved by Director, JREDA. This approval shall also have a cut-off date by which the entire work shall have to be completed.

**4. Security Deposit:**

- 4.1 Successful General bidders shall submit a security deposit @10% of the allotted work order value in the form of Bank Guarantee on or before 20 days from issuing work order.
- 4.2 Successful MSME bidders are exempted from submission of security deposit.
- 4.3 The 50% Security Deposit shall be refunded / released to the bidder after expiry of 60 days from the actual date of successful Supply, Installation & Commissioning. The balance 50% Security Deposit will have to be maintained by the bidder with JREDA as Performance Guarantee till the completion of CMC period of complete system.
- 5. Performance Guarantee:**
- 5.1 50% Security deposit of successful General bidders shall be treated as performance guarantee after Supply, Installation & Commissioning.
- 5.2 Successful MSME bidders shall submit a Performance Guarantee @2.5% of the allotted work order value in the form of bank guarantee before release of 90% payment.
- 5.3 The Performance Guarantee will have to be maintained by the bidder with JREDA till the completion of CMC period.
- 5.4 The Security Deposit/Performance Guarantee shall be submitted in the form of bank guarantee in favour of "Director, JREDA" payable at Ranchi from any Indian Nationalized bank/Scheduled bank.
- 5.5 Non submission of Security Deposit/Performance Guarantee within the time frame, shall lead to forfeiture of EMD and cancellation of LOI/LOA.
- 5.6 If Bidder/MSME unit fails to carry out the work allotted to him as per the provisions of the tender documents then such Bidder/MSME unit may be black listed for future awards of work.
- 6. Submission of Bids:**
- 6.1 Bidders are advised to submit their bids strictly based on the specifications, terms and conditions contained in the bid document and subsequent revisions/amendments, if any. The bid should be submitted along with covering letter as given at **Annexure-1**.
- 6.2 The bid shall be prepared and submitted by typing or printing in English 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. The bidder shall also enclose the information about bidding firm as per **Annexure-6**.
- 6.3 Original copy of bid document, amendments/revisions to bid document and one soft copy, including minutes of meeting(s), issued by JREDA, if any, shall be signed and submitted along with the bid.
- 6.4 All the Proforma must be on the bidder's official letterhead (if specified). Any change in wording of the Proforma will not be allowed. The bidder shall submit a declaration as given at **Annexure-7**.
- 6.5 The offer shall contain no erasures or overwriting except as necessary to correct errors made by bidder. The person signing the offer shall initial such corrections.
- 6.6 Complete bid document including all enclosures should be submitted in hard bond or spiral binding and all pages should be numbered (except leaflet/catalogue) and must be signed by the company's authorized signatory with seal of the company.
- 6.7 The bidders should submit the bid in two envelopes, The **Part-I (Technical bid)** and the **Part – II (Price Bid)** should be sealed in separate envelopes and both envelopes should be sealed in a third

envelope. The Part – II (Price Bid) of only such bidders would be opened who qualify in the **Part – I (Technical Bid)**. The **Part–I (Technical Bid)** should be sealed in an envelope super scribed with (i) NIT NO.(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.

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

**6.9 The Part–II (Price Bid)** should be sealed in an envelope super scribed with NIT No., “Part – II Price Bid”, Name and address of the contact person of the bidding firm, and should be addressed to Director, JREDA. This envelope should contain the following :

- a. It should contain only Performa as prescribed at **Annexure-5** duly filled, signed and stamped by authorized signatory of the bidder.
- b. 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.
- c. The price bid should not contain any technical matter or other matter except price. The date of opening of the price bid will be notified after opening of Technical bid.

**6.10 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) NIT No., (ii) "Offer for Supply of SLs (CFL & LED based)" (iii) Name and address of the contact person of the bidding firm, and (iv) Should be addressed to Director, JREDA, Plot No. 328 B, Road No. -4, Ashok Nagar, Ranchi-834002.

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

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 the document 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. For this purpose Power of Attorney in the Performa as prescribed at **Annexure-11** shall be submitted.

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

The bidder whose bid is not accepted shall not be entitled to claim any costs, charges or expenses in connection with his submission of bid, even though JREDA may decide to withdraw the Notice Inviting Tender.

#### **9.0 Validity of Offer**

Unless otherwise specified, the bidder shall keep his offer valid initially for a period of Six months from the last date of submission of the bid.

#### **10 Other Terms & Conditions**

**10.1** Insertion, post-script, addition and alteration shall not be recognized unless confirmed by bidder's signature and stamp.

**10.2** Incomplete tender or tenders not submitted as per requirement as indicated in the NIT are likely to be rejected.



- 10.3** Bidders shall submit their offer strictly as per terms and conditions of the tender document without any deviation.
- 10.4** 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.
- 10.5** Failure to furnish all information and documentary evidence as stipulated in the bid document or submission of an offer that is not substantially responsive to the bid document in all respects shall be summarily rejected.
- 10.6** 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.
- 10.7** JREDA reserves the right to reject part or whole of the bid/order without assigning any reason thereof, postpone the date of receipt and opening of the bids or cancel the bid without bearing any liability, whatsoever, consequent upon such decision.
- 10.8** No postal transaction shall be entertained for obtaining bid documents.
- 10.9** Issuance of bid documents shall not construe that the bidders would be automatically considered qualified.
- 10.10** **For any clarification with respect to the specification and other allied technical details of the article included in the tender enquiry document SH. Sudhakar Pandey, Project Director JREDA may be contacted during office hours through written request latest by 8<sup>th</sup> May 2013. Request made after 8<sup>th</sup> May 2013 will not be considered.**

**General Terms & Conditions**

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

**1.0 Introduction**

The instruction/information contained in the bid documents are for guidance and compliance of the intending bidder. Bidders are advised to obtain clarification from JREDA, if any, prior to submission of their bid, failing which it will be deemed that the stipulation made in the bid documents have been read, understood and are acceptable to the bidder.

