

**MEGHALAYA NON-CONVENTIONAL AND RURAL ENERGY  
DEVELOPMENT AGENCY**

Near B.S.F. Camp, Mawpat, P.O. Mawpat, Shillong – 793 012

Phone No.0364-2537343/2536138#Fax No.0364-2537611

E-Mail: [mnreda.dir@gmail.com](mailto:mnreda.dir@gmail.com) Website: [www.mnreda.gov.in](http://www.mnreda.gov.in)

**NOTICE INVITING TENDER**

FOR

ELECTRIFICATION OF 103 REMOTE VILLAGES IN  
MEGHALAYA UNDER REMOTE VILLAGE LIGHTING  
PROJECT THROUGH SPV HOME LIGHTING SYSTEM WITH  
INTEGRATION OF SPV STREET LIGHTING SYSTEM.

**MEGHALAYA NON-CONVENTIONAL AND RURAL ENERGY  
DEVELOPMENT AGENCY**

Near B.S.F. Camp, Mawpat, P.O. Mawpat, Shillong – 793 012

Phone No.0364-2537343/2536138#Fax No.0364-2537611

E-Mail: [mnreda.dir@gmail.com](mailto:mnreda.dir@gmail.com) Website: [www.mnreda.gov.in](http://www.mnreda.gov.in)

**TENDER DOCUMENT**

1. NIT NO.MNREDA/1658/2015
2. Name of work : Electrification of 103 Remote Villages in Meghalaya  
Through Off-Grid Solutions i.e. SPV Home Lighting System  
With Integration of SPV Street Lighting System under Remote  
Village Lighting Project.
3. Date of Issue Tender paper : 13.04.2016
4. Date of Submission of Tender : 13.04.2016 upto 27.04.2016 (12.00 noon) .
5. Date of Opening of Tender : 27.04.2016

for Technical Bid.

Tender Document issued to M/s. \_\_\_\_\_

\_\_\_\_\_

against application vide letter No. \_\_\_\_\_ Dated \_\_\_\_\_

against payment of Rs.10,000/- (Rupees Ten thousand)

only vide Demand Draft/Banker's cheque/cash No. \_\_\_\_\_ dated \_\_\_\_\_

of Bank towards the cost of tender document (Non-refundable).

**PART-A**

**COMMERCIAL AND TECHNICAL BID**

(Page No. 1-25)

**PART-B**

**BIDDING SCHEDULE**

( Page No.26-34 )

Issued by :

For Member Secretary-cum-Director,  
Meghalaya Non-Conventional and Rural Energy  
Development Agency, Shillong.

**MEGHALAYA NON-CONVENTIONAL AND RURAL ENERGY  
DEVELOPMENT AGENCY**

Near B.S.F. Camp, Mawpat, P.O. Mawpat, Shillong – 793 012

Phone No.0364-2537343/2536138#Fax No.0364-2537611

E-Mail: [mnreda.dir@gmail.com](mailto:mnreda.dir@gmail.com) Website: [www.mnreda.gov.in](http://www.mnreda.gov.in)

**CONTENTS**

No.	Description	
<b>PART-A : COMMERCIAL &amp; TECHNICAL BID</b>		
1.	Notice Inviting Tender	-1-3
2.	Check List	-4-5
3.	Undertaking of the Bidders	-5
4.	Instruction to Bidders	- 6-10
5.	General Terms and Conditions	- 10-14
6.	Scope of Work	-14-15
7.	Details of Villages Location, No. of Household and systems requirements.	-15-17
8.	Technical Specification	-18-25
<b>PART-B : FINANCIAL BID</b>		
1.	Bidding Schedule	-26-34

**MEGHALAYA NON-CONVENTIONAL AND RURAL ENERGY  
DEVELOPMENT AGENCY**

Near B.S.F. Camp, Mawpat, P.O. Mawpat, Shillong – 793 012

Phone No.0364-2537343/2536138#Fax No.0364-2537611

E-Mail: [mnreda.dir@gmail.com](mailto:mnreda.dir@gmail.com) Website: [www.mnreda.gov.in](http://www.mnreda.gov.in)

**PART-A**

**COMMERCIAL AND TECHNICAL BID**

**MEGHALAYA NON-CONVENTIONAL AND RURAL ENERGY  
DEVELOPMENT AGENCY**

Near B.S.F. Camp, Mawpat, P.O. Mawpat, Shillong – 793 012

Phone No.0364-2537343/2536138#Fax No.0364-2537611

E-Mail: [mnreda.dir@gmail.com](mailto:mnreda.dir@gmail.com) Website: [www.mnreda.gov.in](http://www.mnreda.gov.in)

**NOTICE INVITING TENDER**

No.MNREDA/1658/2015/

Dated Shillong, the 12<sup>th</sup> April, 2016.

Meghalaya Non-Conventional and Rural Energy Development Agency invites sealed tenders from eligible registered and experienced Indian Company/Manufacturer/Firm/Joint Venture/MNRE Channel Partner or its specifically authorised Distributor/Service Provider for electrification of 103 (one hundred three) remote villages through 4,094 SPV Home Lighting System and 620 SPV Street Lighting Systems with 5(five) years comprehensive operation and maintenance contract for 103 remote villages under DDUGJY Programme in the State of Meghalaya .

Tender document will be issued during working days from 13.04.2016 to 26.04.2016 in the office of the undersigned on payment of Rs 10,000/- (Rupees Ten thousand) only in Demand Draft/Banker's cheque/cash or can be download from website of MNREDA. Demand Draft/Banker's cheque should be drawn in favour of Member-Secretary-cum-Director, MNREDA, Shillong. Tender documents shall be received in the office of the undersigned upto 12.00 noon of 27.04.2016 and Technical Bid will be opened at the same place and date from 3.00 p.m.onwards.

The undersigned/MNREDA reserves all rights to cancel the tender and accept/reject any or all the bids without assigning any reasons thereof.

Member Secretary-cum-Director,  
Meghalaya Non-Conventional and Rural Energy  
Development Agency, Shillong.

# MEGHALAYA NON-CONVENTIONAL AND RURAL ENERGY DEVELOPMENT AGENCY

Near B.S.F. Camp, Mawpat, P.O. Mawpat, Shillong – 793 012

Phone No.0364-2537343/2536138#Fax No.0364-2537611

E-Mail: [mnreda.dir@gmail.com](mailto:mnreda.dir@gmail.com) Website: [www.mnreda.gov.in](http://www.mnreda.gov.in)

## NOTICE INVITING TENDER SCHEDULED

No.MNREDA/1638/2015/

Dated Shillong, the 12<sup>th</sup> April, 2016.

Name of work : “ Electrification of 103 (one hundred and three) remote villages by design, manufacturing, testing, supply, installation, and commissioning including 2(two) years warranty and 3(three) years mandatory comprehensive, operation and maintenance contract (COMC) of 7W SPV Home Lighting System and 7W LED SPV Street Lighting System at different villages in 11(Eleven) Districts of Meghalaya.

Description of item	Date & time of submission	Date & time of opening.
<b>1. LED based Home Lighting Systems which includes</b> <ul style="list-style-type: none"><li>➤ SPV Module 200 Wp Li-ion Battery/Tubular Gel/VRLA-12V/40 Ah</li><li>➤ LED Lighting with fixtures-2x5W</li></ul>	From 13.04.16 to 27.04.16 upto 12.00 noon	27.04.16 from 3. P.M. onwards
➤ Kw Electronics & Solar charger 1x20		
➤ DC fan-1x12w		
➤ Mounting structure & other hardware cable and switches.		
➤ I & C		
<b>2.SPV Street Lighting System-consists:</b> <ul style="list-style-type: none"><li>&gt; SPV Module-30Wp</li><li>&gt; Li-ion battery/Tubular Gel/VRLA -12V 40 Ah</li><li>&gt; LED luminaire of 7Wp with charge controller, electronics &amp; cables.</li><li>&gt; Pole and other mechanical fixtures and civil material.</li><li>&gt; I &amp; C</li></ul>		

Member Secretary-cum-Director,  
Meghalaya Non-Conventional and Rural Energy  
Development Agency, Shillong.

