

MEGHALAYA NON-CONVENTIONAL AND
RURAL ENERGY DEVELOPMENT AGENCY.

TENDER DOCUMENT
FOR
SUPPLY OF 15,000 NOS. OF 3 Watts
LED BASED SOLAR LANTERNS
IN THE STATE OF MEGHALAYA.

NIT No.MNREDA/1501/2012/16

Tender Issue To :- _____

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

TABLE OF CONTENTS

Sl.No.	Page No.
1. NOTICE INVITING TENDER	1-2
2. INSTRUCTION TO TENDERER	3-4
3. GENERAL/COMMERCIAL TERMS AND CONDITIONS.	4-8
4. TECHNICAL SPECIFICATIONS & REQUIREMENT	9 -14
5. PRICE SCHEDULED	15

MEGHALAYA NON-CONVENTIONAL AND RURAL ENERGY DEVELOPMENT AGENCY

Near BSF Camp Mawpat, Shillong-793012.
Phone No.0364-2537343/2536138## Fax No.0364-2537611
E-Mail mnreda.dir@gmail.in ## Website www.mnreda.Gov.in

1. NOTICE INVITING TENDER.

No.MNREDA/1501/2012/16:- Sealed tender with 90 (Ninety) days validity are invited from the approved manufacturer/supplier for supply of 15,000 Nos. of 3 watt white LED Solar Lanterns and having valid test report from the Authorized Testing Centre approved by The Ministry of New and Renewable Energy, Govt.of India (MNRE) issued on or after **1st April, 2012.**

Tender Documents can be purchased from the office of The Meghalaya Non-Conventional and Rural Energy Development Agency, (Near BSF Camp Mawpat) Mawpat, Shillong-793012 on submission of an application and on payment of Non-refundable tender cost of Rs.5000/- (Rupees Five thousand) only by cash/crossed demand draft drawn in favour of Member Secretary-cum-Director, MNREDA, payable at Shillong.

Alternatively, the tender document can be down loaded from website www.mnreda.gov.in. The bidder using downloaded document will have to attach with their bids a crossed Bank Draft of Rs.5000/- (Rupees two thousand) only drawn in favour of Member Secretary-Cum-Director, MNREDA, payable at Shillong. Bidders shall ensure that the document in full is downloaded and submitted.

All bids shall be received and opened in the office of the Directorate of MNREDA, Shillong. The tender document will be issued From the 19th October,2012 till the 15th November,2012 on any working days.

The date for submission of Bid is on the 16th November, 2012 at 12 Noon and opening of Commercial and Technical bid will be on the same date i.e. 16th November, 2012 at 1.00 p.m.

The undersigned is not bound to accept the lowest bid and reserves the right to reject any or all the bids without assigning any reason thereof and shall not be responsible for any postal delay whatsoever.

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

Memo.No.MNREDA/1501/2012/16 (a)

Dated Shillong, the 17th October,2012.

Copy to :-

1. The Indian Express Ltd.
issue of
(Financial Express, All)
may
23, Dr. S.K.Bhuyan Road,
Dighali Pukhuri (East)
Guwahati-781001 (India)
Fax No.0461-2548751.

With a request to publish in one
of your Newspaper. Bill in triplicate
be submitted to the undersigned for
payment.