Bidder shall bear all costs associated with the preparation and submission of the bid, journeys undertaken by them and subsequent bidding process till the award of the order to successful bidder and the JREDA shall in no case, shall be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

**2.0 Scope of work**

The Scope of work for **Solar Photovoltaic Solar Power Plant** includes **Design, Manufacture, Testing, Supply, Installation & Commissioning, Operation & Maintenance, Safety & Security of 5 Nos. x 100 kWp (Total 500 kWp Capacity) Stand Alone SPV Power Plant and 2500 LED Street Lights for five years including five years CMC on Turnkey basis along Deoghar-Basukinath State Highway of Jharkhand** complete set in all respects.

**3.0 Bid documents**

Tender documents shall comprise of all the documents mentioned in the table of contents of this documents. In addition to these any other documents/amendments/revisions or instructions issued by JREDA from time to time to bidders till due date of opening of the offers, shall also be deemed to be integral part of the bid document.

**4.0 Price**

The bidder shall quote his price as per schedule of items of work. The contract price rates shall be firm and binding and shall not be subject to any variation except for statutory variation of taxes and duties during the contractual completion period. ***The price shall be inclusive of all taxes, duties and levies including Jharkhand Vat etc. as on the opening date of tender.*** The price shall also include designing, manufacturing, inspection, supply, transport, insurance, handling etc. All applicable charges for taking necessary clearance such as commercial tax, road permit etc. wherever required are also deemed to be included in the contract price.

**5.0 Inspection of the factory and Tests**

JREDA reserves the right to inspect manufacturer's works/factory to ascertain the capability/availability of necessary equipment and infrastructure required for manufacture of the

items offered. JREDA shall have the access and right to inspect the work or any part thereof at any stage and to test the goods to confirm their conformity to the technical specifications. Successful bidder shall inform JREDA at least 15 days in advance of schedule dispatch for technical sample audit.

#### **6.0 Payment terms and conditions**

Subject to any deduction which JREDA may be authorized to make under this contract, the contractor shall be entitled to payment as follows:

- (a) **60%** of the Contract Price shall be paid against supply and delivery of goods in full and in good condition as certified by Consignee & JREDA Officials after submission of following documents:
  - i. Original Commercial invoice raised from the state of Jharkhand for the supply made in triplicate (1+2).
  - ii. Copy of duly raised delivery challan/ transportation challan/lorry receipt.
  - iii. Duly filled **Annexure -10** should be submitted in three sets (one for Consignee record, one for JREDA Hq. and one for JREDA's field Executive Engineer).
  - iv. Photographs of all the equipment (materials) at destination with signature & seal of Consignee & JREDA Officials. This record should be kept in the office of Consignee for verification.
- (b) **30%** of the Contract Price shall be paid against Installation, Testing & Commissioning after submission of following documents:
  - i) Copy of Original Commercial invoice raised at the time of supply in triplicate (1+2).
  - ii) Duly filled **Annexure-10**.
  - iii) Certificate for minimum seven days of satisfactory performance.
- (c) Rest **10%** of the Contract Price shall be paid **@2%** of the Contract Price on completion of every one year period of the 5 year Operation and CMC period, after submission of following documents:
  - i) Copy of Original Commercial invoice raised at the time of supply in triplicate (1+2).
  - ii) Submission of quarterly reports of satisfactory O&M and CMC undertaken by the manufacturer in **Annexure -14**.

#### **7.0 Dispatch Instructions**

All items/equipments shall be subject to pre-dispatch inspection by JREDA or its authorized representatives before their dispatch. The manufacturer will submit test report with regard conformity to technical specifications for the items to be dispatched to JREDA. However, equipments will be dispatched only after the receipt of "Dispatch Clearance" from JREDA after acceptance of test report. No consignment shall be dispatched without the receipt of dispatch clearance from JREDA.

#### **8.0 Liquidated Damages for Delay in Completion**

If the supplier fails in the due performance of the contract to deliver any part of the equipment or complete the work within the time fixed under the contract or any extension thereof granted to him by JREDA and/or to fulfill his obligations in time under the contract, he shall be liable to pay to JREDA @0.5% per week maximum up to 10% of work value delayed beyond contract period.

**9.0 Risk & Cost:**

If the contractor fails to complete the awarded work up to extended period of one year from the scheduled date of completion then JREDA will be at liberty to cancel the said work order and will get the full or part of left over work to be completed by way of engaging alternate contractor and completion of the said work shall be got completed at risk & cost of the failed contractor and failed contractor shall be liable to pay all the dues to JREDA.

**10.0 Insurance**

The supplier shall arrange for transit and erection insurance of the materials & equipments for setting up of Solar Photovoltaic Systems.

**11.0 Assignment/ Sub-letting**

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

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

**12.0 Completeness of Tender**

All fittings, assemblies, accessories, hardware items etc. & safety and protection devices as required shall be deemed to have been included in the tender, whether such items are specifically mentioned in the BoM or not.

**13.0 Compliance with Regulations**

The supplier/contractor shall comply with all applicable laws or ordinances, codes approved standards, rules and regulations and shall procure all necessary municipal and/or other statutory bodies and government permits & licenses etc. at his own cost. The contractor shall leave the purchaser, Director, JREDA harmless as a result of any infractions thereof.