Copy to :-

1. Commissioner & Secretary, Power Department
2. Shri G.S.Bhate  
General Manager (DDG)  
Rural Electrification Corporation Ltd. (REC)  
Core-4, Scope complex,  
7, Lodhi Road, New Delhi-110003.
3. Shri Subendhu Roy,  
Chief Project Manager,  
REC Project, Office, Shillong.
4. The State Informatics Officer  
National Informatics Centre  
Meghalaya, Shillong. } With a request to display the NIT & tender  
document on the website.(Both hard & soft  
copy of the tender document enclosed herewith)
5. M/s. Eastern Chronicle,  
Shillong. } With a request to publish in one issue of your  
newspaper and the bill to be submitted in  
duplicate along with sample of advertisement  
for necessary payment.
6. Notice Board  
MNREDA, Shillong.

Member Secretary-cum-Director,  
Meghalaya Non-Conventional and Rural Energy  
Development Agency, Shillong.

## CHECK LIST

To ensure that your tender submitted to MNREDA is complete in all respects, please go through the following check list and tick mark the enclosures attached with your tender.

Sl. No.	Description	Attached/not attached	Page No. if attached.
1.	Earnest money		
2.	Tender document fee - proof of submission		
3.	The original document duly signed and sealed on each page as confirmation of acceptance of terms and conditions specified in the tender..		
4.	A copy of registration certificate of VAT/CST/PAN and S.T. clearance certificate		
5.	Details of similar work done in last 3(three) years along with copies of the orders and certificates from the customers/their address, phone/fax/email as per the tender evaluation criteria and of the tender document.		
6.	Details of technical specification highlighting salient features of the system with IEC/registration and last report etc.		
7.	Bid security in the form of Bank Guarantee/call deposit/FDR from any scheduled or Nationalized Bank of India in favour of Member Secretary-cum-Director.		
8.	Data sheet duly filled up and completed as per tender document.		
9.	Document(s) required under minimum qualifying criteria for bidding.		
10.	Declaration of the supplier		
11.	Deviation, if any, from the specifications, terms and conditions etc.		
14.	Whether validity of your tender is confirmed as per document.		
15.	Availability of service facilities in Meghalaya/North East and reference name of firms/address phone No. and email etc.		
16.	Warranty of the system		

Note : Registered Indian Company/Firm/Joint Venture/MNRE Channel Partner or its specifically authorised Distributor/Service Provider should attach relevant documents/certification.



**DETAILS OF EMD AND TENDER DOCUMENT FEE ATTACHED.**

Sl. No.	Description
1.	Earnest Money Deposit Earnest Money Deposit of Rs. _____/- submitted in the form of Demand Draft/Banker's cheque, drawn on _____ Bank _____ Branch, bearing DD/BC NO. _____ dated _____ is attached herewith.
2.	Tender Document Fee Tender Document fee of Rs. _____/- submitted in the form of Demand Draft/Banker's cheque, drawn on _____ Bank, _____ Branch, Bearing DD/BC No. _____ dated _____ cash is attached herewith.

Signature and seal of the Manufacturer.

**UNDERTAKING OF THE TENDERER**

I/we have read carefully and examined the Notice Inviting Tender Schedule, General Rules and terms and conditions of the contract, special conditions, schedule of rates/bids and other documents and rules referred to in the tender document for the supply.

I/we hereby tender my rates/bids for the execution of the work for MNREDA as specified within the time stipulated in the schedule in accordance with all aspects with the specifications, designs, drawings and instructions with such conditions so far as applicable.

I/we agree to keep the tender open for 90(ninety) days from the due date of submission thereof and not to make any modifications in its terms and conditions.

A sum of Rs. \_\_\_\_\_ lacs is hereby forwarded as earnest money in the form of crossed demand draft payable to Member-Secretary-cum-Director, MNREDA. I I/we, fail to commence or complete the work ordered in specified time I/we agree that the MNREDA shall, without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. The said earnest money shall be retained. By MNREDA towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be referred by MNREDA.

I/we hereby declare that I/we shall treat the tender documents, specifications and other records connected with the work as secret/confidential and shall not communicate information derived there from to any person other than a person to whom I/we have authorized to communicate the same or use the information in any manner prejudiced to the safety of MNREDA/the State Govt.

I/we shall abide to all the laws and shall be responsible for making payments of all the taxes, duties, levies and other Govt. dues etc. to the appropriate Govt. departments.

Our State Sales Tax registration TIN No. is \_\_\_\_\_ and CST registration No. \_\_\_\_\_. The PAN NO. under the Income Tax Act is \_\_\_\_\_. I/we shall be responsible for the payment of the respective taxes to the appropriate authorities and should I/we fail to do so, I/we hereby authorize MNREDA to recover the taxes due from us and deposit the same with the appropriate authorities on their demand.

Dated :

Signature

Place :

Name of Tenderer with seal

Signature & name of Witness with address :

## **INSTRUCTIONS TO BIDDERS**

### **1. Minimum qualifying criteria for bidding :-**

1.1 . The bidder must have the following minimum criteria to qualify for bidding:-

- i. The bidder should be a Registered Indian Company/Firm/Joint Venture/MNRE Channel partner or its authorised Distributor/Service Provider registered as manufacturer of Solar Module or Battery or PCU or white LED-based luminaries.
- ii. The bidder should have their products approved by MNRE/IEC.
- iii) The bidder should have an average annual turnover of Rs 7.50 crore in the last three years supported by certified audited balance sheets for the last three years which should be submitted.
- iv) The bidders should have cumulative experience of having executed similar projects in the past. Certified work orders and satisfactory performance reports from project owners should be submitted.
- v) The bidder should have adequate service network for maintenance of the system in North Eastern Region. Details to be furnished.
- vi) The firm who failed to accomplish their assigned project in the last financial year shall not be allowed to participate in this tender.
- vii) The bidder must have valid VAT/ service tax registration certificate along with TIN and shall have to submit copies of such certificate issued by the appropriate authority.
- viii) The bidder shall submit alongwith bid document, copies of Audited Balance Sheets and Profit and Loss Account alongwith details of the project(s) undertaken.

Non-submission of above documents shall result in rejection of bid.

### **2. Tender document:**

In addition to this tender document, any other documents/instructions/amendments/revisions issued by MNREDA to the bidder till the date of opening of the bid shall also be deemed to be an integral part of the bid document in every respect & non-fulfilment of any condition stipulated in such amendments etc shall result in rejection of the bid.

### 3. **Cost of tender document:**

- 3.1. Tender document can be purchased from MNREDA on payment of tender cost of Rs.10,000/- (Rupees Ten thousand) only either in cash or demand draft/banker's cheque drawn in favour of Member-Secretary-Cum-Director, MNREDA, Shillong.
- 3.2. Bidders may also download the bid document from MNREDA website and submit the cost of the bid document as indicated at 3.1 above in the form of Demand Draft/Banker's cheque.

### 4. **Earnest Money :**

- 4.1. Earnest Money @ 2% for general category and 1% for SC/ST/OBC tenderers of the quoted amount in the form of Bank Guarantee/Call Deposit/FDR from any scheduled or Nationalized Bank of India pledged in favour of Member-Secretary-cum-Director, MNREDA, Shillong should be furnished without which tenders will be summarily rejected.
- 4.2. The bidders who claim exemption shall have to produce relevant papers from the proper authority i.e. NSIC registration certificate etc.
- 4.3. EMD shall be returned to the bidders after issue of final work order.

### 5. **Submission of Bid :**

The bid should be submitted latest by the date and time indicated in the NIT schedule. The bid should be submitted in 2(two) parts i.e. (i) COMMERCIAL & TECHNICAL BID AND (ii) FINANCIAL BID.