2. Office Notice Board.

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

2. Instruction to Tenderer :-

- i) The cost of tender papers or document should be in the form of Cash/Bankers cheque/Demand Draft(Non-Refundable) drawn in favour of Member-Secretary-cum-Director, Meghalaya Non-Conventional and Rural Energy Development Agency, Shillong.
- ii) Tender Document will be issued by Courier or speed post on request but extra payment of Rs.200/- (Rupees two hundred) only should be made by Demand Draft towards cost of speed post or courier.
- iii) Local Dealer of any manufacturer or supplier will be issued tender document but on furnishing of their Dealership Certificate and tender document will be issued in principal's name.
- iv) In the event of postal delayed, MNREDA shall not be held responsible.
- v) Tender document will be issued on any working days within the specified date.
- vi) In case the opening date is declared as holiday tender shall be open in the next working day at the same time and hour.
- vii) Tenderer are to furnish their offer in a sealed cover envelope.
- viii) Commercial Terms and Conditions specially indicating deviations to the terms and conditions stipulated in detailed tender papers including payment terms etc. must be clearly specify in case of any deviation with justification therein.
- ix) The price quoted should be firm and as per the format provided in the tender document and should inclusive of all Taxes and duties.
- x) Any other particular information, which are required to be furnished as per detailed tender papers but which have not been specifically indicated.
- xi) The rate should be legible written in English both in figure and in words. In case of any dispute between the figure and words the letter shall be prevailed.

- xii) Earnest Money Deposit of 1% for Schedule Tribe and Schedule Cast and backward classes and 2% for general on the amount quoted in the form of Bank Guarantee / Call Deposit / FDR from any Scheduled or Nationalized Bank of India pledged in favour of Director MNREDA, Shillong should be furnished without which tenders will be rejected.
- xiii) The system are to be supply to all the 7 (seven) District Head Quarter of MNREDA, Office.
- xiv) Test Report of System from any Testing Centre approved by MNRE should be submitted and issued after 1st April, 2012..
- xv) The bids shall be submitted in two parts i.e. (i) Commercial Terms and Conditions and Technical Bid. (ii) Price Bid in a separate Sealed envelope. The following should be clearly indicate on the body of the Sealed envelopes.
 - (a) N.I.T. No.
 - (b) Whether Techno-Commercial Bid or Price Bid.
 - (c) Name of the bidder
 - (d) Both the envelope should be placed in the outer Envelope and Sealed. The outer envelope shall also bear the name and address of bidder and reference details.

The MNREDA shall take no responsibility for misplacement or pre-mature opening of any part of the bid, in case above instructions are not complied by the bidders.

3. **General/Commercial Terms and Conditions :-**

- i) **Signing of tender paper** :- The Tender document as issued by MNREDA should be sealed and signed by the Authorized person of the firm and it will be view as acceptance of each and every conditions containing therein.
- ii) **Attestation** :- All Xerox supporting papers which is not original should be duly attested by the Government official not below the rank of Magistrate.

(iii) **Value Added Tax** :- VAT Registration and VAT clearance certificate upto March, 2012 should be furnished along with the Bid.

(iv) **Time of Completion** :- The supply should be completed within 90 (ninety) days from the date of issue of work order.

(v) **Trading License** :- The successful bidder shall have to produce a Trading License from the proper authority before supplied the system.

(vi) **Agreement** :- An Agreement has to be signed within 7(seven) days of issues of final work order. The Agreement shall be prepared by the purchaser on a stamp paper duly signed by the authorize person of the firm and purchaser. The tender document as issued along with the Bid as submitted by the bidders along with supporting papers shall be part and parcel of the agreement.

(vii) **Allocation of works** :- MNREDA shall have the right to award contracts in the following proportion of the total quantity to the L₁, L₂ and L₃ bidder subject to the condition that the L₂ and L₂ bidder accept the L₁ rate.

(a) L₁ bidder = 50% of the total quantities

(b) L₂ bidder = 30% of the total quantities

(c) L₃ bidder = 20% of the total quantities.

The work may be allotted as above to more than one party so as to enable to complete the work within the set target date.

(viii) **Warranty** :- The system should be guarantee for a period of 5 (five) years from the date of receipt of system from any manufacturing defect and the battery for a minimum period of (two) years.