**14.0 Agreement**

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

## **15.0 Income Tax**

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

## **16.0 Five Years Operation and Comprehensive Maintenance Contract (CMC)**

**16.1** The **Solar Photovoltaic Solar Power Plants** contract price includes the provision of 5 years operation and mandatory Comprehensive Maintenance Contract (CMC). To ensure long term sustainability of the system, the bidder should provide his representatives name, full address, mobile number and photographs to JREDA with one hard copy as well as the names and contact details of all technicians should also be provided.

**16.2** The Operation and Maintenance shall include ensuring operation of system on day to day basis. The system should be operational from evening with full illumination up to 11 PM & 50% illumination from 11 PM to morning. Comprehensive Maintenance Contract shall include ensuring servicing & replacement guarantee for parts and components (such as battery, electronics, Inverter, PV modules and other hardware) of **SPV SPP** for five years from the date of installation. For PV modules, the replacement guarantee is for Twenty five (25) years. Battery should be warranted for a minimum life of 5 years. The date of CMC maintenance period shall begin on the date of actual commissioning of **SPV SPP**. It is mandatory for the contractor to carry out CMC regularly and submit report to JREDA quarterly. CMC documents should be certified by Consignee.

### **17.0 Preventive/Routine Maintenance**

This shall be done by the supplier/contractor at least once in 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, regular checks to identify any leakage of electricity, 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 SPP**. The maintenance record should be kept properly and to be submitted at JREDA office time to time.

### **18.0 Breakdown/Corrective Maintenance**

**18.1** Whenever a complaint is lodged by the user, the bidder shall attend the same immediately. It is clarified that effective CMC means that, the bidder should ensure 24 hours smooth working of all the **SPV SPP** throughout the CMC period and therefore, if any complaint in this level of service is found by the JREDA officials and if the bidder do not attend the rectification of any such defects within three days of communication of such complaint to the bidders, the bidder will be liable for a penalty of Rs. 200 per day beyond three days of reporting of such complaint.

**18.2** For carrying out the CMC effectively, the Bidder/Manufacturer shall establish Common Service Centre (CSC) at Deoghar.

### **19.0 Force Majeure conditions**

In the event of either party being rendered unable by force majeure to perform any obligation required to be performed by them under this agreement, relative obligation of the party affected by such force majeure shall be treated as suspended during which force majeure condition last.

The term force majeure shall have herein mean riots (other than among the contractor's employee), civil commotion, war (whether declared or not), invasion, act of foreign enemies hostilities, rebellion, insurrection, military coup to usurp power, act of god such as earthquake, lightening, floods, fires not caused by contractor's negligence and other cause which the contractor has no control and accepted as such by the Director, JREDA, whose decision shall be final and binding.

If the work is suspended by force majeure conditions lasting for more than 45 days, the purchasers shall have the option of canceling this contract in whole or part thereof, at its discretion. The contractor shall not claim for compensation for force majeure conditions.

**20.0 Jurisdiction of the Court**

All disputes would be settled within Ranchi jurisdiction of court of law only.

## TECHNICAL SPECIFICATION

### NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14

**Technical Specifications for Design, Manufacture, Testing, Supply, Installation & Commissioning, Operation & Maintenance of 5 Nos. x 100 kWp (Total 500 kWp Capacity) Stand Alone SPV Power Plant and 2500 LED Street Lights including five years CMC on Turnkey basis along Deoghar-Basukinath State Highway of Jharkhand.**

#### **Introduction:**

It is proposed to installed 2500 nos. of LED Street Lights in a stretch of 44 KM from Deoghar to Basukinath, alongside the State Highway in Jharkhand.

To energise these lights, 5 nos. of Stand Alone SPV Power Plants of 100 kWp each (Total 500 kWp capacity) would be installed on the way.

#### **Site details:**

Site Name : Deoghar to Basukinath (Total length of road is 44 KM)  
Location : Distt. Deoghar & Dumka, Jharkhand  
Capacity : 5 X 100 kWp  
Nearest railway station : 8 KM from Jasidih railway station, Jharkhand  
Latitude : 24<sup>00</sup>'N  
Longitude : 85<sup>50</sup>'E  
Elevation : 3300 ft.

#### **Proposed Location to set up the SPV Power Plants:**

It is proposed to install 5 nos. of 100 kWp SPV Power Plants (to be installed on the ground) at each location mentioned below:

Solar Street Lights throughout the stretch of 44 KM

- |      |  |   |       |
|------|--|---|-------|
| i.   | 100 kWp Solar Power Plant at Jhalar (Distt. Deoghar)   | - | 1 No. |
| ii.  | 100 kWp Solar Power Plant at Mohanpur (Distt. Deoghar) | - | 1 No. |
| iii. | 100 kWp Solar Power Plant at Godmara (Distt. Deoghar)  | - | 1 No. |
| iv.  | 100 kWp Solar Power Plant at Hariharpur (Distt. Dumka) | - | 1 No. |
| v.   | 100 kWp Solar Power Plant at Jaramundi (Distt. Dumka)  | - | 1 No. |

#### **Scope of work:**

1. Site survey and layout planning.
2. Design, development and supply of all components (including LED Street Lights with Poles) of the SPV Power Plants.
3. Transportation of SPV Power system hardware up to site.
4. Civil works (including construction of control rooms wherever required) and related electrical and other works.
5. Installation and commissioning of SPV Power system (including LED Street Lights with poles).
6. Operation & maintenance of the system for a period of 5 years from the date of installation.
7. Training to JREDA/Local staff for up-keep and routine maintenance.
8. Any other job essential for smooth completion of the project, not mentioned in "Jobs in the scope of JREDA" below.

#### **Jobs in the Scope of JREDA**

- i. Arranging a shadow-free area for SPV array installation & control rooms.

- ii. Providing statutory clearance of any type, wherever required.