#### 5.1. **Commercial & Technical Bid shall consist of the following documents:**

- i) Tender paper (Part- 'A') duly signed and sealed by authorized person/s of the Firm
- ii) Cost of tender document, if downloaded or certified copy of money receipt for the tender document issued by MNREDA.
- iii) Data sheet duly filled up and completed as per tender document.
- iv) Documents required under minimum qualifying criteria for bidding.
- v) Any deviation with justification thereof
- vi) The supporting documents should be self attested.
- vii) Any other document(s) as mentioned in this tender document

**5.2. Financial Bid shall consist of the following documents:**

- i) Tender Paper (Part-‘B’) duly signed and sealed by the authorized person/s of the firm
- ii) Price bid should be quoted in the format given.

5.3. Commercial & Technical Bid should be sealed in a separate envelope, hereinafter referred to as “First Envelope” and marked as “Commercial & Technical Bid”

5.4. Commercial & Technical Bid should not contain price of any items otherwise the bid shall be disqualified.

5.5. Financial Bid should be sealed in a separate envelope, hereinafter referred to as “SECOND ENVELOPE” and marked as “Financial Bid”

5.6. Financial Bid should not contain any technical matter or other matter except price bid. The date of opening of the price bid will be notified to qualified bidders after commercial & technical bid evaluation.

5.7. First Envelope and Second Envelope should be sealed in a third envelope marked as “Tender Offer” for the name of work and No. alongwith name of the Firm and full address.

**6. Opening and evaluation of tender.**

6.1. On the date and time indicated in the NIT schedule, only the outer envelope and First Envelope shall be opened. If the cost of the tender document and Earnest Money are found to be in order, then the commercial and technical bid document shall be accepted and kept for evaluation. Otherwise, the tender document shall stand rejected and shall be returned to the bidder.

6.2. The bid document which is accepted shall be evaluated first as per the qualifying criteria and if found to be qualified, the technical and commercial bid shall be evaluated.

6.3. If the bid document is not found to be qualified as per the qualifying criteria, it shall be treated as non-responsive and the technical and commercial bid shall not be evaluated and shall be returned to the bidder.

6.4. Only the bidders whose technical and commercial bids are responsive shall be eligible for opening of the financial bids.

7) **Opening of financial bid :**

Date of opening of financial bid shall be intimated individually to those bidders who have qualified in the technical and commercial offer.

- 7.1. The price quoted should be firm and valid for 1 (one) year from the date of opening of the price bid. The price should be quoted as per the format provided in the tender document. Price break-up of various components must be clearly indicated in the format and failure to comply with the above shall result in rejection of the bid.
- 7.2. The rate(s) should be written in English, both in figure and words. In case of any differences between the prices mentioned in figures and words, the prices mentioned in words shall be considered as 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 calculated accordingly.
- 7.3. Price quoted should be firm and F.O.R. destination, including all taxes, including VAT & CST, and all duties, packing, forwarding freight, insurance and any other incidental charges.

8) **Award of Contract :**

The contract shall be awarded to the lowest (L<sub>1</sub>) bidder and he shall be informed of acceptance of the award within 3 (three) days from the date of issue of the work order for which he should respond and acknowledge within the next 3 (three) days failing which the work shall be offered to the next lowest bidder at the L<sub>1</sub> rate.

9) **Contract Performance Guarantee (CPG) :**

- i) The successful bidder shall furnish a Contract Performance Guarantee @ 10% of the bid amount quoted in the form of Bank Guarantee/Call Deposit/FDR within 7 (seven) days from the date of the award of the contract. The Contract Performance Guarantee should be valid for a period of one year initially and may be extended if required. The format for the CPG is given at Appendix-II.

10) **Additional Information :**

Any other information(s) which are required to be furnished as per detailed tender paper but which have not been specifically indicated should be furnished.

11) **Other terms and conditions :**

- 11.1. Insertion, post, script, addition and alteration shall be confirmed by the bidder's signature and stamp.

- 11.2. Incomplete tender or tenders not submitted as per requirement as indicated in the NIT shall be rejected.
- 11.3. Bidders shall submit their offer strictly as per terms and conditions of the tender document.
- 11.4. Failure to furnish all information and documentary evidence as stipulated in the bid document or submission of an offer that is not substantially responsive to the bid document in all respects shall be summarily rejected.
- 11.5. All bids shall be received in duly sealed cover only within the due date and time. No bids shall be received after the due date and time.
- 11.6. MNREDA 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.
- 11.7. Issuance of bid documents shall not be construed that the bidders would be automatically considered as qualified.

## **GENERAL TERMS & CONDITIONS**

### **1. Signing of Tender Paper**

The Tender Document as issued by MNREDA should be signed on every page by the authorized person of the firm and it will be viewed as acceptance of each and every condition containing therein.

### **2. Time of Completion**

The work should be completed within **120 (one hundred and twenty) days** from the date of issue of final work order. However, the supply of all the major materials for the work like SPV modules, battery, inverter, structures, cables, etc should be completed within **40 (forty) days** from the date of issue of final work order, failing which the work order shall stand cancelled and the Contract Performance Guarantee shall be forfeited. Recovery of the mobilization advance shall also be effected.

### **3. Agreement**

An Agreement has to be signed within 10 (ten) days of issue of the final work order. The Agreement shall be prepared by the successful bidder in the prescribed format (**Appendix 1**) on a non-judicial stamp paper of Rs. 100/- (Rupees one hundred) only and signed by the authorized persons of the Firm and MNREDA. The annual maintenance contract agreement shall be signed separately on completion of installation and commissioning of the system.

#### **4. Warranty**

The System supplied should be under warranty for a period of **2 years** and the SPV Module for a period of **10 years** from the date of commissioning of the System.

#### **5. Payment Terms and Conditions**

The Bidders shall be entitled to the following payment terms:

- (a) Mobilization Advance: The contractor shall be paid 30% (thirty percent) of the contract value as mobilization advance on application and against a Bank Guarantee of like amount from any Nationalized Bank or Scheduled Bank valid for a period of 180 (One Hundred Eighty) days from the date of acceptance of the work.
- (b) 30% (thirty percent) of the contract value shall be paid against receipt of materials at site and in good condition, subject to availability of funds.
- (c) 30% (thirty percent) of the contract value shall be paid on completion and commissioning of the System.
- (d) Balance 10% (ten percent) shall be released at the expiry of warranty period and after submission of performance report duly certified by the concerned Project officer.

#### **6. Contract Performance Guarantee**

6.1 The bidder shall submit the Contract Performance Guarantee (CPG) @ 10% of the bid amount within 7 (seven) days from the date of award of the Contract. The Contract Performance Guarantee should be valid for a period of one year initially and may be extended if required.

6.2 In the event of the contractor not being able to supply or to carry out the work or a part of the work assigned to him in accordance with the terms of this contract, the Contract Performance Guarantee shall be forfeited. Further, MNREDA shall have the right to recover any sums advanced to the contractor as mobilization advance.

#### **7. Subletting of Contract**

The Contractor shall not, without the prior consent in writing of the MNREDA, assign or sublet or transfer his contract, or a substantial part thereof, other than raw materials, or any part of the work of which makers are named in the contract, provided that any such consent shall not relieve the contractor from any obligation, duty or responsibility under the contract.

#### **8. Contractor to Inform himself fully**

- (a) The Contractor shall be deemed to have carefully examined the general conditions, specifications and Schedules and also to have satisfied himself as to the nature and character of the system and equipment to be supplied and installed under the contract, the site conditions and all relevant matters.
- (b) If he shall have any doubt as to the meaning of any portion of the contract/work order, he shall, before signing/accepting it, set forth the particulars thereof and submit them to the MNREDA in writing in order to remove such doubts.

**9. Service Center**

It is mandatory that the bidder should have a local service centre in the North Eastern Region and preference will be given to those Firms who have the service centre in the State of Meghalaya.