(ix) **Payment Terms and Conditions** :- The Bidders shall be entitled to the following payment terms:-

- (a) The contractor shall be paid 30% (thirty percent) of value as mobilization advance against a Bank Guarantee of equivalent/like amount from any Nationalized Bank or Scheduled Bank valid for a period of 90(sixty) days from the date of acceptance of work.
- (b) 60% (sixty percent) of the contract value of the system shall be paid against receipt of materials at our District Office in good conditions.
- (c) Balance 10% (ten percent) to be paid at the end of 2(two) years of warranty period or against submission of Bank Guarantee of equivalent/like amount valid for a period of two years from the date of distribution of systems.

In the event of 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 purchaser shall have the right to recover any sums advanced from the contractor from his/its assets/amount submitted as mobilization advance.

(x)Write up of System :- The write up in English about functioning of the system shall have to be supplied along with system and one copy should be submitted along with the Bids.

(xi)Experience :- It is mandatory the bidders should have an experience of supplying at least 2000 units LED based solar lantern to any Govt/Semi Govt./PSU in the Last financial year. Details of such work order and experience shall have to be supported with document proof.

(xii)Financial Soundness : Documentary evidence to support the Financial Soundness of the Tenderer should be furnished.

(xiii) Submission of Bids :- The submission of Bids should be strictly in the following order (without which Tender opening will not be entertained) :-

A. For Commercial and Technical Bid (Envelope Part-I).

(a) Covering letter for submission of Bid in the letter Head of Supplier.

(ii)Tender paper as issued by the Agency duly signed and sealed by the Authorized persons of the firm.

- (k) Technical Specification duly filled in as per Tender Document in a separate sheet but as per format indicate at Section 4 (J).
- (l) Experience in similar kind of works with documentary support.
- (m) VAT Registration and VAT clearance certificate upto March, 2012
- (n) Write up of system
- (o) Any deviation with justification thereof.
- (p) Test Report of system issued after 1st April, 2012.

B. For Price Bid part (Envelope part-II)

- (a) Covering letter for submission of bid in letter Head of supplier.
- (b) Price bid duly filling as per format of price Scheduled.
- (c) Earnest Money deposit / SSI registration certificate issued by NSIC

(xiv) Service Centre :- It is mandatory that the manufacturer or Supplier should have a local service centre in the state, and preference will be given to those firms who have got enough Experience in North East Region.

(xv) Exemption of EMD :- The Manufacturer or Supplier who claim exemption shall have to furnish and SSI Registration Certificate issued by NSIC.

(xvii) Delivery of system :-

- (a) The contractor shall deliver the 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 purchaser from time to time regarding the transit of the plant and material.
- (b) Notification of delivery or dispatch in regard to each and every consignment shall be made to the purchaser immediately after dispatch or delivery. The contractor shall supply to the consignee invoice in duplicate and packing account of all stores delivered or dispatch by him.
- (a) In case of any occurrence of loss or damage in transit upto destination, it shall be liability of the contractor to initiate or pursue the claim with Insurance Company. He should take immediate steps to repair the damaged apparatus or replacement thereto. Any extension of time limit required in such contingency will be considered by the purchaser on merit.

(xviii) Inspection of Materials :- The materials will be dispatched to the Supplier after the inspection by the Director, MNREDA or his authorized representative at his premises at site and acceptance of the same. MNREDA reserve the right to test maximum of 5% of all materials supplied.

(xix) Arbitration :-

- (a) Except where otherwise provided if anytime question dispute or difference whatever shall arise between the contractor and the purchaser upon or in the relation to or in connection with this contract either of the parties may give to the other notice in writing of the existence of such a question on rejection of the matter, the dispute or difference shall be referred to the sole arbitration appointed by MNREDA at the time of dispute after ascertaining the terms of reference mutually.
- (b) The Arbitration will preferably be a member of Arbitration Council and arbitration proceeding will take place as per provision or arbitration Act 1940 or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply.
- (c) The contractor will ensure that the work under this contract shall continue during arbitration proceeding and dispute and no payments due from or payment by the purchaser shall be withhold on account of such proceeding except to the extent which may be in dispute.