**Technical description**

The Street light luminaries should be suitable for outdoor application. The enclosure of luminaire should be weather proof, should house LEDs and control circuit. The unit should be controlled manually by people deployed at each power plant. These luminaries should be mounted on Galvanized Iron (GI) poles of 65 NB of height of 6 meters from ground level and should be installed either at the middle of the parallel roads or at the footpath on the roadside as per JREDA requirement. Concrete Grouting of poles should be as per standard norms.

The street lights should be installed at approximate spacing of 18 Mtrs. The power to these lights should be fed from a centralized power plant, which will be situated at respective sites mentioned above.

500 Nos. (Covering a total distance of approx. 8-10 Kms) of luminaries will be powered by a 100 kWp centralized SPV power plant. A total of five such plants should be installed powering 2500 street lights on the way.

The Power from the Power plant should be fed to the street light luminaries using underground cable arrangements.

Each of the 100 kWp Power Plant suitable to operate the above mentioned loads should have the following sub-systems:

S. No.	Description	Specifications
1	Solar Photovoltaic Array	100 kWp
2	Battery Bank	240V, 2500 AH Lead Acid Type AGM-VRLA or tubular Gel
3	Power Conditioning unit including MPPT, Charge Controller, Inverter and Data Acquisition System	240VD.C.;100kWp/230/415 Volts A.C.; 100 KVA (or 2 x 50 KVA)
4	Street Light Luminaries with Poles and Hardware	500 Nos. of LED Luminaries (50W) mounted on required Nos. of Poles
5	Control room	About 400 sq. ft.
6	Fencing all around PV Array	7 feet high 10 inch thick brick wall with proper entry gate.
7	Underground cabling for street lights	8-10 Kms at a depth of 1mtrs.
8	Other components such as: Structures Cables, Junction Boxes Lightening arrestors, Earthings etc.	As per the site requirement For 100 kWp Power Plant

**Detailed Specifications of components:**

**PV Modules**

- Indigenously manufactured PV modules with mono/multi crystalline silicon solar cells.
- Suitable nos. of minimum 125 Wp capacity PV modules.
- Modules are required to have certificate as per IEC 61215 specifications or equivalent National or International/Standards.
- Modules must qualify to IEC 61730 Part I and II for safety qualification testing.
- Certificate for module qualification from IEC or equivalent to be submitted as part of the offer.
- The efficiency of the PV modules should be minimum 14% and fill factor should be more than 70%.  
(I-V curve of the PV modules should be submitted)
- The terminal box on the module should have a provision for “Opening” for replacing the cable, if required.
- Each PV module must have a strip laminated inside the module with following information
  - a) Name of the Manufacturer or distinctive Logo.
  - b) Model or Type No.
  - c) Serial No.



- d) Year of make.

**Mounting Structure**

- The modules support structure should be mild steel, hot dipped galvanized (Min. 80 microns) for holding the PV modules. The size of angle iron should not be less than 50x 50 x5 mm.
- Each panel frame structure should be so fabricated as to be grouted on ground or roof on its legs. It should withstand severe cyclone/storm with the speed of 150 Km/Hr.
- Each panel frame structure should have provision to adjust its angle of inclination to the horizontal between 10 to 40 degrees with a step of 10 degree, so that the inclination can be adjusted at the specified tilt angle whenever required.
- Each panel frame should be complete with a weatherproof junction box as per the relevant BIS specifications, where the module terminals should be interconnected and output taken.
- All nuts and bolts should be made of very good quality and should be corrosion resistant.
- The structure should be designed to allow easy replacement of any module.
- The array structure should be so designed that it will occupy minimum space without sacrificing the output from the SPV panels.

**Cabling & Junction Boxes**

Modules of a panel should be mounted on a structure and connected together in series in the daisy chain manner. The two ends of the modules series should be brought to the panel junction box (PJB) mounted on the panel structure. Series blocking diode should be located in the panel junction box and the panel output should be taken to field junction box (FJB) where outputs of all the panels should be brought for paralleling.

In the control room a DC Distribution Board (DCDB) should be provided where the cables coming from the FJB should be terminated and taken to the PCU. The Batteries, PCU, DCDB and ACDB etc. should be placed inside a weather-proof location.

**Power Conditioning Unit**

The Power Conditioning Unit (PCU) mainly comprises MPPT, Solar Charge Controller and a three phase bi-directional inverter.

The MPPT Charger should be designed to provide the necessary DC/DC conversion to maximize the power from the 100 kWp SPV array to charge the 240V, 2500 AH battery bank. The charge controller should be equipped with necessary software that allows precise charging of the batteries bank. Many protection features should be included to ensure that no abnormal or out of range charge conditions are encountered by the battery bank. The system should incorporate a front panel display with LEDs and a switch to indicate the “operational status” and “fault status” of the system, reset system faults and implement various operating modes.

The microprocessor controlled inverter should incorporate Pulse Width Modulation (PWM) technology and should incorporate all the desired safety features.

Important features/protections required in the PCU:

- MPPT
- Array ground fault detection.
- Automatic fault conditions reset for all parameters like voltage, frequency and/or black out.
- MOV type surge arrestors on AC & DC terminals for over voltage protection from lightning induced surges.
- PCU operation from 5<sup>0</sup> to 55<sup>0</sup> C.
- All parameters should be accessible through an industry standard communication link.
- Over load capacity (for 30 sec.) should be 150% of continuous rating.