**10. Breach/ Cancellation of the Contract**

In case of non-performance in any form or change of the covenants and conditions in this contract by the contractor, MNREDA shall have the power to **annul**, rescind, cancel or terminate the contract and upon its notifying in writing to the contractor that it has so done, this contract shall be absolutely determined. The decision of MNREDA in this regard shall be final and binding.

**11. Responsibility of the Contractor**

The contractor shall guarantee and be entirely responsible for the execution of the contract in accordance with the specifications, schedules and appendices. He shall further guarantee and be responsible for the quality and workmanship of all materials and completed works, correct designs, drawings, correct delivery of materials, erection, testing and commissioning, within the warranty. On completion of commissioning, a separate agreement shall have to be signed in respect of a comprehensive annual maintenance contract for a period of three years after the warranty period.

**12. Safety Measures**

The Contractor shall have to undertake necessary measures for providing adequate safety and precautions to avoid any accident which may cause damage to any equipment/material or injury to workmen. MNREDA shall not responsible for any such accidents.

**13. Delivery of System**

- (a) The contractor shall deliver the plant/systems in accordance with the terms of the contract at the time/times at the place/places and in the manner specified in the contract. The contractor shall comply with instructions that may be given by the MNREDA from time to time regarding the transit of the plant and material.
- (b) Notification of dispatch or delivery in regard to each and every consignment shall be made to the MNREDA immediately after dispatch or delivery. The contractor shall submit to the MNREDA consignee invoice in duplicate and packing account of all stores dispatched or delivered by him.
- (c) In case of any occurrence of loss or damage in transit up to destination, it shall be the liability of the contractor to initiate and pursue the claim with the Insurance Company. He should take immediate steps to repair the damaged equipment or arrange a replacement thereto. Any extension of time limit required in such contingency will be considered by MNREDA on merit.



#### **14. Inspection of Material**

The material shall be dispatched by the supplier after inspection by the Director-cum-Member-Secretary, MNREDA or his representative. The supplier shall give 7 days written notice of any material ready for inspection. The material shall be erected in the project only after acceptance of the same. The installation of the work shall be carried out under the close supervision of the Project Officer, MNREDA. The final inspection after installation and commissioning shall be carried out by Project Officer, MNREDA. MNREDA can also get the systems tested by any approved test centre/laboratory. Rejected material (if any) will be replaced by the supplier at its cost within a stipulated time.

#### **15. Force Majeure :**

The contractor shall not be liable for any penalty for delay or for failure to perform the contract for reasons of "Force majeure" such as natural calamities, and any other acts provided that the contractor shall, within 10 (ten) days from the beginning of such delay, notify the MNREDA in writing of the cause of delay. MNREDA shall verify the facts and grant such extension as facts justify. Delay in supply of any accessories of solar system like PCU, battery bank etc. by the related firms, to whom the bidders has placed order shall also not be treated as force majeure.

#### **16) Rejection of works :**

In the event of any of the material supplied/work done by the contractor is found defective in material or workmanship or otherwise not in conformity with the requirements of this contract specifications, MNREDA shall either reject the material and/or work and advise the contractor to rectify the same. The contractor on receipt of such notices shall rectify or replace the defective material and rectify the work, free of cost. If the contractor fails to do so, MNREDA may:

- a) At its option, replace or rectify such defective materials and/or work and recover extra cost so involved from the contractor plus 15% (fifteen) percent service charges of the cost of such rectification from the contractor or terminate the contract for balance work/supplies with enforcement of penalty as per contract.
- b) Defective materials/workmanship will not be accepted under any condition and shall be rejected outright without compensation. The contractor shall be liable for any loss/damage sustained by MNREDA due to defective work.

#### **17) Penalty for delay in completion of work:**

If the contractor fails to complete the erection, testing and commissioning etc. within the time schedule specified in the work order, including any extension granted thereto, MNREDA will recover from the contractor as penalty a sum of one percent (1.0%) of the system price of the incomplete portion of the work for each calendar month of delay or part thereof. For this purpose, the date of taking over shall be reckoned as the date of completion. The total penalty shall not exceed 5% (five percent) of the contract price.

**18) Insurance :**

The contractor shall arrange insurance coverage for the materials at his custody for the work under execution as per the conditions laid down in the relevant clause of the technical specification, at least till the systems are commissioned and handed over to MNREDA.

The contractor shall take up insurance or such other measures for the manpower so as to cover the claim for damage arising under Workman's Compensation Act and other applicable State/Central Laws. MNREDA shall not bear any responsibility on this account.

**19) Non-Assignments :**

The contractor shall not assign or transfer the work orders issued as per this contract or any part thereof to any other person/party without the prior approval of MNREDA.

**20. Court of Competent Jurisdiction :**

Any disputes shall be referred to the courts of Shillong which shall have absolute jurisdiction to entertain and try the case.

**SCOPE OF WORK**

**1. Scope of Work**

The scope of work shall include the following:

- a) Design, manufacture, supply, installation & commissioning of Solar PV Power Plant
- b) Detailed planning of smooth execution of the project
- c) Performance testing of the complete system
- d) Warranty of the system for 2 years faultless operation.
- e) After sales service

This would inter-alia include:

- a) A clear understanding of the features of the proposed project site. This may require a prior visit to the proposed site.
- b) Supply of the complete systems, including all necessary components, sub components, spares, and tools etc. as per technical specifications given elsewhere in this document.
- c) Erection and commissioning of the supplied systems on the specified site.
- d) All structural drawings to be approved by the Project Officer In-charge, MNREDA.
- e) Any other work urgently required as per site conditions.
- f) The bidder must also provide a detailed operation and maintenance manual specific to the installed systems.
- g) Fabrication, supply and the installation of suitable support for the PV panels and other components whichever is required with the accessories.

- h) Provide electrochemical marking (embossing) on each solar module which will show name of manufacturer, year of manufacturing and capacity of solar module.

Page 14

- i) Supply of manual for Operation and Maintenance of all the systems in English or local language.
- j) Supply and installation of control equipments required for the system.
- k) Training of the user(s) for operation and maintenance of the system.
- l) Any additional works not covered above, but necessary for the functioning of the system and required to be incorporated as per specification.
- m) Regarding actual work to be carried out at the site, tenderer needs to execute the work in consultation with the office of MNREDA.
- n) The successful bidder shall provide Comprehensive Maintenance Contract (CMC) of 3 years after the end of the warranty period.
- o) The successful bidder shall provide the necessary training to the identified representative approved by MNREDA during the course of 5 years of warranty and CMC periods for proper daily operation and maintenance of installed system.

**DETAILS OF VILLAGES, LOCATION, CENSUS CODE, NO. OF HOUSEHOLD AND SYSTEMS REQUIREMENTS TO BE INSTALLED IN 103 REMOTE VILLAGES.**

Sl. No.	Name of Village	Block	District	Census Code 2011	Total Household Census 2011	Household considered	Systems requirements	
							Solar home lighting system	SPV Street Lighting System.
1.	ShetJahader	Laskein	Jaintia Hills	279285	4	4	4	1
2.	Damasitung	Saipung	-do-	279475	7	8	8	1
3.	Lahalien	Khliehriat	-do-	279483	74	83	83	12
4.	Lejri	-do-	-do-	279484	57	64	64	10
5.	Kazakhm	Saipung	-do-	279565	20	22	22	3
6.	Moulacheng	Saipung	-do-	279573	21	23	23	3
7.	Bambaithol	Saipung	-do-	279581	9	10	10	2
8.	Kayengpur	Saipung	-do-	279582	30	33	33	5
9.	kayengphai	Saipung	-do-	279583	10	11	11	2
10.	Salain	Saipung	-do-	279585	15	17	17	3
11.	Saitual	Saipung	-do-	279591	16	18	18	3
12.	Lalzol	Saipung	-do-	279592	15	17	17	3
13.	Nachangzol	Saipung	-do-	279594	23	26	26	4
14.	Gohaimara	Mawshynrut	West Khasi Hills	276333	92	103	103	15
15.	Salbari	Mawshynrut	-do-	276336	68	76	76	11
16.	Sohmarang	Mawshynrut	-do-	276349	25	28	28	4
17.	Nongdron	Mawshynrut	-do-	276350	32	36	36	5
18.	IewNongma	Mawshynrut	-do-	276369	27	30	30	5