(xix) Court of Competent Jurisdiction:-

The Courts of Gauhati High Courts, Shillong Bench will only have jurisdiction in this case.

TECHNICAL SPECIFICATIONS OF THE 3 watts, 5 Wp Modules LED SOLAR LANTERN.

A. PV Module

- (a) Indigenously manufactured PV modules should be used in the solar lantern.
- (b) The PV module should have crystalline silicon solar cells, and should have a test certificate conforming to IEC 61215 Edition II / BIS 14286 from an NABL or IECQ accredited Laboratory. In case the certificate for the offered module is not available, a test certificate for higher capacity module produced by the same PV module manufacturer should be available.
- (c) The PV module must have a minimum of 5 Wp at a load voltage* of 16.40 ± 0.2 V under the standard test conditions (STC) of measurement.
- (d) The open circuit voltage* of the PV modules under STC should be at least 21.0 volts.
- (e) The module efficiency should not be less than 10%.
- (f) The terminal box on the module should have provision of opening it for replacing the cable, if required.
- (g) there should preferably be an arrangement (stand) for mounting the module at an optimum angle in the direction facing the sun.
- (h) A foil / strip containing the following details should be fixed inside the module so as to be clearly visible from the front side :-
 - (i) Name of the Manufacturer and/or distinctive Logo
 - (ii) Model and/or type No.
 - (iii) Serial No.
 - (iv) Year of Manufacture

(i) A distinctive serial number starting with NSM will be engraved on the frame of the module or screen printed on the tedlar sheet of the module.

(j) Each PV module used in any solar power project must use a RF identification tag (RFID), which must contain the following information. The RFID can be inside or outside the module laminate, but must be able to withstand hards environment conditions.

(i) Name of the Manufacturer of PV Modules

(ii) Name of the Manufacturer of Solar cells

(iii) Month and year of the manufacture (Separately for solar cells and module)

(iv) Country of origin (separately for solar cells and module)

(v) I-V curve for the module

(vi) Peak wattage, I_m , V_m and FF for the module

(vii) Unique serial No. and model No. of the module

(viii) Date and year of obtaining IEC PV module qualification certificate

(ix) Name of the test lab issuing IEC certificate

(x) Other relevant information on traceability of solar cells and module as epr ISO 9000 series.

(B) Lamps

(a) The lamp will be white light emitting diode (W-LED) diffused and soothing to eyes.

(b) The luminous performance of LEDs used should not be less than 60 lumen per watt.

(c) Use of LEDs, which emit ultraviolet light, are not acceptable.

(d) The light output from the light source should be constant during the specified duration.

- (e) LED of only the manufacturers, i.e. Nichia/CREE/OSRAM/Philips Lumileds/SEOUL or LEDNIUN in the lamp shall be accepted.
- (f) The LED make, model number and technical characteristic of lamp should be furnished along with offer.
- (g) The LED should be top mounted or pillar mounted in such a way that it should also illuminate the base.
- (h) The illuminance (LUX) when measured from a distance of 1 feet away from the centre point of the bottom of the lantern in the same plane of horizontal should be min. 60 lux. Light coverage should 360 degree.

C. Battery

- (a) The battery shall be sealed maintenance free (SMF) of reputed make.
- (b) The capacity of the battery will be a minimum of 7 AH at 12V @ C/20 rate of discharge.
- (c) 75% of the rated capacity of the battery should be between fully charged and load cut off condition.

D. Electronics

- (a) The total electronic efficiency should be at least 85%
- (b) The idle current consumption in the charge controller should not be more than 1 mA.
- (c) Electronics should operate at 12V and should have temperature compensation for proper charging of the battery throughout the year.
- (d) The light output should remain constant with variation of the battery voltage.
- (e) Necessary lengths of wire/cables (min.5 meters), switches suitable for DC use and fuses should be provided.