<b>Operating Parameters</b>	<b>Specifications</b>
Output Voltage	230/415Volts ± 1% three phase, 4 wire output. Nominal voltage could be adjusted ± 5% via system set points.
Output Frequency	50Hz ± 0.5% during standalone inverter operation. Inverter to follow generator frequency up to ± 3 Hz of the nominal output frequency during

	parallel operation.
Continuous Rating	100 KVA ( or 2 x 50 KVA)
Surge Rating	Up to 150% of the continuous rating for a minimum of 30 seconds.
Waveform	Sine wave output
THD	Less than 4%
Efficiency	At 25% load > 85% At 50% load > 90% At 75 % load and above > 92%
Internal Protection System	<ul style="list-style-type: none"> <li>• Inverter continuous overload</li> <li>• Short circuit protection</li> <li>• Over/under AC voltage protection</li> <li>• Over/under frequency protection</li> <li>• Over/under battery voltage protection</li> </ul>
Alarm Signals	Via system fault relay (potential free contact)
Front Panel Display	<ul style="list-style-type: none"> <li>• Instantaneous per phase Power, voltage, pf, and frequency</li> <li>• Battery voltage, current,</li> <li>• Solar charge current and ambient temperature</li> <li>• Solar radiation</li> <li>• Accumulated output KWHrs.</li> </ul>
Front Panel Metering	<ul style="list-style-type: none"> <li>• Battery Volt Meter</li> <li>• Battery Amp Meter</li> <li>• Solar Amp Meter</li> </ul>
Front Panel Controls	<ul style="list-style-type: none"> <li>• Emergency Stop Button</li> <li>• Grid Auto Manual Bypass Switch</li> </ul>
Front Panel Indicators	<ul style="list-style-type: none"> <li>• Inverter On Line and Grid On Line</li> <li>• Control Power Supply OK</li> <li>• System Fault</li> </ul>
Circuit Breakers	<ul style="list-style-type: none"> <li>• Grid Input</li> <li>• Battery Input</li> <li>• Solar Input (with shunt trip)</li> </ul>
Earthing Provisions	AC bypassing to earth on inverter and DC inputs

<b>DATA Logging</b>	
<b>Operating Parameters</b>	<b>Specifications</b>
Computer Ports	RS232 referenced to ground (non-isolated).
System Features	<ul style="list-style-type: none"> <li>• Adjustable logging period from 60 second averages to 24 hours daily logs</li> <li>• Storage capacity of up to 6 days at 60 minute logs</li> <li>• Time and date stamped log entries</li> <li>• Time and date annotated fault log, holding the fault description and operating statistics</li> <li>• View and change system set point configurations remotely</li> <li>• Bulk log download for immediate data importation into a spreadsheet</li> </ul>
Logging Attributes	<p><b>System summations</b></p> <ul style="list-style-type: none"> <li>• Site kWh</li> <li>• Inverter input &amp; output kWh</li> <li>• Grid/Gen set kWh</li> <li>• Battery input &amp; output kWh</li> <li>• Solar kWh</li> </ul> <p><b>System Parameters</b></p> <ul style="list-style-type: none"> <li>• Grid/Gen set kW, voltage, pf, frequency</li> <li>• Inverter kW, voltage, pf, frequency</li> <li>• Battery current</li> <li>• Battery voltage</li> <li>• Ambient temperature</li> <li>• Solar charge current</li> <li>• Solar radiation</li> </ul>

Environmental	
Operating Temperature Range	5-50 degrees Celsius
Humidity	0-90% non-condensing
Enclosure	IP30

### Battery Bank

A 240V, 2500 AH (at C/10 rate) Battery Bank should be used in the system for storing the generated energy. The battery bank in the offered SPV systems should be maintenance free type for SPV application Lead Acid type AGM-VRLA or tubular Gel.

- The batteries should be suitable for recharging by means of solar modules via solar charge regulators.
- The self-discharge of battery should be as per BIS specs.
- The Amp Hr. charge efficiency should be more than 90%

### Street Lights

The LED Street lights should be weatherproof, suitable for outdoor application. The enclosure will house **50 Watt LED lamp** which should be operational from dusk-to-down (with manual override) every day. These Luminaries should be mounted on Galvanized poles for protection against weather at a height of 6 meters.

The street lights should be installed at an approximate spacing of 18 meters each. The power to these lights should be fed from 100 kWp centralized power plant. Total 500 Nos. of Street lights are connected with each 100 kWp Solar Power Plant. During initial 6 Hrs. lights will operate at full glow and afterward at 50% glow. The power from the Power Plant should be distributed through underground PVC insulated Aluminum Armored cable.

### Technical specifications

- Power Consumption: 50W
- Input Voltage: AC140-264V
- Lumen Output: 4200 lm
- Colour Temp: 6500K
- Operating Temp: -20<sup>0</sup>C to 50<sup>0</sup>C
- No of LED's: 48
- Power Output: 42W
- Power Factor: >0.90
- Lamp Efficiency > 85%
- Life Span: Typically >50,000 hrs
- Viewing Angle: 120<sup>0</sup>
- Protection: IP-65

### Spare parts

Bidder should keep stock of essential spares (Control cards, PCB's, Switches fuses etc.) at their nearest service center and/or at each site at their cost for 5 years maintenance. A recommended list of such spares should be provided with the offer.

### Installation and commissioning

- Detailed project execution plan should be submitted along with the offer.
- The bidder should quote for installation and commissioning.
- The bidder is responsible for arranging all the accessories and measuring instruments required to properly commission the system.

Format for Covering Letter

NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14

(To be submitted in the official letter head of the company)

To,

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

**Sub: Design, Manufacture, Testing, Supply, Installation & Commissioning, Operation & Maintenance of 5 Nos. x 100 kWp (Total 500 kWp Capacity) Stand Alone SPV Power Plant and 2500 LED Street Lights including five years CMC on Turnkey basis along Deoghar-Basukinath State Highway of Jharkhand.**

Sir,

We are hereby submitting our offer in full compliance with the terms and condition of the above NIB No. A blank copy of the tender, duly signed on each page is also submitted as a proof of our acceptance of all specifications as well as terms & Conditions. We have submitted the requisite amount of “Earnest Money” in the form of Bank Guarantee, valid for twelve months.