19.	Aberam		-do-	276374	5	6	6	1
20.	Hahuapara		-do-	276375	68	70	70	11
21.	MadanJaiaw		-do-	276382	20	22	22	3
22.	Joypur	Mawshynrut	-do-	276392	109	122	122	18

23.	Agreng	Mawshynrut	-do-	276393	27	30	30	5
24.	Mawlan-A	Mawshynrut	-do-	276413	51	57	57	9
25.	Mawlan-B	Mawshynrut	-do-	276414	18	20	20	3
26.	Umpha	Mawshynrut	-do-	276415	6	7	7	1
27.	Umbah	Mawshynrut	-do-	276416	20	22	22	3
28.	Mawsikar	Mawshynrut	-do-	276417	55	61	61	9
29.	Umbyrsit	Mawshynrut	-do-	276418	33	37	37	6
30.	Mawdiangnam	Mawshynrut	-do-	276419	53	59	59	9
31.	Umyiap	Mawshynrut	-do-	276420	52	58	58	9
32.	Umshahsiang	Mawshynrut	-do-	276425	10	11	11	2
33.	Umdiangsiar	Mawshynrut	-do-	276426	19	21	21	3
34.	Langpih	Mawshynrut	-do-	276429	49	55	55	8
35.	Umwahli	Mawshynrut	-do-	276430	34	38	38	6
36.	Umwahlang	Mawshynrut	-do-	276431	79	88	88	13
37.	Umtap	Mawshynrut	-do-	276508	42	47	47	7
38.	Mawmareh	Mawshynrut	-do-	276509	16	18	18	3
39.	Umkiam	Mawshynrut	-do-	276655	90	100	100	15
40.	Umkhamdor	Nongstoin	West Khasi Hills	276656	82	91	91	14
41.	Mawdiangkop	-do-	-do-	276657	31	35	35	5
42.	Talimara	-do-	-do-	276658	19	21	21	3
43.	Waregro	-do-	-do-	276660	58	59	59	9
44.	Hasem	-do-	-do-	276665	34	38	38	6
45.	Umdiangphiang	-do-	-do-	276666	12	13	13	2
46.	Borkhuli	-do-	-do-	276667	36	40	40	6
47.	Dolidonga	-do-	-do-	276668	77	86	86	13
48.	Mawthawphet	-do-	-do-	276833	24	27	27	4
49.	Nongkseh	-do-	-do-	276724	2	2	2	0
50.	Nongmiangkain	-do-	-do-	276813	16	18	18	3
51.	Porkhadoh	Mawshynrut	-do-	276881	20	22	22	3

52.	Umsakhlajriaw	-do-	-do-	277019	99	110	110	17
53.	Pormador	Ranikor	-do-	277141	38	42	42	6
54.	Nongmalang	-do-	-do-	277148	27	30	30	5
55.	Nongdewsaw	-do-	-do-	277182	2	2	2	0
56.	Mawtaien	-do-	-do-	277183	6	7	7	1
57.	Mawhati	-do-	-do-	277204	48	54	54	8
58.	Kewri	-do-	-do-	277255	6	7	7	1
59.	Siejong	-do-	-do-	277346	5	6	6	1
60.	Choripahar	Resubelpara	East Garo Hills	274579	33	37	37	6

61.	Mandalangre	-do-	-do-	274648	25	28	28	4
62.	Tetenggitok	DamboRongjeng	-do-	274749	18	20	20	3
63.	Rangshangkham	Pynursla	East Khasi Hills	278224	33	37	37	6
64.	Mawkyring	Mawryngkeng.	-do-	278365	32	36	36	5
65.	Mawkalang	KhatashnongLaitkroh	-do-	278506	18	20	20	3
66.	Mawtuli	-do-	-do-	278553	7	8	8	1
67.	Ramkheng	-do-	-do-	278595	31	35	35	5
68.	UmlynterBalat	Mawsynram	-do-	278717	9	10	10	2
69.	Kharprah	-do-	-do-	278748	25	28	28	4
70.	Diengkhai	Shella-Bholaganj	-do-	278874	16	18	18	3
71.	Nunmati	Selsella	West Garo Hills	272917	24	27	27	4
72.	Rongranggiri	-do-	-do-	273026	99	110	110	17
73.	Barmanpara	-do-	-do-	273081	63	70	70	11
74.	Jongchipara (Nakat)	Tikrikilla	-do-	273406	62	69	69	10
75.	TenakSonggitcham	Gasuapara	South Garo Hills	275958	11	12	12	2
76.	BernongshaiNongmaw	Jirang	Ri-Bhoi	277703	29	32	32	5
77.	DakaPathar	-do-	-do-	277763	10	11	11	2
78.	DummiePaham	-do-	-do-	277744	35	39	39	6
79.	GaroBhangaAmreng	-do-	-do-	277756	32	36	36	5
80.	GaroBhangaRim	-do-	-do-	277757	29	32	32	5
81.	GaroBhangaThymmai	-do-	-do-	277758	25	28	28	4
82.	JalukPaham	-do-	-do-	277745	24	27	27	4
83.	Jatalong	Umsning	-do-	277948	41	46	46	7
84.	Khliehumwang	-do-	-do-	277958	83	93	93	14
85.	Koinadhara	Umling	-do-	277458	6	7	7	1
86.	KynthemNongmali	Jirang	-do-	277740	35	39	39	6

87.	Laru	Umsning	-do-	277879	162	181	181	27
88.	Madanumweng	-do-	-do-	277961	65	72	72	11
89.	Mawsladieng	-do-	-do-	277880	19	21	21	3
90.	Mawtynkong	Jirang	-do-	277747	34	38	38	6
91.	Nongterih	-do-	-do-	277743	15	17	17	3
92.	NongwahMawla	-do-	-do-	277726	52	58	58	9
93.	Polengtleit	Umsning	-do-	277836	64	71	71	11
94.	Sabuda	-do-	-do-	277952	54	60	60	9
95.	Ulubari	-do-	-do-	277741	28	31	31	5
96.	Umjarain	-do-		277880	7	8	8	1
97.	Umlaper	-do-	-do-	277883	32	36	36	5
98.	Umenat	-do-	-do-	277884	48	54	54	8
99.	Umru	-do-	-do-	277878	15	17	17	3
100.	Umsder	-do-	-do-	277881	9	10	10	2
101.	Umshyngkot	-do-	-do-	277835	42	47	47	7
102.	Umtlieh	-do-	-do-	277954	126	141	141	21
103.	Umtynglad	Jirang	-do-	277746	8	9	9	1

Total HH & No. of SPV HLS & SSLS	3668	4094	4094	620
----------------------------------	------	------	------	-----

### TECHNICAL SPECIFICATIONS

LED based solar home lighting systems and solar street lighting systems.

Design, supply, installation and commissioning of 4094 Nos. of SPV Home Lighting System and 620 Nos. of SPV street lighting systems in 103 remote villages (list of villages attached at Page 14-17) in Meghalaya.