E. Duty Cycle

The LED solar lantern should provide a minimum of four hours of lighting per day under average daily solar radiation conditions of 5 kWh//sq.m. on a horizontal surface with one day back up i.e. total 8 hours in a charge. The actual duration of lighting may vary depending on the location, season etc.

F. Electronic Protection

- (a) Adequate protection is to be incorporated under no load conditions(e.g. when the lamp is removed and the lantern is switched ON).
- (b) Battery cut offs and reconnects should be provided to protect it against overcharge and deep discharge condition.
- (c) A fuse should be provided to protect against short circuit conditions.
- (d) A blocking diode, preferably a Schottky diode, should be provided as part of the lantern electronics to prevent reverse flow of current through the PV module, if such a diode is not provided with the module itself.
- (e) Full protection against open circuit, accidental short circuit and reverse polarity should be provided.

G. Other Features

- (a) Two LED indicators one for a green light to indicate charging in progress, and another red LED to indicate deep discharge conditions of the battery suggesting that load should be switched off and the battery must be charged immediately should be provided on the body of the lantern. The green LED should glow only when the battery is actually being charged.

(b) The On/Off switch used in the lantern must be suitable for use in DC circuits and be reliable with long life. Use of electronic switch is allowed. A cable (2 core x 1.5 sq.mm) of suitable length (at least 5 meters) should be provided for interconnection between the module and the lantern.

(c) The following details should be marked indelibly on the lantern;

- Name of the Manufacturer or Distinctive Logo.
- Model Number

H. Additional features

(a) Dimming facility of 1/3 level must be provided

(b) Mobile charging socket should be provided. It should charge mobile phone during night also.

I. Warranty :-

(a) The mechanical structures, electrical works including power conditions/inverters/charge controllers/maximum power point tracker units/distribution boards/digital meters/switchgear/storage batteries etc. and overall workmanship of the systems must be warranted against any manufacturing/design/installation defects for a minimum period of 5(five) years.

(b) PV modules used in solar systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.

J. Technical Requirement for Solar LED based Lantern :-

The specification should be furnished below in a separate sheet (without which specification will be rejected) :-

- 1. BATTERY :**
 - (i) Make
 - (ii) Type of battery
 - (iii) AH capacity
 - (iv) Efficiency
 - (v) Battery Rating
 - (vi) Separator Materials
 - (vii) Discharge rate
 - (viii) Battery Box Material
 - (ix) Sl.No. & Date

- 2. DUTY CYCLE :-**
 - (i) No. of light point
 - (ii) Average hour of operation/day

- 3. MODULE :-**
 - (i) Make
 - (ii) Type of Module
 - (iii) Efficiency
 - (iv) Maximum Wattage
 - (v) Operating Voltage
 - (vi) Sl. No. & Date
 - (vii) Test Report from Authorized Test Centre should be submitted along with.

- 4. LAMPS :-**
 - i) Make
 - ii) Type of lamps
 - iii) Light output

- 5. ELECTRONICS :-**
 - i) Name of manufacturer
 - ii) Model/Type No.
 - iii) Idle current
 - iv) Total electronic efficiency
 - v) Operating Voltage of the electronic circuit
 - vi) Type of Inverter, sine wave /quasi sine wave.
 - vii) Type of protection provided
 - viii) Whether protection against battery overcharge or deep discharge provided
 - ix) Prevention of reverse current provided or not
 - x) Full protection against open circuit, accidental short circuit and reverse polarity provided or not.
 - xi) Mobile charging provision.

5.PRICE SCHEDULE :

Sl. No.	System description	Unit	Quantity	Rate/unit Rs.	Amount (Rs.)
1.	3 watts LED based Solar Lantern FOR Shillong including transportation, packing, taxes and duties or any other expenses.	Nos.	15000		
2.	Local transportation and distribution.	Nos.	15000		
	Total	-	-		

(Rupees _____

_) only.

signatory)

(Signature of the authorized

Name :- _____

Designation :-

Company Seal :-