We confirm that, we have the capability to supply and install the required no of systems within scheduled period.

The tender is submitted in two separate and sealed envelopes marked **Part-I & Part-II**.

(Signature of Authorized Signatory)

Name:

Designation:

Company Seal:

Check List of Technical bidNIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14

S. No.	Particulars	Yes / No	Flag No.*	Page No.
1	Covering Letter as per <b>Annexure-1</b> .		I	
2	Information about the Bidder as per <b>Annexure-6</b> .		II	
3	The bidder is registered PV System Integrator or Manufacturing company of SPV cells or PV Modules or Battery or PV System Electronics confirming to relevant National/International Standards (Attach relevant certificates of Industry Department or MNRE).		III	
4	To indicate the functionality of the firm attach the balance sheet of last three years ending 31.03.2012/2013 of the firm duly certified by statutory Auditor.		IV/V/VI	
5	Registration certificate of MSME of Jharkhand State (Enclose certificate issued by Industry Department, Govt. of Jharkhand).		VII	
6	The proof of supply of SPV items in any SNA/Govt. organization/PSU in the last seven years as per <b>Annexure-4</b> . Attach copy of the order and certificate indicating its successful execution.		VIII/IX Series	
7	IEC/IS certificates for Solar PV Module (Attach relevant certificate).		X	
8	IEC/IS certificate for Electronics and test certificate of Inverter (Attach valid relevant certificates).		XI	
9	Certificate of Battery (Attach valid certificate).		XII	
10	A copy of valid VAT/ TIN registration certificate		XIII	
11	Undertaking from bidder that they have resources and capability to supply the offered quantity within scheduled period as per <b>Annexure-3</b> .		XIV	
12	Average Annual Turnover for last three years ending 31.03.2012/2013. (Attach average annual turnover certificate as per <b>Annexure-12</b> )		XV	
13	Net worth as on 31.03.2012. (Attach proof & Net worth certificate as per <b>Annexure-13</b> )		XVI	
14	Details of tender document fee (Bank Draft No. and Date)		XVII	
15	Details of Earnest money (Bank Guarantee No. and Date) as per <b>Annexure-9</b> .		XVIII	
16	Technical Details as per <b>Annexure-8</b> .		XIX	
17	Declaration by Bidder as per <b>Annexure-7</b> .		XX	
18	Product Leaflet/Catalogue (if any).		XXI	
19	A tentative overall supply schedule in the form of Bar Chart.		XXII	
20	Authority Letter for Signing Bid Document & Attending Bid Opening Meeting as per <b>Annexure-11</b> .		XXIII	
21	Confirm whether you have prepared all the documents in a spiral binding booklet & all pages have been serially numbered.		XXIV	

\* Please flag the annexure and write flag number as in the box.

**Please ensure:**

- i) That all information is provided strictly in the order mentioned in the check list mentioned above.
- ii) 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.
- iii) Any clarification/confirmation bidder may require shall be obtained from JREDA before submission of the bid. 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.

(Signature of Authorized Signatory)

Name:

Designation:

Company Seal:

**Format for Undertaking to confirm having Capability & Resources**

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

To,

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

Dear Sir,

**Sub: Design, Manufacture, Testing, Supply, Installation & Commissioning, Operation & Maintenance of 5 Nos. x 100 kWp (Total 500 kWp Capacity) Stand Alone SPV Power Plant and 2500 LED Street Lights including five years CMC on Turnkey basis along Deoghar-Basukinath State Highway of Jharkhand.**

We certify that we have the resources and capability to supply and install the offered quantity within scheduled period. We confirm that we are aware that these resources and capability have been assessed on the basis of MNRE benchmark cost for SPV Systems.

Signature of Chief Executive Officer/Managing Director

Date:

**Note:** The above response sheet should be signed and certified as true by the Chief Executive Officer/Managing Director being full time Director.

**Details of Orders Received and Executed in Last 7 Years**

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

Details of Orders Received & Executed by the Manufacturer/Supplier for Supply of **SPV Systems** to SNA/  
Govt. Organization during Last Seven Years.

SL. No.	Name of Agency/ Organization	Purchase Order No., Date & Ordered Qty.	Name of Model	Delivery Schedule/C ommissioni ng Schedule	Qty. Supplied Within Delivery Schedule	Qty. Supplied After Delivery Schedule	Date of Full Supply/Com missioning

Yours faithfully,

(Signature of Authorized Signatory)

Name:

Designation:

Company Seal:

Note:

- (a) Attach Photocopies of Purchase Orders
- (b) Attach Photocopies of Certificate of Satisfactory Performance Issued by Concerned Nodal Agency/*PSU*/ Govt. 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



**Part-II PRICE BID**

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

<b>SL. No.</b>	<b>Description</b>	<b>Quoted Price (In Rs.)</b>
<b>1</b>	<b>2</b>	<b>3</b>
1	Design, Manufacture, Testing, Supply, Installation & Commissioning, Operation & Maintenance of 5 Nos. x 100 kWp (Total 500 kWp Capacity) Stand Alone SPV Power Plant and 2500 LED Street Lights including five years CMC on Turnkey basis along Deoghar-Basukinath State Highway of Jharkhand.	
Total		

- 1 Above quoted price for **Solar Power Plant and 2500 LED Street Lights** 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, operation & maintenance, performance testing and training.
- 2 Certified that rates quoted for **Solar Power Plant and 2500 LED Street Lights** are as per specifications, terms & conditions mentioned in the bid document.