#### **SPECIFICATION:**

##### **A. SPV Home Lighting System:**

I.	SPV Module (s)	
i)	Wattage to be used	200 Wp
ii)	Type of Module	Poly crystalline silicon
iii)	Name of Manufacturer	To be mentioned
iv)	Applicable Standard	IEC 61215 (revised) Certification
v)	Material structure of solar cell	Mono or poly crystalline silicon
vi)	Module Efficiency	Not less than 10%
vii)	Terminal Box on the module	Should have a provision for opening or replacing the cable of required
viii)	VOC open circuit voltage	
ix)	Warranty for Modules	Should be 10 (ten) years and above.
2.	<b>BATTERY :</b>	
i)	Make (as per test report)	
ii)	Type of Battery	i)Lithium Ion Battery//Tubular Gel/VRLA
iii)	Capacity	12V 40 Ah
iv)	Permitted depth of discharge	At least 75% of the rated capacity
v)	Model number	To be mentioned
vi)	Mounting of Battery	Inside the house
vii)	Reference of IS No.	IS 13369
viii)	Ampere hour Efficiency	90%
ix)	Watt hour efficiency	75%
x)	Type Test certificate	To be attached
xi)	Battery should confirm to the latest BIS/International Standards	To be mentioned
xii)	Specification details and write up or battery	Should be furnished
xiii)	Battery should have a minimum rating of 12V, 40 Ah at C/20 rate of discharge depending on the Model	To be mentioned
3.	<b>Battery Box :</b>	
i)	Battery Box material	Pre-coated galvanized sheet of > 1.0 mm thick
ii)	Battery Box protection	Powder-coating of 80 micron thickness
iii)	Battery Box with acid proof corrosion paint for housing the storage indoors	Should be furnished
4.	<b>Electronic :</b>	
i)	Total electronics efficiency	Should be at least 85%
ii)	Electronics should have temperature compensation for proper charging of the battery throughout the year.	Should be indicated

iii)	Idle current	Should be less than 2mA
iv)	The Voltage drop from module terminals to the battery terminals	Should not exceed 0.6 volts
v)	Wave form type	Sine or quasi-sine
vi)	Frequency	20-35 KHZ
vii)	Necessary lengths of wires/cables, switches suitable DC use and fuses	Should be provided
viii)	PCB containing the Electronics	Should be capable of solder free installation and replacement.
<b>5.</b>	<b>Light source</b>	
i)	The light source will be	White LED type
ii)	Colour temperature of white LEDs	5500° K – 6500°K
iii)	LED units ultra-violet light	Not permitted
iv)	White LEDs make	Should be indicated
v)	White LEDs model number	Should be indicated
vi)	White LEDs country of origin	Should be indicated
vii)	White LEDs technical characteristics	Should be indicated
viii)	LED lamp make	Should be indicated
ix)	LED lenses	Peanut lenses
x)	The light output from the W-LED light source	Should be constant throughout the duty cycle.
xi)	LED lighting with fixtures	2x5W
7.	LED SPV Home Lighting System Warranty for white LED based SPV Home lighting system(including battery except PV Module)	To be warranted for a period of 5 (five) years from the date of supply.
8.	DC fan	1x12V
9.	Solar charger	1x20W

**DATA SHEET**

**(SPV HOME LIGHTING SYSTEM)**

Sl. No.	Items	Requirements
<b>1.</b>	<b>SPV Module</b>	
i)	Watt Peak of Module	
ii)	Type of Module	
iii)	Name of Manufacturer	
iv)	Applicable standard	
v)	Material structure of solar cell	
vi)	Module Efficiency	
vii)	Terminal Box on the module	
viii)	VOC open circuit	
ix)	Warranty for Module	
<b>2.</b>	<b>Battery:</b>	
i)	Make	
ii)	Capacity	
iii)	Permitted depth of discharge	
iv)	Model number	
v)	Mounting of battery	
vi)	Reference of IS No.	
vii)	Amphere hour efficiency	
viii)	Watt hour efficiency	

ix)	Type of test certificate	
x)	Battery should conform to the latest BIS/International Standards	
xi)	Specification details and write up on battery	
xii)	Battery should have a minimum rating of 12V, 40 Ah at C/20 rate of discharge depending on the Model	
<b>3.</b>	<b>Battery Box</b>	
i)	Battery Box Material	
ii)	Battery Box protection	
iii)	Battery Box with acid proof corrosion paint for housing the storage indoors	
<b>4.</b>	<b>Electronics</b>	
i)	Total electronics efficiency	
ii)	Electronics should have temperature compensation for proper charging of the battery throughout the year.	
iii)	Idle current	
iv)	The voltage drop from module terminals to the battery terminals	

<b>5.</b>	<b>Light source</b>	
i)	The light source will be white LED type	
ii)	Colour temperature of white LEDs	
iii)	White LEDs make	
iv)	White LEDs model number	
v)	White LEDs country of origin	
vi)	White LEDs technical characteristics	
vii)	LED lamp make	
viii)	LED lenses	
ix)	The Light output form W-LED light source	
<b>6.</b>	<b>LED SPV Home Lighting System Warranty for LED based SPV Home Lighting System (including Battery) except PV module</b>	
<b>7.</b>	<b>DC fan</b>	
<b>8.</b>	<b>Solar charger</b>	

**B. SPV STREET LIGHTING SYSTEM :**

Sl. No.	Details of technical	Requirements
<b>1.</b>	<b>Electronics :</b>	
i)	Luminaire	The luminaire light should be in 5 metre above the ground.



ii)	Operating voltage	12V
iii)	Light output	➤ 5000 lumens
iv)	LED life	➤ 50,000 hours
v)	Drivers life	100,000 cycles
v)	CRI	➤ 70
vi)	Temperature compensation for proper charging of the battery through the year.	Should be indicated
vii)	Light source	White LED type
viii)	Colour temperature of white LEDs	5500°K – 6500 K'
ix)	LEDs units ultra violet light	Not permitted
x)	White LEDs make	Should be indicated
ix)	White LEDs model number	Should be mentioned
x)	White LEDs model number	Should be mentioned
xi)	White LEDs country of origin	Should be mentioned

xii)	White LEDs technical characteristics	Should be indicated
xiii)	LED lamp make	Should be indicated
xiv)	LED lenses	Peanut lenses
xv)	Total lumen output	
xvi)	System wattage (LED + Drier	
xvii)	Luminaire efficiency per watt	80 lumens/watt
xviii)	Driver type	DC-DC
Xix	Driver efficiency	92%
xx)	Driver current	≤ 400mA
xxi)	Luminaire housing	Aluminium pressure die-cast housing
xxii)	Ingress protection	IP 65
xxiii)	Luminaire arm	Powder coated
xxiv)	A valid test certificate of the company for module qualification as per prevailing IEC or BIS standards for any of the modules manufactured by the company.	Required
xxv)	The manufacturer should certify that the submitted module is also manufactured using same design and process	Required
xxvi)	The operating voltage corresponding to the Power output mentioned above.	16.4V
xxvii)	Warranty	10 years
xxviii)	SPV module(s) frame	Metallic with corrosion resistance paint.
xxix)	CM80 report for white LED chip	To be submitted
Xxx	Applicable standard	IEC 61215 (revised)certification
xxxi)	Material structure for solar cell	Poly-crystalline silicon solar cells
xxxii)	VOC open circuit voltage	21.0 V under standard testing conditions (STC).

xxxiii)	Minimum power at Vmax	30W
xxxiv)	Cell efficiency	14%
xxxv)	Country of manufacture	India
xxxvi)	Mounting frame	Metallic (with corrosion resistance paint)
2.	<b>SPV Module :</b>	
i)	Wattage should be	30 Wp
ii)	Type of Module	Poly crystalline silicon cells
iii)	Name of Manufacturer	To be mentioned
iv)	Applicable standard	IEC 61215 (Revised certification)

v)	Material structure for solar cell	Crystalline silicon
vi)	Module efficiency	Should not be less than 12%
vii)	Power output of the Module under STC	Should be minimum of 30Wp at a load voltage 16.4±0.2V
viii)	Open circuit voltage under STC	Should be less than 21.0 volts
ix)	The terminal box on the module should have a provision for opening it for replacing the cable , if required.	To be mentioned
x)	A distinctive serial number with NSM will be engraved on the frame of the modules or screen printed on the tedlar sheet of the module * The load voltage and VOC conditions of the PV modules are not applicable for the system having MPPT based charge controller*	Should mentioned
xi)	There should be a name plate fixed inside the module which will give	To be indicated
a)	Name of the manufacturer	
b)	Model number	
c)	Serial number	
d)	Year of manufacturer	
3.	<b>Battery:</b>	
i)	Make (as per test report)	To be indicated
ii)	Type of battery	li-ion battery/ tubular Gel/VRLA
iii)	Capacity	12V 40 Ah
iv)	Permitted depth of discharge	At least 75% of the rated capacity
v)	<b>Model number</b>	Should be indicated
vi)	Mounting of Battery	Top
vii)	Reference of IS No.	IS 13369
viii)	Amphere hour efficiency	90%
ix)	Watt hour efficiency	75%
x)	Type test certicate	To be attached
xi)	Battery system back-up	42 hours
3.	<b>Battery Box:</b>	
i)	Battery Box Material	Pre-coated galvanized hut of > 1.0 mm thick
ii)	Battery Box protection	Powder-coating of 80 micron thickness
iii)	Battery box support structure protection	Powder coating of 80 micron thickness.

<b>4.</b>	<b>Pole :</b>	
i)	Type	Octagonal pole with 65 micron thick galvanizing
ii)	Height	5 metres above ground
iii)	Thickness	5mm
iv)	Foundation nuts, bolts and templates	Bolts and nuts. MS SAE 1018 hot dip galvanize

v)	Top OD	90 mm
<b>5.</b>	<b>Inbuilt protections:</b>	
i)	Overcharge protection for battery	To be provided
ii)	Deep discharge protection for battery	To be provided
iii)	Reverse polarity protection for panel and battery	To be provided
iv)	Temperature compensated charging for battery	To be provided
v)	Polarity	Auto resettable circuit for protection without using fuse.
vi)	Short circuit protection for battery	Auto resettable circuit should be provided
vii)	LED indicators a green light to indicate charging in progress and a red light to indicate deep discharge condition of the battery	To be provided
<b>6.</b>	LED solar street lighting system Warranty for white LED solar street lighting system (including the battery) except PV Module	To be warranted for a period of 5(five) years from the date of supply.

## DATA SHEET

### (SPV STREET LIGHTING SYSTEM)

<b>ELECTRONICS</b>	
Luminaire Height	
Operating Voltage	
Light output	
LED Life	
Driver Life	
CRI	
Temperature compensation for proper charging of the battery throughout the year.	
Light source	
Colour temperature of white LEDs	
LEDs emits ultraviolet light	
White LEDs make	
White LEDs model number	
White LEDs country of origin	

White LEDs technical characteristics	
LED lamp make	
LED Lenses	
Total Lumen Output	
System Wattage (LED + driver)	
Luminaire efficacy per Watt	
Driver type	
Driver efficiency	
Driver Current	
Luminaire housing	
Ingress Protection	
Luminaire arm	
Luminaire arm Length	
Luminaire arm Tilt	
The light output from the white LED light source should be constant throughout the duty cycle.	
Dimming facility	
Applicable Standard.	
LM 79 report for Luminaire	
<b>SPV MODULE</b>	
The PV module (s) capacity	
A PV module test report from authorized test centre.	
A valid test certificate of the company for module qualification as per prevailing IEC or BIS standards for any of the modules manufactured by that company.	
The manufacturer should certify that the submitted module is also manufactured using same design and process.	
The operating voltage corresponding to the power output mentioned above	
Warranty	
SPV module(s)frame structure	
LM80 report for White LED Chip	
Applicable Standard.	
Material Structure of Solar Cell	
VOC open circuit voltage	
Minimum Power at Vmax	
Cell efficiency	
Country of manufacture	
Mounting frame	
<b>BATTERY</b>	
Make (as per test report)	
Type of Battery	
Capacity	
Permitted depth of discharge	

Model number	
Mounting of Battery	
Reference of IS No.	
Ampere hour Efficiency	
Watt Hour Efficiency	
Type Test Certificate	
Battery System Back-up	
<b>Battery box</b>	
Battery box material	
Battery box protection	
Battery box support structure protection	
<b>Pole</b>	
Type	
Height	
Thickness	
Foundation nuts, bolts and templates	
Top OD	
<b>Charge Controller</b>	
Rating	
Type	
Temperature compensated charging	
Efficiency	
Enclosure for charge controller	
No load current	
<b>Inbuilt Protections:</b>	
Overcharge protection for battery	
Deep discharge protection for battery	
Reverse polarity protection for panel and battery	
Temperature compensated charging for battery	
Polarity	
Short circuit protection for battery	
LED indicators: a green light to indicate charging in progress and a red light to indicate deep discharge condition of the battery	
Warranty for White LED solar street lighting system (including the battery) except PV module	



# **MEGHALAYA NON-CONVENTIONAL AND RURAL ENERGY DEVELOPMENT AGENCY**

Near B.S.F. Camp, Mawpat, P.O. Mawpat, Shillong – 793 012

Phone No.0364-2537343/2536138#Fax No.0364-2537611

E-Mail: [mnreda.dir@gmail.com](mailto:mnreda.dir@gmail.com) Website: [www.mnreda.gov.in](http://www.mnreda.gov.in)

## **PART – B**

## **FINANCIAL BID**

# PART – B

## FINANCIAL BID

No.MNREDA/1658/2015/

Dated Shillong, the \_\_\_\_\_ 2016.

### 1. SPV Home Lighting System :

Sl. No.	Items	unit	Quantity	Rate (Rs.)	Amount (Rs.)
1.	Supply of components and parts required in LED based solar home lighting system.	Nos.			
2.	Installation and commissioning of the system (in respect of complete set)	Nos.			
3.	CMC (3 years of LED based solar home lighting system.	Nos.			
	Total				

(Rupees \_\_\_\_\_)only.



## 2. SPV STREET LIGHTING SYSTEM:

Sl. No.	Items	unit	Quantity	Rate (Rs.)	Amount (Rs.)
1.	Supply of components and parts required in 7W LED based solar street lighting system.	Nos.			
2.	Installation and commissioning of the systems (in respect of complete set)	Nos			
3.	CMC (3 years) of 7W LED street lighting system.	Nos.			
	Total				

(Rupees \_\_\_\_\_)only.

- Note :
1. The prices quoted above are complete in all respects as per technical specifications and inclusive of all central/state/local taxes and duties, packing, forwarding, transit, insurance, loading and unloading, transportation and other charges etc.
  2. Certified that rates quoted are as per specifications, terms and conditions mentioned in the bid document.
  3. All the materials shall be delivered within 30 (thirty) days from the date of issue of the work order.

Date :

Signature of tender

Place :

with company seal.

## AGREEMENT

### APPENDIX-I

#### **PREAMBLE:**

Contract for design, supply, manufacturing inspection, packing and forwarding, transportation, installation & commissioning of \_\_\_\_\_ Kwp solar photovoltaic plant systems at \_\_\_\_\_ location in the State of Meghalaya.

This contract made this \_\_\_\_ day of \_\_\_\_\_ Two thousand Fifteen at Shillong.

#### **BETWEEN**

Meghalaya Non-Conventional and Rural Energy Development Agency(MNREDA) having its office at Near BSF Camp, Mawpat, Shillong-793012, East Khasi Hills District, Meghalaya, India, hereinafter referred to as the "PURCHASER" which term or expression unless excluded by or repugnant to the context or the meaning thereof, shall be deemed to include its successors and permitted assigns, **OF THE ONE PART,**

#### **AND**

M/s \_\_\_\_\_ having its office at \_\_\_\_\_ Hereinafter referred to as "Supplier" which term or expression unless excluded by or repugnant to the context or meaning thereof shall be deemed to include its successors and permitted assigns), **OF THE OTHER PART,**

#### **AND WHEREAS**

- a. The PURCHASER has decided to get the work of supply, installation and commissioning of \_\_\_\_\_ Kwp Solar Photovoltaic Power Plant at \_\_\_\_\_ location in the State of Meghalaya.
- b. The SUPPLIER has declared that he has valuable specialized knowledge and expertise for Manufacturer, Shop Testing, packing, Forwarding, Transportation, Transit Insurance, Supply, Installation, Testing and Commissioning of Solar Photovoltaic power Plant Systems.
- c. The Supplier has obtained clarifications on technical and commercial aspects, inspected the site and generally all matters incidental thereto and ancillary thereof, affecting the execution and completion of the job, and
- d. The SUPPLIER has agreed to undertake the aforesaid work as per the Specifications and the terms and conditions of the PURCHASER.
- e. The SUPPLIER has accepted the tender of the SUPPLIER for the aforesaid work and on the basis of above declarations of the Supplier, has decided to enter into this agreement with the SUPPLIER.