(Signature of Authorized Signatory)

Name:

Designation:

Company Seal:

(This bid Performa must be submitted duly signed in case separate sheet is submitted)

**Information about the Bidding Firm**

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

(To be submitted in the official letter head of the company)

<b>SL. No.</b>	<b>Particulars</b>	
1.	Name of the Bidder	
2.	Address of Bidder with Telephone, Fax, email	
3.	Address of the Registered Office	
4.	Address of the works	
5.	GPS Co-ordinate of Registered Office	
6.	GPS Co-ordinate of Factory Campus	
7.	Name & Designation of Authorized Signatory for Correspondence (Attach Power of Attorney as per <b>Annexure-11</b> )	
8.	Nature of Firm (Proprietorship/Partnership /Pvt. Ltd./Public Ltd. Co./Public Sector)	
9.	Permanent Account Number (PAN)/TIN (Attach proof)	
10.	Firm's Registration Number (Attach proof)	
11.	Sales Tax/Value Added Tax Registration Number (Attach proof)	
12.	Specify the Item Originally Manufactured (SPV module/Electronics/Battery) (Attach copy of Registration Certificate of Industry Department)	
13.	Details of in-house testing facility (Attach Proof)	
14.	Office/ Dealer and Service network in Jharkhand with TIN No.(Give details)	

15.	Quoted quantity	
16.	Particulars of Earnest Money	
17.	Place where Materials will be Manufactured	
18.	Place where Materials will be Available for Inspection	
19.	Other details and remarks, if any	

Yours faithfully,

(Signature of Authorized Signatory)

Name :

Designation :

Company seal :

(Separate sheet may be used for giving detailed information duly signed)

**Declaration by the Bidder**

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

(To be submitted in the official letter head of the company)

I/We \_\_\_\_\_ (here in after referred to as the Bidder) being desirous of tendering for the rate contract for work under the above mentioned tender and having fully understood the nature of the work and having carefully noted all the terms and conditions, specifications etc. as mentioned in the tender document, DO HEREBY DECLARE THAT

1. The Bidder is fully aware of all the requirements of the tender document and agrees with all provisions of the tender document.
2. The Bidder is capable of executing and completing the work as required in the tender.
3. The Bidder accepts all risks and responsibilities directly or indirectly connected with the performance of the tender.
4. The Bidder has no collusion with any employee of JREDA or with any other person or firm in the preparation of the bid.
5. The Bidder has not been influenced by any statement or promises of JREDA or any of its employees, but only by the tender document.
6. The Bidder is financially solvent and sound to execute the work.
7. The Bidder is sufficiently experienced and competent to perform the contract to the satisfaction of JREDA.
8. The information and the statements submitted with the tender are true.
9. The Bidder is familiar with all general and special laws, acts, ordinances, rules and regulations of the Municipal, District, State and Central Government that may affect the work, its performance or personnel employed therein.
10. The Bidder has not been debarred from similar type of work by any SNA/ Government Dept. /PSU.
11. This offer shall remain valid for Six months from the date of opening of the tender.
12. The Bidder gives the assurance to execute the tendered work as per specifications terms and conditions.
13. The Bidder confirms the capability to supply and install required no. of systems per month.
14. The Bidder accepts that the earnest money be absolutely forfeited by JREDA if the Bidder fails to undertake the work or sign the contract within the stipulated period.

(Signature of Authorized Signatory)

Name:

Designation:

Company Seal:

**Technical Detail Form**

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

(To be submitted in the official letter head of the company)

S. No.	Particulars	Details
1	Mounting arrangement for Solar module	:
2	Solar module frame material	:
3	Module type	:
4	No. of solar cells per module	:
5	Make of Solar module (Attach IEC Certificate)	:
6	Country	:
7	Weather resistant HDPE junction Box (IP55)	:
8	Max. Temperature rise of solar cells under severe working condition over max. ambient temperature	:
9	Nominal voltage	:
10	Operating voltage of solar module (nom)	:
11	Peak power voltage (Vmp)	:
12	Peak Power current (Imp)	:
13	Open circuit voltage (Voc)	:
14	Short circuit current (Isc)	:
15	Make of PCU for 100.0 kW and Origin	:
16	Make of Battery and Origin	:
17	Type of Battery	:
18	No. of Battery for 100.0 kW system	:
19	Each Battery Voltage for 100.0 kW system	:
20	Each Battery Ah for 100.0kW system	:
21	Battery Bank rating (voltage & Ah) for 100.0 kW system	:
22	Street Light Luminaries Details	:

27. Undertaking

- a) We agree to manufacture and supply quality Solar Power Plant as per NIT specifications.
- b) We agree to give performance guarantee as specified and to abide by the scope of the guarantee as prescribed under the tender document.
- c) We agree to operate as per the terms & conditions of the tender.

We undertake to supply quality products for promoting energy efficiency in the era of lighting systems.

(Signature of Authorized Signatory with Name Designation & Company Seal)

**Filling Instructions:**

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

**Format for Submitting Bank Guarantee for Earnest Money**

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

(To be submitted in Rs. 100/- 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 ..... (Supplier's name) (hereinafter referred to as "Supplier"), 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 Supplier as per "Notice Inviting Bid, point no. 3 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 Supplier.

1. We ..... (Bank) hereby agree and undertake to pay you on demand the said amount of Rs. .... (Rupees ..... only) without any protest or demur in the event the Supplier/Tenderer after submission of his tender, resiles from or withdraws his offer or modifies the terms and conditions thereof in a manner not acceptable to you or expresses his unwillingness to accept the order placed and/or letter of intent issued on the Supplier/Tenderer for the work under "Notice Inviting Bid Ref. No.: **01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**".
2. Your decision as to whether the Supplier/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 Supplier/Tenderer for

the work under “Notice Inviting Bid Ref. No. : **01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**” 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 up to ..... (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 Supplier/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 .....