**NOW IT IS HEREBY AGREED AND DECLARED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:**

Article-1

- 1.1 In consideration of the total contract price of Rs. \_\_\_\_\_(Rupees \_\_\_\_\_)only and as per details specified in Purchase Order to be paid by the PURCHASER to the SUPPLIER for scope of work and services the SUPPLIER hereby covenants with the PURCHASER to perform the work detailed in Purchaser Order and Technical Specification.
- 1.2 Subject to the provisions of this contract, completion of the work within the stipulated time is the essence of the contract. The SUPPLIER shall arrange to effect deliveries of the materials, facilities and other services under this contract within the time schedule and in such manner that the completion of all items of work shall be synchronized in such a way that the overall schedule of the various items specified in the contract is observed and adhered to.
- 1.3 Notwithstanding the approval accorded by the PURCHASER to the appointment of any sub-Suppliers including those which may be specified in the contract, the SUPPLIER shall be solely responsible for the completion of the work as per specifications and within the time schedule agreed in this contract. Approval of any sub-Supplier by PURCHASER shall not relieve SUPPLIER from any of his liabilities or obligations under the contract and he shall be responsible for the acts, defaults and neglects of any sub-Supplier as fully as if they were the acts, defaults or neglects of SUPPLIER.

Article-2

The contract price is inclusive of all applicable charges, insurance, freight, TOT, Octroi, Excise Duty, Professional Tax, VAT and all the other taxes and duties.

Article-3

This contract shall come into effect from the date of Purchase Order.

Article-4.

In case of any failure 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 MNREDA and to fulfil his obligations in time under the contract, he shall be liable to pay MNREDA liquidated damaged as mentioned in the Purchase Order.

Article-5

The following documents shall form and be read and construed as an integral part of this contract: Purchase Order No.MNREDA/\_\_\_\_\_.

Article-6

All notices under this contract shall be given in writing and shall be deemed sufficiently given when delivered either in person or by telegram, fax/telex or by registered mail or courier addressed to the other party at its address set forth in the preamble to this contract with a copy to the nominated representative at site.

Article-7

This contract is executed in English language.

Article-8

The contract shall be subject to the exclusive jurisdiction of the courts under the Meghalaya High Court at Shillong.

IN WITNESS HEREOF the Parties hereto by representatives duly authorized have executed the contract on the day, month and the year first above written.

Signature

Signature

For and on behalf of Supplier

For and on behalf of

Meghalaya Non-Conventional and Rural Energy development Agency.

(Seal of the office)

(Seal of the office)

In the Presence of:

In the Presence of:

1.

1.

2.

**CONTRACT PERFORMANCE GUARANTEE**

(To be stamped in accordance with Stamp Act)

(The stamp paper should be in the name of issuing bank)

Bank Guarantee No.

Ref:

Date :

To,

Director,  
Meghalaya Non-Conventional and Rural Energy  
Development Agency (MNREDA),  
Near BSF Camp, Mawpat, Shillong-793012.

Dear Sir,

In consideration of the MNREDA Meghalaya Non-Conventional and Rural Energy Development Agency (hereinafter referred to as the (MNREDA) which expression shall unless repugnant to the context or meaning thereof includes its executers, administrators, successors and assigns) having accepted offer of Supply Installation Testing Commissioning(SITC) of Solar Project of \_\_\_\_\_ Kwp at \_\_\_\_\_ by M/s. \_\_\_\_\_ with its Registered/Head Office at \_\_\_\_\_ (hereinafter referred to as "Supplier", which expression shall unless repugnant to the context or meaning thereof includes its executers, administrators, successors and assigns) a contract by issue of (MNREDA) Letter of Award No. \_\_\_\_\_ Dated \_\_\_\_\_ and the same having been unequivocally accepted by the Supplier resulting in a "Contract" bearing No. \_\_\_\_\_ for Supply Installation Testing Commissioning(SITC) of Solar Project of \_\_\_\_\_ Kwp at \_\_\_\_\_ and the Supplier having agreed to provide a contract performance guarantee for the faithfull performance of the entire contract equivalent to Rs. \_\_\_\_\_ ( in figure and words).

Whereas the above said Letter of Award being assigned by MNREDA Authority Signatory (hereinafter referred to as the “MNREDA”, which expression shall unless repugnant to the context or meaning thereof includes its executers, administrators, successors and assigns) vide MNREDA’s , letter No. \_\_\_\_\_ dated \_\_\_\_\_ w.e.f. 01.01.2015 and accepted by the Supplier, thereby requiring the Contract Performance Guarantee for the same amount to be issued in favour of MNREDA.

We \_\_\_\_\_ (Name & Address), having our Head office at \_\_\_\_\_ and Branch office at \_\_\_\_\_ (hereinafter referred to as “Bank”, which expression shall unless repugnant to the context or meaning thereof includes its executers, administrators, successors and assigns) do hereby guarantee and undertake to pay promptly to MNREDA, on demand any and all monies payable by the Supplier to the extent of \_\_\_\_\_ as aforesaid at any time upto \_\_\_\_\_ (DD/MM/YYYY) without any demur, reservation, contest, recourse or protest and/or without any reference to the Supplier. Any such demand made by MNREDA on the Bank shall be conclusive and binding notwithstanding any difference between the MNREDA and the Supplier or any dispute pending before any court, tribunal or any other authority. The bank undertakes not to revoke this Bank guarantee during its currency without previous consent of the MNREDA and further agrees that the guarantee herein contained shall continues to be enforceable till the MNREDA discharges this guarantee.

The MNREDA shall have the fullest liberty without affecting in anyway the liability of the bank under this guarantee from time to time to extend the time for performance of the contract by the Supplier. The MNREDA shall have the fullest liberty, without affecting this guarantee to postpone from time to time the exercise of any powers, vested in them or of any right which they might have against the Supplier, and to exercise the same at any time any manner, and whether to enforce or to forbear or to enforce any covenants, contained or implied, in the contract between MNREDA and the Supplier or any other course of remedy or security available to the MNREDA. The Bank shall not be released of its obligation under these presents by any exercise by the MNREDA of its liberty with reference to the matters aforesaid or any of them or by a reason of any other acts of omission or commission on the part of the MNREDA or any other indulgence shown by the MNREDA or by any other matters or thing whatsoever which under law would, but for this provision, have the effect of relieving the bank.

The bank also agrees that the MNREDA at its option shall be entitled to enforce this guarantee against the bank as a principal debtor, in the first instance without proceeding against the Supplier and

notwithstanding any security or other guarantee that the MNREDA may have in relation to the Supplier's liabilities.

Notwithstanding anything contained herein above our liability under this guarantee is restricted to \_\_\_\_\_ and it shall remain in force upto and including \_\_\_\_\_ and shall be extended from time to time for such period, as may be desired by M/s. \_\_\_\_\_ on whose behalf this guarantee has been given.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_ at \_\_\_\_\_

Witness. 1.

Signature \_\_\_\_\_ (Signature) \_\_\_\_\_

Name \_\_\_\_\_ Bank Rubber Stamp

Official Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ Name \_\_\_\_\_

(Designation with Bank Stamp) \_\_\_\_\_

Witness. 2.

Signature \_\_\_\_\_ Attorney as per Power of Attorney No. \_\_\_\_\_

Name \_\_\_\_\_ Dated \_\_\_\_\_

Official Address \_\_\_\_\_