.....



**Certificate of Delivery of Solar Systems received by the Consignee as Proof of Compliance by the Supplier**

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

**प्रमाणपत्र**

Consignee/प्राप्त कर्ता का नाम : .....पदनाम: .....

विभाग का नाम: .....

विभाग का पता : .....

प्रमाणित किया जाता है कि सोलर फोटोभोल्टाईक कार्यक्रम के अंतर्गत सोलर पावर प्लांट हेतु निम्नलिखित उपस्कर प्राप्त किये गये:-

1. सोलर मॉड्यूलस की संख्या एवं क्षमता- .....
2. मॉड्यूल हेतु स्ट्रक्चर की संख्या:.....
3. बैट्री की संख्या एवं प्रकार :.....
4. इन्वर्टर (पी0सी0यू0) की संख्या एव प्रकार:.....
5. जंक्शन बॉक्स की संख्या:.....
6. तार आदि.....

इन सोलर उपस्करों की आपूर्ति मेसर्स ..... द्वारा की गई है।

Consignee का हस्ताक्षर:

ज्रेडा प्रतिनिधि का प्रमाण-पत्र

यह प्रमाणित किया जाता है कि उपर इंगित सामानों का निरीक्षण Specification के अनुसार प्राप्त करके उपर इंगित प्राप्त कर्ता को सुपूर्द की जा चुकी है।

**Format of Power of Attorney for Signing Bid**

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

**POWER OF ATTORNEY**

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

Know all men by these presents, we.....(name and address of the registered office) do hereby constitute, appoint and authorize Mr. / Ms.....(name and residential address) who is presently employed with us and holding the position of.....

as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our bid for **Design, Manufacture, Testing, Supply, Installation & Commissioning, Operation & Maintenance of 5 Nos. x 100 kWp (Total 500 kWp Capacity) Stand Alone SPV Power Plant and 2500 LED Street Lights including five years CMC on Turnkey basis along Deoghar-Basukinath State Highway of Jharkhand**, including signing and submission of all documents and providing information / Bids to Jharkhand Renewable Energy Development Agency, representing us in all matters before [Insert Name], and generally dealing with Jharkhand Renewable Energy Development Agency in all matters in connection with our bid for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

For

\_\_\_\_\_  
Accepted

..... (Signature)

(Name, Title and Address of the Attorney)

**Note:** The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, lay down by the applicable law and the charter documents of the executants (s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

**Format For Financial Requirement – Annual Turnover**

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

[On the letterhead of Bidding Company]

To,

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

Dear Sir,

**Sub: Design, Manufacture, Testing, Supply, Installation & Commissioning, Operation & Maintenance of 5 Nos. x 100 kWp (Total 500 kWp Capacity) Stand Alone SPV Power Plant and 2500 LED Street Lights including five years CMC on Turnkey basis along Deoghar-Basukinath State Highway of Jharkhand.**

We certify that the Bidding Company had an average Annual Turnover of Rs. ----- based on audited annual accounts of the last three years ending 31.03.2012/2013 for SPV Systems.

*Authorised Signatory*  
*(Power of Attorney holder)*

*Statutory Auditor*  
*(Stamp & Signature)*

Date:

**Format For Financial Requirement - Net Worth Certificate**

**NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

[On the letterhead of Bidding Company]

To,

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

Dear Sir,

**Sub: Design, Manufacture, Testing, Supply, Installation & Commissioning, Operation & Maintenance of 5 Nos. x 100 kWp (Total 500 kWp Capacity) Stand Alone SPV Power Plant and 2500 LED Street Lights including five years CMC on Turnkey basis along Deoghar-Basukinath State Highway of Jharkhand.**

This is to certify that Net worth of \_\_\_\_\_ {insert the name of Bidding Company}, as on 31st March 2012/2013 is Rs \_\_\_\_\_. The details are appended below.

<b>Particulars</b>	<b>Amount (In Rs.)</b>
Equity Share Capital	
Add: Reserves	
Subtract: Revaluation Reserve	
Subtract: Intangible Assets	
Subtract: Miscellaneous Expenditure to the extent not written off and carried forward losses	
Net Worth as on 31 <sup>st</sup> March 2012/2013	

*Authorised Signatory*  
*(Power of Attorney holder)*

*Statutory Auditor*  
*(Stamp & Signature)*

**Format for Quarterly O&M and CMC Report****NIB No: 01/JREDA/SPV/SPP/Deoghar-Basukinath/2013-14**

[On the letterhead of Bidding Company]

To,

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

Dear Sir,

**Sub: Design, Manufacture, Testing, Supply, Installation & Commissioning, Operation & Maintenance of 5 Nos. x 100 kWp (Total 500 kWp Capacity) Stand Alone SPV Power Plant and 2500 LED Street Lights including five years CMC on Turnkey basis along Deoghar-Basukinath State Highway of Jharkhand.**

Date of Installation.....

JREDA Dispatch Order No..... Dated.....

Place of Supply.....

S. N.	Place of Installed System	System Details		Date of Site Visit	O&M/CMC activities undertaken by Technician	Name and Signature of Concerned field Officer of JREDA	Name and Signature of Controlling Officer of JREDA
		Module No.					
		Battery No.					
		Charge Controller No.					
		Street Light No. from----- No. to----- No.					
		Module No.					
		Battery No.					
		Charge Controller No.					
		Street Light No. from----- No. to----- No.					
		Module No.					
		Battery No.					
		Charge Controller No.					
		Street Light No. from----- No. to----- No.					

(Signature of Authorized Signatory)

Name:

Designation:

Company Seal: