

# **TENDER BID DOCUMENT**

## **e-TENDER for**

- (i) Design, manufacture & supply of White LED-based Solar Street Lighting System of 40 Wp SPV Module**
- (ii) Installation & Commissioning and**
- (iii) Maintenance & Performance Warranty Contract (MPWC) for 5years**

**NIB No. MANIREDA/SSL/TOURIST/2016/4**

**Under**

**Jawaharlal Nehru National Solar Mission  
Of  
The Ministry of New and Renewable Energy**

**For the Year 2014-2015**

**Manipur Renewable Energy Development Agency (MANIREDA)**

2<sup>nd</sup> Floor, South Block, Secured Office Complex, A.T. Line, Near Hotel Imphal, Imphal-795001

Tele Fax : 0385-2421594, e-mail : [manireda99@yahoo.com](mailto:manireda99@yahoo.com) Website : [www.manireda.com](http://www.manireda.com)

(This tender document is having 35 pages including this page)

Cost of bid document: Rs 1,000/-

## Contents

1. Notice Inviting Bid.....	03
2. Bid Details .....	04
3. Detailed Notice Inviting Bid .....	05
4. General Terms & Conditions.....	10
5. Technical Specification.....	15
6. Five years Maintenance & Performance Warranty Contract (MPWC).....	19
7. Proforma – 1 : Forwarding Letter.....	21
8. Proforma – 2 : Authority Letter for Signing Bid Document..... & Attending Bid Opening Meeting	22
9. Proforma – 3 : Information about the Bidding Firm.....	23
10. Proforma – 4: Details of Orders Received and Executed in Past Years.. ..	25
11. Proforma – 5: No Deviation Certificate .....	26
12. Proforma – 6: Format for Guarantee Card to be Supplied for SSL .....	27
13. Proforma – 7: Format for Certificate of Delivery of the Number of SSL Received by the Consignee as Proof of Compliance by the Supplier .....	28
14. Proforma – 8: Format Details of the Module, Battery & Luminaire Utilization Report of SSLs Installed Under the SPV Program. ....	29
15. Proforma –9: Format for submitting the Price Schedule .....	30
16. Check List & Format for Submission of Bid .....	31
17. Proforma – 10: Application for Payment .....	33
18. Proforma – 11: Material Inspection Clearance Certificate (MICC).....	34
19. Proforma – 12: Completion Certificate .....	35

## 1. Notice Inviting Bid

### Manipur Renewable Energy Development Agency (MANIREDA)

2<sup>nd</sup> Floor, South Block, Secured Office Complex, AT Line, Near Hotel Imphal, Imphal-795001  
Tele Fax : 0385-2421594; e-mail: manireda99@yahoo.com; Website: [www.manireda.com](http://www.manireda.com)

NIB No. : MANIREDA/SSL/TOURIST/2016/4

Imphal, dated: 11/07/2016

Online tender is invited from the reputed manufacturers of MNRE approved channel partners as per the details given below:

Item	Tender No.	Quantity Required	Cost of Tender Document	Earnest Money
(i) Design, manufacture & supply of White LED-based Solar Street Lighting System of 40 Wp SPV Module (ii) Installation & Commissioning and (iii) Maintenance & Performance Warranty Contract (MPWC) for 5years	MANIREDA/SSL/TOURIST/2016/4	400 Nos.	Rs. 1000/-	Rs. 2.00 lakhs

Tender Document can be downloaded from website:[www.manireda.com](http://www.manireda.com) /[www.manipur.gov.in](http://www.manipur.gov.in) for which the cost of Tender Document amounting Rs. 1000/- is to be enclosed as demand draft, in favour of Director, MANIREDA, payable at Imphal during submission of hard copy of tender, failing which, tender shall not be considered. Bidders have to upload their bid at <https://manipur tenders.gov.in>

Bidders have to upload Bid to the aforesaid website as well as submit hard copy. Uploading of tender documents shall be up to 12.00 noon on 02/08/2016. Hard copy of bid documents and Cost of Tender document and Earnest Money shall be submitted from 12.00 noon of 02/08/2016 to 11.30 A.M. of 05/08/2016. The Technical bid shall be opened at 12.00 noon sharp, on 05/08/2016. The financial bid of the technically qualified Bidders only shall be opened through e-tender, for which date & time will be informed later.

Prospective bidders are requested to remain updated for any amendments/modifications/cancellation, etc. in the bid document conditions/terms, in the above mentioned website. No separate notifications will be given for such amendments/ modifications in the print media (press) or intimated to the bidders separately.

Director, MANIREDA, reserves the right to reject any or all tenders without assigning any reasons thereof.

Sd/-  
Director , MANIREDA

## 2. Bid Details

TENDER FORM NO :.....  
 ISSUED TO : M/s.....  
 TENDER FEE DETAILS : Vide Receipt No.....Dt.....  
 DD No..... Bank.....

Sl	Description	Details
1.	Notice Inviting Bid (NIB) No.	MANIREDA/SSL/TOURIST/2016/4
2.	Scope of work	(i)Design, manufacture, supply of White LED based Solar Street Lighting Systems (SSLs) of 40Wp SPV Module (ii)Installation & commissioning and (iii)5(five) years Maintenance and Performance Warrantee Contract (MPWC) at Tourist attracted area of Manipur State. Estimated quantity to be purchased is 400(four hundred) sets. The quantity mentioned above is tentative & is subject to increase or decrease depending on the actual requirement at the time of placing order and resources available and as per discretion of MANIREDA.
3.	Place of submission of bid documents and address for communication/Bid Opening Meeting	Manipur Renewable Energy Development Agency (MANIREDA), 2 <sup>nd</sup> Floor, South Block, Secured Office Complex, AT Line, Near Hotel Imphal, Imphal-795001. Telefax No. : 0385-2421594 Website : www.manireda.com, E-mail : manireda99@yahoo.com
4.	Last date of uploading of bid document in the e-tender	<b>Date : Up to 12.00 noon of 2<sup>nd</sup> August, 2016.</b> e-tendering site : <a href="https://manipur-tenders.gov.in">https://manipur-tenders.gov.in</a>
5.	Last date & time of submission of Hard copy of bids	<b>Date : 5<sup>th</sup> August, 2016</b> Time : Upto 11:30 A.M.(submission of documents after 11:30 A.M will not be accepted at any circumstances).
6.	Date & time of opening of Technical Bid	<b>Date : 5<sup>th</sup> August, 2016.</b> Time : at 12.00 Noon sharp. Venue : Office of the Director, MANIREDA, 2 <sup>nd</sup> Floor, South Block, Secured Office Complex, AT Line, Imphal.
7.	Date & time of opening of Financial Bid	Financial Bids will be opened for only Technically qualified bidders. Date : Will inform accordingly. Time : - Venue : Office of the Director, MANIREDA, 2 <sup>nd</sup> Floor, South Block, Secured Office Complex, AT Line, Near Hotel Imphal, Imphal.
8.	Cost of bid document (Non-refundable)	Rs 1000/- in the form of D.D. favouring Director MANIREDA payable at Imphal.
9.	Earnest Money (Refundable)	Rs. 2.00 lakhs (Rupees two lakhs only) in the form of D. D. favoring Director MANIREDA, payable at Imphal.
10.	Time of completion	Within four (4) months from the date of work order or date of release of mobilisation advance whichever is applicable.
11.	Validity of offer	The offer shall remain valid up to 365 days from the due date of submission of offer.
12.	Validity of earnest money	The earnest money shall be submitted by the bidder in the form of demand draft from any Nationalized/Scheduled bank. This demand draft shall have validity for at least 3 months.

### 3. Detailed Notice Inviting Bid (DNIB)

#### Manipur Renewable Energy Development Agency (MANIREDA)

2<sup>nd</sup> Floor, South Block, Secured Office Complex, AT Line, Near Hotel Imphal, Imphal-795001

Telefax : 0385-2421594, e-mail : manireda99@yahoo.com, Website : [www.manireda.com](http://www.manireda.com)

NIB No. : MANIREDA/SSL/TOURIST/2016/4

Date: 11/07/2016

Sub : Design, manufacture, supply, installation & commissioning including 5(five) years Maintenance and Performance Warrantee Contract (MPWC) of White LED based Solar Street Lighting Systems (SSLs) at Tourist attracted area of Manipur State.

Dear Sir/Madam,

Manipur Renewable Energy Development Agency (MANIREDA), Imphal has the pleasure in inviting offers from eligible Indian manufacturers for the above work with your best binding price offer as per 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 19 chapters including Proformas. In addition, any other documents/ instructions/amendments/revisions issued by MANIREDA 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 Bidders can download the Bid Document from Manipur E-Tender website ([www.manipur tenders.gov.in](http://www.manipur tenders.gov.in)) and MANIREDA website ([www.manireda.com](http://www.manireda.com)) and submit the cost of the bid document amounting Rs 1000/-, as applicable along with Technical Bid.
- 2.2 Bid applications without the cost of bid document will be rejected.

#### 3. Earnest Money

- 3.1 The bidder should submit in Technical Bid the earnest money deposit @ Rs. 2.00 lakhs in the form of Demand Draft from a Nationalised Bank/scheduled bank of requisite value as mentioned in chapter 2 (Bid Details).
- 3.2 Bidders failing to submit earnest money will be rejected.
- 3.3 The request for adjustment of earlier dues in place of earnest money will not be entertained.
- 3.4 **In case of claim for exemption from deposition of Earnest Money, sufficient proof in support of claim for exemption of EMD as prescribed in Govt. of India Notification is to be attached with the Bid.**
- 3.5 The earnest money shall be returned to all unsuccessful bidders in technical evaluation, within three weeks.
- 3.6 The earnest money shall be forfeited if –
- Any bidder withdraws his bid or resides from his offer during the validity period.
  - The successful bidder fails to furnish his acceptance of the Order within twenty days of placement of Work Order by MANIREDA.
  - The bidder fails to successfully complete the work within the stipulated time frame. Delay in completion due to extreme and unavoidable situations will have to get approved by Director, MANIREDA. This approval will also have a cut-off date by which the entire work will have to be completed.
- 3.7 The earnest money shall be refunded to the successful bidder after completion of the project in all respect.

#### 4. Performance Guarantee

- 4.1 Performance Warranty Bond shall be deposited by the supplier @5% of the Contract Price

excluding Installation & Commissioning and Maintenance and Performance Warranty Contract (MPWC) in the form of Bank Guarantee for 5(five) years period from the date of completion & commissioning of the project OR in case Bank Guarantee is not furnished, 5% of the Contract price excluding Installation & Commissioning and MPWC shall be retained as Performance Guarantee. If the solar power plant failed to perform as per laid down system specifications or any deviations/compromise has been observed in the system specifications etc. the Performance Warranty deposit of the firm shall be forfeited. The successful bidder/Contractor shall submit the Original Warranty documents of SPV Modules, Luminaire and Battery to MANIREDA during the supply of the systems.

**5. Submission of Bids:**

**Bidders have to upload the document mentioned in Para 6.1 in the e-tender website (<https://manipurenders.gov.in>). Bidders shall also have to submit hard copies of the uploaded documents as well as stated at Para 6.4 & 6.5:**

- 5.1 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.
- 5.2 The bid shall be prepared and submitted by typing or printing in English with indelible black ink on white paper in consecutively numbered pages duly signed by the authorized signatory with company seal affixed on each page. Any part of the bid, which is not specifically signed by the authorized signatory and not affixed with company seal, shall not be considered for the purpose of evaluation.
- 5.3 Original copy of bid document, amendments/revisions to bid document, including minutes of meeting(s), issued by MANIREDA, if any, shall be signed and submitted along with the bid.
- 5.4 All the Proformas must be on the bidder's official letterhead. Any change in wording of the Proforma will lead to rejection of the bid application.
- 5.5 The offer shall contain no erasures or overwriting except as necessary to correct errors made by bidder. Such corrections, if any, shall be initialed by the person signing the offer.
- 5.6 Hard copy of Bid Document should be submitted in Hard Bond or Spiral Binding.
- 5.7 The Bid Document should have proper paging and flagging of Annexures/details.
- 5.8 Any Overwriting /illegible/erasing, etc. in the documents submitted by the firms shall not be accepted and will not be considered in the evaluation.

**6. Mode of Submission of Bids: Bidders have to both upload document as well as submit hard copy as stated below:**

- 6.1 The bidder shall submit/upload the scanned copies of the following documents with Digital Signature certificate in the E-tender:
  - (i) Scanned copy of Tender Fee and scanned copy of Earnest Money Deposit (EMD)
  - (ii) Forwarding Letter- Proforma -1
  - (iii) Authorising letter for attending Bid Opening Meeting-Proforma-2
  - (iv) Information about the Bidding Firm- Proforma-3
  - (v) Details of Orders Received and Executed in Past 3 years for Solar Street Lighting -Proforma-4
  - (vi) Document for being valid Channel Partner of MNRE for Solar applications under JNNSM(SPV) with credit rating.
  - (vii) Certificate of manufacturing SPV Cell/Module or Luminary electronics conforming relevant national/international standards.
  - (viii) Test Certificate conforming to MNRE approved specifications of W-LED Solar Street Lighting System from an authorized testing centers of the MNRE. (Test Certificate should have been issued on or after April 2009.)
  - (ix) Test Reports of components like PV module, Luminaire, Battery from approved/competent testing centres.
  - (x) Cumulative Experience of the Bidder in executing contracts of Solar Photovoltaic Systems/solar street lights should be minimum Rs. 5.00 crores in the last 3 years in the name of the bidder to Govt. aided/Govt. Deptt./Institutions. Supporting documents for proof of experience should be submitted.
  - (xi) A summarized sheet of turnover for last 3yrs certified by registered Chartered Accountant.
  - (xii) Letter of authorized dealer/service provider registered as per MVAT Act in Manipur.
  - (xiii) ISO 9001 certificate
  - (xiii) ISO 14001 certificate.

- (xiv) Registration Certificate of Company/Firm.
- 6.2. The bidder shall download the template of Price Bid/Schedule of Works /Bill of Quantity (BOQ) as mentioned in the Proforma-9 which is uploaded in the Tender in the aforesaid site(<https://manipurenders.gov.in> ). After downloading the BOQ, the bidder shall fill their rate & quantity of the items as per BOQ, digitally signed and upload the filled BOQ in the same site.
- 6.3. The bidder need not submit BOQ/Price Bid in hard copy as done in previous tenders.
- 6.4. The bidder also must submit Hard copy of documents stated above at Para 6.1(i) to 6.1(xii) with all supporting document like copies of work orders in support of cumulative experience clearly indicating Amount and capacity of work.
- 6.5 In addition, the bidder must submit hard copy of other remaining Proformas and Annexures as listed in the Check list with supporting documents.
- 6.6 The hard copy of Technical Bid should be submitted in a sealed envelope superscribed "NIB No. : MANIREDA/SSL/TOURIST/2016/4 (Technical Bid)",to the office MANIREDA, 2<sup>nd</sup> Floor, South Block, Secured Office Complex, AT Line, Near Hotel Imphal, Imphal-795001 addressed to Director, MANIREDA. This envelope should contain the following:
- (i) Cost of bid document (for the bidders who have downloaded the bid document from web site).
  - (ii) Original earnest money by demand Draft of requisite value.
  - (iii) Technical Bid should not contain price of any item. Such cases, even if found anywhere, shall not be given any cognizance.
- 6.7 Only one copy of Technical Bid (hard copy) should be submitted.
- 6.8 The hard copy with earnest money and cost of tender document has to be submitted during the period upto 11.30 A.M. of 5<sup>th</sup> August, 2016 failing which no late comers would be entertained.

## **7.0 Scope of Work**

- 7.1 The scope of work shall be as indicated in the Bid Details.
- 7.2 MANIREDA reserves the right to amend the scope of work, accept or reject any or all the offers/bids, in part or in full or cancel/withdraw the invitation for bids without assigning any reasons whatsoever and in such case, the bidder/intending bidder shall have no claim arising out of such action.
- 7.3 The Bidder shall carefully check the specifications and shall satisfy himself regarding the technical requirement and completeness of the equipment/system.
- 7.4 Bidder should be capable and agree to install the SSL at Tourist attracted area of Manipur. MANIREDA reserves the right to award work to any bidders at its discretion.
- 7.5 The bidders should beforehand thoroughly familiarized with the incidental expenditures/charges on transportation, installation and maintenance expenses etc. They should also access the local conditions including prevailing law and order problems before submitting their offer. Any claim on change/ increase in the rate/price/cost of the work due to any reason will not be entertained at any circumstances.
- 7.6 It is not necessary to select the lowest quoted rate. MANIREDA reserves the right to decide the reasonable price/rate for successful implementation of the project. MANIREDA reserves the right to award the work to more than one firm, if necessary, by bifurcating the total numbers of systems to be supplied among bidders .

## **8.0 Price**

- 8.1 The Bidder shall quote price as per Proforma - 9. Price quoted shall be firm & binding and shall not be subject to any variation whatsoever, on any account except for statutory variation on taxes & duties during contractual completion period.
- 8.2 The price should be inclusive of all taxes, duties, levies, etc. as on date.

## **9.0 Terms of Payment**

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

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

- 10.1 The Bidders should furnish the Authorization letter as per Proforma - 2 with the seal of the company for the person attending Bid Opening meeting & signing the bid document.

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

#### **11.0 No Claim or Compensation for Submission of Tender.**

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

#### **12.0 Eligibility and Qualification Criteria**

12.1 The bidder should be:

A Registered Manufacturing Company/Firm/Corporation in India of SPV Cells/Modules or Luminaire electronics(Conforming to relevant National/International Standards). Cumulative Experience of the Bidder in executing contracts of Solar Photovoltaic Systems/solar street lights should be minimum Rs. 5.00 crores in the last 3 years in the name of the bidder to Govt. aided/Govt. Deptt./Institutions. Supporting documents for proof of experience should be submitted.

(Copies of work orders must be enclosed to support the cumulative experience).

12.2 Overall Average Annual Turnover of the Company/Firm/ Corporation in the last three financial years (2014-15, 2014-15 & 2015-16) should be at least 2.00 crore. This must be the individual Company's turnover and not that of any group of Companies(A summarized sheet of turnover certified by registered CA should be compulsorily enclosed)

12.3 The bidder should be a MNRE accredited Channel Partner having credit rating (from MNRE Accredited Rating Agency). **For approved Channel Partners of MNRE based in Manipur, the above experience & turnover may be relaxable (12.1 & 12.2). However, it must be a manufacturer having test certificate of LED Solar Street Light in its name.**

12.4 Copy of valid Test Certificate for the components of tendered(40 Wp SPV Module) W-LED Solar Street Light like Luminary, PV Module, Battery, etc. from an approved/competent testing centres as per requirements under the JNNSM scheme of the MNRE, GOI, should be submitted along with the Bid.

12.5 The Bidder should have valid CST/State VAT/TIN registration certificate. A copy of which should be enclosed.

12.6 The Bidder should have registered office/authorized dealer/service network in Manipur as per MVAT Act 2005 and for smooth execution of MPWC , in place before award of contract.

#### **13.0 Validity of Offer**

13.1 Unless otherwise specified, the bidder shall keep his tender valid initially for a period of 365 days from the due date of submission of the offer.

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

14.1 Insertion, post-script, addition and alteration in Hard Copy shall not be recognized unless confirmed by bidder's signature and stamp.

14.2 Incomplete tender or tenders not submitted as per requirement as indicated in the NIB are likely to be rejected.

14.3 Bidders shall submit their offer strictly as per terms and conditions of the tender document without any deviation.

14.4 If at any time any of the documents/information submitted by the bidder is found to be incorrect, false or untruthful, the resultant order may be summarily rejected/cancelled at the risk of the bidder.

14.5 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.

14.6 All bids (hard copy) will be received in duly sealed cover within the due date and time. Bids received after the due date and time is liable for outright rejection.

14.7 MANIREDA 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.

- 14.8 Attestation of various documents enclosed along with the offer must be done by a Gazetted Officer or Notary Public or by the Proprietor of the Firm.
- 14.9 The bidder must fulfill both uploading documents and submission of hard copy in the manner mentioned above.

## 4. GENERAL TERMS & CONDITIONS

### 1.0 Scope of Work

- 1.1 The Scope of work for W-LED Solar Street Lighting system includes (i) Design, manufacture, shop testing, packing & forwarding, transportation, transit insurance, supply of 40Wp SPV Module W-LED Solar Street Lighting system at identified sites via transit godown of MANIREDA for checking/store entry, (ii) installation, testing & commissioning of 40Wp SPV Module W-LED Solar Street Lighting system at identified sites (iii) 5 years Maintenance & Performance Warranty Contract (MPWC) of SSL complete in all respects along with one set of operational instruction cum maintenance manual (in English) as per the direction of MANIREDA.

### 2.0 Opening and Evaluation of Bids

- 2.1 The Technical Bids and Financial Bids will be opened on the date and time mentioned in the tender website in the **Office of the Director, MANIREDA, 2<sup>nd</sup> Floor, South Block, Secured Office Complex, AT Line, Near Hotel Imphal, Imphal** in presence of bidders or their authorized representatives who choose to attend the meeting. The representative should produce authorization letter to attend the bid opening meeting in the Proforma -2.
- 2.2 MANIREDA, if required, may at its discretion obtain clarifications on offers by requesting clarifications from any or all the bidders at any time prior to Financial Bid opening. Such request for clarification and the response shall be in writing.
- 2.3 MANIREDA shall examine whether the bid is complete in all respects and conform to the stipulated requirement of the technical specifications and tests reports. The bid having material deviation shall be rejected as being non-responsive.
- 2.4 The Financial Bid of only those bidders, whose Technical Bids are found qualified after evaluation, will be opened and evaluated. In case of deviation in the date and time of opening of the Financial Bid from what is given in the Bid Detail, the date & time for opening of the Financial Bid will be uploaded on MANIREDA website. Bidders are requested to visit the website ([www.manireda.com](http://www.manireda.com)) regularly and keep themselves informed.
- 2.5 The prices shall be evaluated for W-LED Solar Street Lighting system on the Total Price (P):- (a) System cost including, insurance, transportation etc. FOR at identified sites (b) Installation & Commissioning including VAT, Labour Cess, Service Tax, etc. and (c) MPWC for 5 years period including Service Tax).
- 2.6 The bidders shall be ranked L1, L2, L3 ...as per the Total Price (P). The work order will be issued subject to the acceptance of the bidders to supply at approved rate.
- 2.7 MANIREDA, if required, may at its discretion extend the scheduled date of opening of Financial Bid.

### 3.0 Award of Contract/Work Order

- 3.1 The contract/work order shall be awarded to the bidder whose financial Bid was acceptable and who is selected by the Departmental Tender Committee /Higher Tender Committee to undertake the work at the approved rate and on approval of the Chairman, MANIREDA.

### 4.0 Quantity Required

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

### 5.0 Effective Date of Contract

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

### 6.0 Contract Price

- 6.1 The total contract price and 5 years MPWC. in full and complete set including SPV module, control electronics & inverter, battery, mechanical components, etc. should be quoted in Proforma - 9. The price shall be for the total scope as defined in this document.
- 6.2 The income tax shall be deducted as applicable at the existing rate.
- 6.3 During the period of the contract, MANIREDA may order addition/deletion in quantities/capacities which the bidder shall comply. The adjustment in Contract Price shall be made at the same unit rate as per Price Schedule (Proforma – 9).

## 7.0 Terms of Payment

- (a) 20% of the total work order value (excluding installation, commissioning and MPWC cost) shall be released as mobilisation advance against the submission of Bank Guarantee of equivalent amount from a Nationalised Bank valid at least for a period of 6 months after verification subject to availability of fund from MNRE, GoI or other sources. The mobilisation advance so paid shall be interest bearing @ 9% per annum effective from the day on which advance payment is made.
- (b) 50% of the total work order value (excluding installation, commissioning and MPWC charges) or 70% if the mobilisation advance is not taken for each bill shall be released against delivery of goods in full and in good condition(materials for 200 set) subject to availability of fund from MNRE, GOI or other sources:-
1. Certificate of Supply of SSL received by the consignee as specified.
  2. Commercial invoice of the supply made in triplicate.
  3. Copy of delivery challan/transportation challan/lorry receipt
  4. Material Inspection Certificate.
- (c) Remaining 30% of the contract price (excluding installation, commissioning and MPWC charges) and 100% of installation, commissioning charges shall be paid against duly verified completion report with successful installation and commissioning of the systems after submission of the following documents:
1. Certificate of installation & commissioning of SSL received by the consignee as specified in Proforma – 7.
  2. Details of the module, battery & luminaire utilization report of SSL installed under the SPV Program as specified in Proforma-9
  3. Commercial invoice of the supply made in triplicate.
  4. Copy of delivery challan/transportation challan/lorry receipt.
  5. Verification of Certificate of Commissioning from the beneficiary countersigned by officer concerned.
  6. Photographs along with details of module, battery, Luminaire, etc. installed in soft copy(CD/DVD).
  7. All payments shall be released by MANIREDA through account Payee Cheque issued in favour of the Supplier/Contractor or e-payment through RTGS/account transfer as the case may be for which the following mandatory information is to be furnished;

Name of the firm to whom payment is to be made	Name of bank	Bank Branch address	Account Number	Type of account	MICR Code	IFSC code	PAN No.
------------------------------------------------	--------------	---------------------	----------------	-----------------	-----------	-----------	---------

- d) The contractor has to deposit @5% of the project cost (excluding MPWC) as Performance Guarantee in terms of irrevocable Bank Guarantee for the tenure of the contract including MPWC. In case, the Contractor opted for withholding 5% payment in lieu of depositing 5%, then 5% of system cost plus installation charges would be withheld for the Performance Guarantee period of 5year. If the Solar system fails to confirm to the laid down systems specifications or any deviation/compromise has been observed in the system specifications etc., the performance guarantee deposit of the firm shall be forfeited.
- e) MPWC charges shall be released on 5 equal yearly installments on satisfactory performance. The record of performance sheet duly attested by the authority of Beneficiary Organisation/Deputy Commissioner shall be submitted to MANIREDA on quarterly basis, by 15th of the next month.

## 8.0 Income Tax :

- 8.1 Without prejudice to the obligations of the Supplier/Contractor under law, any Income Tax, which MANIREDA may be required to deduct by law/statute, shall be deducted at source and shall be paid to the Income Tax authorities on account of the Supplier. MANIREDA shall provide the Supplier a certificate for such deduction of tax.

## 9.0 Statutory Variations in Taxes and Duties:

- 9.1 The adjustment in the Contract Price towards imposition of new taxes or abrogation of existing taxes due to statutory variation shall be applicable only if the new tax is enacted or

existing tax is abrogated within contractual delivery/execution period. For any upward variation due to enactment of new tax or abrogation of existing tax after contractual delivery/execution period, adjustment in the Contract Price shall not apply, although for any downward variation, MANIREDA shall make necessary adjustment in the rate of the items.

- 9.2 The Supplier shall bear and pay all liabilities in respect of statutory variations in taxes and duties and imposition of new taxes and duties that may be imposed after the contractual delivery/execution dates, as originally stipulated, in case the delivery dates are extended due to reasons attributable to Supplier.

**10.0 Agreement:**

- 10.1 The Supplier/Contractor(s) have to enter into an agreement within two weeks, in the office of the Director, MANIREDA in prescribed format before commencement of supply/services.

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

- 11.1 MANIREDA reserves the right to inspect the manufacturer's works/factory to ascertain the capability/availability of necessary equipment & infrastructure required for manufacture of the item offered before opening of the Financial Bid of the bidders.
- 11.2 MANIREDA shall have access and right to inspect the work or any part thereof at any stage.
- 11.3 MANIREDA shall have the right to inspect and test the goods to confirm their conformity to the technical specifications after delivery of goods to consignee.
- 11.4 Successful bidder shall inform MANIREDA at least 25 days in advance of schedule dispatch.

**12.0 Dispatch Instructions:**

- 12.1 All items/equipments may be subjected to pre-dispatch inspection by Director, MANIREDA or its authorized representative(s) as per relative standards/provisions approved by MANIREDA before dispatch of items. Cost of inspection by officials (not more than two) would be borne by the successful bidder.

**13.0 Transit Insurance:**

- 13.1 Transit Insurance shall be arranged by the Supplier for his total supplies. In case of any damage/loss/pilferage/non-delivery during transit, the Supplier shall lodge the claim and settle the claim with the insurance agency. The Supplier shall also arrange replacement of the damaged, lost/pilfered items expeditiously pending settlement of commercial implications with insurance agency, if any, so as not to hamper the working of the system. The resultant loss if any due to failure of Supplier to comply with the above shall be to the account of the Supplier.

**14.0 After Sales Service and Availability of Spare Parts:**

- 14.1 The Supplier shall depute authorized Service Engineer within 3 days from the date of the intimation of fault, and establish sufficient inventory of spares, technicians in the State in consultation with MANIREDA to provide satisfactory and uninterrupted services during the guarantee/ MPWC period for which a servicing centre must be established at Imphal. Address, contact number etc. of the Servicing centre must be submitted before commencement of the work.

**15.0 Completion Schedule:**

- 15.1 The delivery of goods at FOR destination in full as per the terms and conditions of the contract/order shall be completed within **five (5) months** from the date of issue of the Work Order whichever is earlier.

**16.0 Guarantee/Warranty Period:**

- 16.1 The manufacturer must provide guarantee which include servicing & replacement guarantee for parts and components (such as battery, electronics, inverter etc) of Solar Power Plant for 5 (five) years. For PV modules, it must be warranted for its 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 from the date of commissioning the SSLs at site & demonstration of performance to the consignee/MANIREDA.
- 16.2 The guarantee card to be supplied with the system must contain the details of the system supplied as given in the Proforma - 6. The manufacturers can also provide additional information about the system and condition of guarantee as necessary.
- 16.3 Supplier/contractor shall without prejudice to any other clauses of the order repair/replace the defective parts and restore the system to satisfactory working/performance within 7(seven) days of intimation of fault without any additional cost to MANIREDA within the period of guarantee/ MPWC.

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

- 17.1 The Supplier/contractor shall not assign or sublet, manufacture, shop testing, packing & forwarding, transportation, transit insurance and supply, in whole or part, its obligations to any third party to perform under the order/contract.
- 17.2 In the event the Supplier contravenes this condition, MANIREDA reserves the right to reject the equipment/work sub-contracted and procure the same from elsewhere at Supplier's risk and cost. The Supplier shall be solely liable for any loss or damage which MANIREDA may sustain in consequence or arising out of such replacing of the contract work.
- 17.3 In case, the installation & commissioning and MPWC is planned to be carried out in collaboration with other party, the bidder has to sign MoU with the party on a Non-judicial stamp paper of value not less than Rs. 100/- and submit a copy of the MoU along with the bid. The MoU shall clearly indicate division of scope of work between the prime bidder and his sub-vendor and terms of payment. However, the total responsibility of work will remain with the prime bidder.

**18.0 Liquidated Damages for Delay in Completion:**

- 18.1 The completion period for the assignment must carefully be worked out and all resource & work planning is to be done accordingly with flexibility for adjustments.
- 18.2 If the Supplier fails in the due performance of the contract to deliver and commission any part of the equipment or complete the work within the scheduled date for any reason other than due to Force Majeure conditions or any extension thereof granted to him by MANIREDA, he shall be liable to pay to MANIREDA as pre-agreed liquidated damages but not by way of penalty on account of delayed successful commissioning, a sum equal to 0.1% of total contract value per 3 months of such delay, or part thereof, subject to maximum of 2% of the Total Contract Value.
- 18.3 The liquidated damages for delayed completion shall be recovered from the Supplier's Bill/Bank Guarantee deposited as earnest money.
- 18.4 Deductions/payment of liquidated damages shall in no way relieve the Supplier from his contractual responsibility to complete the works.

**19.0 Cancellation of Order :**

- 19.1 MANIREDA will be at liberty to terminate in part or full the awarded contract without prejudicing its rights and affecting the obligations of the Contractor by giving seven (7) days notice in writing in the following events:
- (a) If the Supplier is found defaulter for delayed supply or failure to deliver satisfactory performance or supply of substandard materials pursuant to NIB conditions.
- (b) If the Supplier/Vendor fails to comply with the provision(s) of the contract including the responsibilities to fulfill the 5 years maintenance and performance warrantee contract as per the provisions mentioned in this bid document.
- (c) If the Supplier/Vendor is involved in any action of moral turpitude.

**20.0 Arbitration :**

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

**21.0 Force Majeure :**

- 21.1 Should at any time during the continuance of the contract the performance in whole or in part of any obligations by either party under this contract be held up by reasons of any war, hostility, acts of foreign enemy, civil commotion, sabotage, fires, floods, earthquakes, explosions, epidemics, cyclones, quarantine restrictions, Governmental regulations, law & order and other proclamation etc. (hereinafter referred to as "Events") then, provided notice of the happening of any such eventuality is given by either party to the other within 15 days from the date of occurrence

thereof neither party shall, by reasons of such eventuality, be entitled to terminate this contract, nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance, and the work under this contract shall be resumed as soon as practicable after such eventuality has come to an end or ceased to exist.

- 21.2 Should one or both the parties be prevented from fulfilling their contractual obligations by a state of force majeure, lasting continuously for a period of at least four (4) weeks, the two parties should consult each other regarding the further implementation of the contract.
- 21.3 The above-mentioned force majeure conditions/clause shall also apply in the works of sub-contractors/suppliers of the contractor.
- 21.4 However, the Supplier shall not be liable for liquidated damages or termination/cancellation of order/contract if and to the extent that its delay in performance or other failure to perform its obligations under the contract is the result of an event of force majeure.

## 5. Technical Specification

### WHITE-LED (W-LED) BASED SOLAR STREET LIGHTING SYSTEM

#### 1. DEFINITION:

A stand alone solar photovoltaic Street Lighting System(SLS) is an outdoor lighting unit used for illuminating a street or an open area. The Solar Street Lighting System consists of solar photovoltaic (SPV) module, a luminaire, storage battery, control electronics, inter-connecting wires/cables, module mounting pole including hardware and battery box. The luminaire is based on White Light Emitting Diode (W-LED), a solid state device which emits light when electric current passes through it. The luminaire is mounted on the pole at a suitable angle to maximize illumination on the ground. The control electronics (including charge controller and LED driver) fixed inside a luminaire. The PV module is placed at the top of the pole at an angle facing south, so that it receives solar radiation throughout the day, without any shadow falling on it. The battery is placed in a box and attached to the pole. Electricity generated by the PV module charges the battery during the day time which powers the luminaire from dusk to dawn. The system lights at dusk and switches off at dawn automatically.

#### 2. BROAD PERFORMANCE SPECIFICATIONS:

PV Module	40 Wp under STC
Battery	Sealed maintenance free Tubular GEL type VRLA, 12V/40 AH @ C/10, Max DoD: 75%.
Light Source	White Light Emitting Diode (W-LED), 9 Watt(Min.), W-LED Luminaire, dispersed beam, soothing to eyes with the use of proper optics and diffuser
Light Output	Minimum 16 Lux when measured at the periphery of 4 meter diameter from a height of 4 meter. The illumination should be uniform without dark bands or abrupt variations, and soothing to the eye. Higher light output will be preferred.
Mounting of light	Minimum 4meter (from ground level) pole mounted
Electronics (Charge controller and LED driver) Efficiency	Minimum 85 % total. <b>The charge controller should be of MPPT type with MPPT efficiency more than 85 %.</b>
Duty Cycle	Dusk to dawn
Autonomy	3 days or Minimum 42 operating hours per permissible discharge

#### 3. DUTY CYCLE:

The LED solar street lighting system should be designed to operate from dusk to dawn, under average daily insolation of 4.45 kWh/Sq.m./day on a horizontal surface.

#### 4. PV MODULE:

- (i) Indigenously manufactured PV module should be used.
- (ii) The PV module should have crystalline silicon terrestrial solar cells and must have a certificate of testing conforming to IEC 61215 Edition II/BIS 14286 from an NABL or IECQ accredited laboratory.
- (iii) The power output of the module under STC should be a minimum of 40Wp at a load voltage\* of  $16.4 \pm 0.2$  V.
- (iv) The open circuit voltage\* of the PV modules under STC should be at least 21.0 Volts.
- (v) **The module efficiency should not be less than 14 %.**
- (vi) The terminal box on the module should have a provision for opening for replacing the cable, if required.
- (vii) There should be a Name Plate fixed inside the module which will give:
  - a. Name of the Manufacturer or Distinctive Logo
  - b. Model or Type Number
  - c. Serial Number

- d. Month and year of the manufacture
- (viii) **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.**
- (ix) Monogram of MANIREDA along with following details in English script shall be screen printed in indelible ink or paint on the back side of each PV module:
- Solar Photo Voltaic Programme 2015-16 (W-LED Solar Street Light)
  - Not for sale or transfer
  - Statutory action would be taken by MANIREDA, if it is found sold or transferred under different

Sections of IPC

\* The load voltage and Voc conditions of the PV modules are not applicable for the system having MPPT based charge controller.

#### **5. BATTERY (Tubular Gel type VRLA):**

- (i) The battery will have a minimum rating of 12V, 40Ah at C/10 discharge rate.
- (ii) At least 75 % of the rated capacity of the battery should be between fully charged & load cut off conditions.
- (iii) Battery should conform to the latest BIS/International standards. Manufacturer must provide a qualification test report/ certificate of the battery conforming to the relevant latest BIS/International standards from an NABL/IECQ accredited Laboratory.

#### **6. LIGHT SOURCE:**

- (i) The light source will be of white LED type with wider view angles of a minimum of 120° or more. The colour temperature of white LED used in the system should be in the range of 5500° K – 6500° K.
- (ii) W- LEDs should not emit ultraviolet light.  
Manufacturer must submit the lux distribution profile of the system. The luminaire should also conform to the Standard IEC 60598 (General requirements and tests of luminaire)
- (iii) The light output from the white LED light source should be constant throughout the duty cycle.
- (iv) The lamps should be housed in an assembly suitable for outdoor use. The housing of the luminaire should be of aluminum pressure die-cast and must conform to IP 65. The manufacturer must provide a test report/ certificate on conformity of the luminaire to IP 65 from an NABL/IECQ accredited laboratory. The entire electronics including the LED driver and charge controller must be integrated inside the luminaire. The name of manufacturer should be embossed on the aluminum body of the luminaire.
- (v) The luminaire life time should be >50,000 hrs. Manufacturer must submit a declaration in this regard. The total degradation in the light output should not be more than 30 % after 50000 burning hours.
- (vi) The temperature of heat sink should not increase more than 20°C above ambient temperature during the dusk to dawn operation.
- (vii) The individual LED should be either from OSRAM or PHILIPS or NICHIA or CREE or CITIZEN or reputed make. Make, model number, country of origin and technical characteristics of the white LEDs used in the lighting system must be furnished by the manufacturer.

#### **7. ELECTRONICS:**

- (i) The total electronic efficiency of the LED driver should be at least 85%.
- (ii) Electronics should operate at 12 V and should have temperature compensation for proper charging of the battery throughout the year.
- (iii) The light output should remain constant with variations in the battery voltages.
- (iv) System voltage: 12VDC.
- (v) No load current: <20mA.
- (vi) The PV module itself should be used to sense the ambient light level for switching ON and OFF the lamp.
- (vii) The PCB containing the electronics should be capable of solder free installation and replacement.
- (viii) Necessary lengths of wires/cables, switches suitable for DC use and fuses should be provided.



## 8. ELECTRONIC PROTECTIONS:

- (i) Adequate protection is to be incorporated under “No Load” conditions e.g. when the lamp is removed and the system is switched ON.
- (ii) The system should have protection against battery overcharge and deep discharge conditions. The numerical values of the battery set points i.e. load cut off, load reconnect and charge regulation voltage must be specified. Load reconnect should be set at a value when the battery is 80% charged.
- (iii) Protection/Fuse should be provided to protect against any load short circuit and open circuit conditions.
- (iv) A blocking diode should be provided as part of the electronics, to prevent reverse flow of current through the PV module(s), in case such a diode is not provided with the PV module.
- (v) Full protection against open circuit, accidental short circuit and reverse polarity should be provided.
- (vi) Electronics should operate at 12 V and should have adequate temperature compensation arrangement for proper charging of the battery (as recommended by the battery manufacturer) throughout the year.
- (vii) Adequate protection should be provided against Battery reverse polarity.
- (viii) Enclosure protection of the luminary must be IP 65 type to prevent the corrosion.
- (ix) All the LEDs used in the luminary must be connected in a way to have a fail short mechanism in order to avoid the catastrophic failure of the system in case any of the LED fails.

## 9. MECHANICAL COMPONENTS:

- (i) As a precautionary measures against pilferage/theft, the battery should be top pole mounted i.e. to be attached to the pole just below the luminary. The pole should have the provision to hold the luminaire and battery and the foundation and mechanical strength of the pole must be capable to withstand the entire structure from strong wind (minimum upto 150 km/hr.) or any other natural forces.
- (ii) All the nuts & bolts to be used for the system should be lock nut & bolt (anti- theft nut & bolt) and made of stainless steel.
- (iii) The pole of the street lighting system shall be made of hot dip galvanized MS tubular type 4.50m height from ground level after installation and having 114mm (min) outer diameter, 4mm (min) thickness. The arm of the luminary should be at least 4m from ground level. The pole shall be of hot dip galvanized of thickness at least **60 micron**. The battery box is to be fixed on the pole very firmly/rigidly. The battery box with battery shall be kept at least 3.5 m height from the ground level. The battery box should be made of Galvanized iron sheet and must have a corrosion free powder coating. The luminary bracket (cross arm) shall also be made of hot **dip galvanized iron** of suitable size and to be fitted with pole with provision of adjusting of luminary height with 360° movement. The structures shall be designed for simple mechanical and electrical installation. It shall support module and battery box with battery and transfer the mechanical loads to the ground. The structure for mounting the panel is to be made of aluminum. The system shall have to be so designed to withstand wind velocity maximum of 150km/hr. and adverse weather condition prevailing in Manipur. **The manufacturer must provide a certificate of compliance in this regard.**
- (iv) It should be possible to mount the light source on a metallic arm attached to the pole in order to achieve the defined lighting levels as per the Indian road lighting standard.
- (v) A vented GI metallic box with acid proof corrosion resistance powder coating for housing the storage battery outdoor should be provided. The battery box should be strong enough to hold the 12V/40 AH, battery with proper clearance for future maintenance work. Top surface of the battery box made to be slightly inclined to avoid accumulation of water. Front side of the battery to be engraved “LED SLS-MANIREDA (No. & year)”. The battery box shall have to be designed from security point of view ensuring that terminals of battery are not short-circuited.
- (vi) **Installation and foundation:** The height of the pole length should be 4.50mtrs from the ground level with suitable concrete foundation of mixture (1:2:4) having size (457X457X762mm). The pole should be embedded minimum 610 mm below from existing GL. Adequate provision should be kept for servicing and maintenance.

**10. OTHER FEATURES:**

- (i) The system should be provided with 2 LED indicators: a green light to indicate charging in progress and a red LED to indicate deep discharge condition of the battery. The green LED should glow only when the battery is actually being charged.
- (ii) The system body should have a name Plate and should provide the following details :
  - (a) Name of the Manufacturer or Distinctive Logo.
  - (b) Model Number
  - (c) Serial Number
  - (d) Year of manufacture
- (iii) Necessary lengths of wires/cables, switches and fuses should be provided as per the relevant BIS standard

**11. QUALITY AND WARRANTY:**

- (i) The complete White LED Solar Street Lighting system (including the battery) will be warranted for a period of 5(five) years from the date of supply.
- (ii) The PV module(s) will be warranted for a minimum period of 25 years from the date of supply. The PV modules must be warranted for their output peak watt capacity, which should not be less than 90% at the end of Ten 10(ten) years and 80% at the end of 25(Twenty five) years.
- (iii) Components and parts used in White LED Solar Street Lighting systems should conform to the latest BIS/International specifications, wherever such specifications are available and applicable.
- (iv) The Warranty Card to be supplied with the system must contain the details of the system.

**12. OPERATION and MAINTENANCE MANUAL:**

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

- (a) Basic principles of Photovoltaics,
- (b) A small write-up (with a block diagram) on Solar Street Lighting System – its components, PV module, battery, electronics and luminaire and expected performance.
- (c) Type, Model Number, Voltage & capacity of the battery used in the system.
- (d) The make, model number, country of origin and technical characteristics(including IESNA LM-80 report) of W-LEDs used in the lighting system.
- (e) About charging and significance of indicators,
- (f) Clear instructions about erection of pole and mounting of PV module(s) and lamp housing assembly on the pole,
- (g) Clear instructions on regular maintenance and trouble shooting of solar street lighting system,
- (h) DO's and DONT's,
- (i) Name and address of the contact person for repair and maintenance, in case of non-functionality of the solar street lighting system.

## **6. FIVE YEARS MAINTENANCE & PERFORMANCE WARRANTY CONTRACT (MPWC)**

### **1.0 The Maintenance and Performance Warranty Contract (MPWC)**

- 1.1 After the works are awarded to the successful Bidder/Bidders, he/they enter into a Maintenance & Performance Warranty Contract (MPWC) with MANIREDA which includes the scope of operation and maintenance of the W-LED SPV Street Lighting system for a period of 5(five) years. The date of MPWC period shall begin from the date of actual commissioning of the Solar Power Plant. The Maintenance & Performance Warranty Contract shall include servicing & replacement guarantee for parts and components (such as SPV Module, Battery, Luminaire, etc.) of W-LED Solar Street Light for 5 years from the date of installation. For PV modules, the replacement guarantee is for 25 years.
- 1.2 The Contractor should keep a trained person permanently (present round the clock) for day today operation, troubleshooting, maintenance etc. at the worksite during the MPWC period of 5 years.
- 1.3 The Contractor should also train a person preferably staff/authority of the beneficiary institution if required for day today checking, troubleshooting, maintenance etc. in order to facilitate easy function of the system after MPWC period.
- 1.4 The maintenance service provided shall ensure proper functioning of the W-LED SPV Street Light as a whole. All preventive/routine maintenance and breakdown/corrective maintenance required for ensuring maximum uptime shall have to be provided by the Contractor. The Contractor shall furnish a Performance Report duly attested by the authority of Beneficiary Organisation/**Tourist Centre** alongwith the hard copy/printout of the daily performance data of the Plant for every quarter (3 months) shall be submitted to MANIREDA quarterly within 15<sup>th</sup> day of following month during the MPWC period. The Maintenance and Performance Warrantee Contract (PWMC) shall have two distinct components as described below.

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

- 2.1 This shall include activities such as, cleaning and checking the health of the W-LED SPV Street Light, cleaning of module surface, checking of all electrical connections, Checking of module mounting structure, checking of batteries including cleaning & greasing of battery terminals and any other activity that may be required for proper functioning of the system as a whole.

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

- 3.1 Whenever a complaint is lodged by the user, the bidder shall attend to the same within a reasonable period of time 3 days and in any case the breakdown shall be corrected within a period not exceeding 7 days from the date of complaint.
- 3.2 The bidder shall maintain the following facilities at the local Service Centre for ensuring highest level of services to the end user;
  - (i) Adequately trained manpower, specifically trained by the bidder for carrying out the service activities.
  - (ii) Adequate provisions for record keeping, which shall inter-alia, include the following:
    - (a) Details of system supplied within the command area of the service station including full name and address of end user, system and sub-system serial numbers and records of routine maintenance carried out (duly signed by the end user).
    - (b) History record sheets of maintenance done.
  - (iii) Adequate spares and manpower for ensuring least down time of an individual system.
  - (iv) The Service Center shall send summary service reports to MANIREDA on quarterly basis. These reports shall include the following information:
    - (a) Number/Type of components of the system covered by the Service Center.
    - (b) Number/Type of components/systems working satisfactorily on the reporting date.
    - (c) Number of complaints received during the period of reporting.
    - (d) Number of complaints attended during the period of reporting.
    - (e) Major cause of failure, as observed
    - (f) Major replacement made during the reporting period. Separate report shall be submitted for each type of systems manufacture wise in case the service center

caters to the requirement of more than one manufacture.

- 3.3 The records maintained at the Service Center shall be available from time to time to MANIREDA.
- 3.4 The date of MPWC maintenance period shall begin on the date of actual commissioning of the SPV systems. If during the MPWC period, the system becomes non-functional due to any defect or shortage of spares etc. for a period more than 1 week then the time duration of this non-functional period will be extended in the MPWC period.
- 3.5 Any payment for release of MPWC charges will not be entertained or put up to Higher Authority of MANIREDA without the Performance Report duly attested by the authority of Beneficiary Organisation/Tourist Centre.
- 3.6 Bidder shall furnish details of infrastructure that are presently available for establishing of Service Centers.

## 7. Proforma - 1

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

NIB No.: MANIREDA/SSL/TOURIST/2016/4

To,

The Director

Manipur Renewable Energy Development Agency (MANIREDA),  
2<sup>nd</sup> Floor, South Block, Secured Office Complex, AT Line, Near Imphal Hotel,  
Imphal-795001.

**Sub: Offer in Response to Notice Inviting Bid No. MANIREDA/SSL/TOURIST/2016/4 for (i) Design, manufacture, shop testing, packing & forwarding, transportation, transit insurance, supply of 40Wp SPV Module W-LED Solar Street Lighting system at identified sites via transit godown of MANIREDA for checking/store entry, (ii) installation, testing & commissioning of 40Wp SPV Module W-LED Solar Street Lighting system at identified sites (iii) 5 years Maintenance & Performance Warranty Contract (MPWC) at Tourist attracted area of Manipur.**

Sir,

With reference to the above we are submitting this offer after having fully read and understood the nature of the work and having carefully noted all the specifications, terms & conditions laid down in the bid document. This offer is hereby submitted in sealed envelopes duly marked as indicated below:

(Technical Proposal): Submitted in original

The Financial Proposal is submitted online in e-tender

We also confirm that:

2. We are an Indian company/firm.
3. The components of SPV systems shall be indigenously manufactured.
4. We have never been debarred from executing similar type of work by any Central/ State/ Public Sector Undertaking/Department/Nodal Agency.
5. The Bid Document is downloaded from MANIREDA website and necessary document in support is enclosed.
6. We shall execute the offer/work order as per specifications, terms & conditions of the Bid Documents on award of work.
7. Our offer shall remain valid for placement of purchase orders up to 365 days from the due date of submission of offer.
8. If at any time, any of the declarations submitted by us is found to be false, our offer or order is liable to rejection.

Yours faithfully,

(Signature of Authorized Signatory)

Name :  
Designation :  
Company Seal :

8. Proforma – 2

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

NIB No.: MANIREDA/SSL/TOURIST/2016/4

Date:.....

To,

The Director  
Manipur Renewable Energy Development Agency (MANIREDA),  
2<sup>nd</sup> Floor, South Block, Secured Office Complex, AT Line, Near Hotel Imphal,  
Imphal-795001.

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

I hereby authorize ..... (Name & Designation) to attend the **Bid Opening Meeting & sign the Bid Document** (*tick wherever applicable or tick both, if same person is to attend*) to be held on..... at MANIREDA on behalf of our company.

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

.....

(Specimen Signature)  
Name : .....  
: .....

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

Yours faithfully,

(Signature of Authorized Signatory)  
Name :  
Designation :

Note:

- 1. To be submitted by bidders on official letter head of the company.

### 9. Proforma - 3

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

NIB No.: MANIREDA/SSL/TOURIST/2016/4

Date:.....

Sl.	Particular			
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			
8.	Nature of Firm (Proprietorship/Partnership /Pvt. Ltd./Public Ltd. Co./Public Sector)			
9.	Permanent Account Number (PAN)			
10.	Firm's Registration Number			
11.	EPF Registration No. (if applicable)			
12.	Sales Tax/Value Added Tax Registration Number			
13.	Specify the Item Originally Manufactured			
14.	Year of Starting of Manufacturing/Assembling of PV Component(s)			
15.	Installed Capacity for Solar Products/Components/Plant			
16.	Total Production and Sale of PV Products During the Last Three Years (in Rupees)	2013-14	<b>Production</b>	<b>Sales</b>
		2014-15		
		2015-16		
17.	Name of Material and Model Type Offered			

18.	Name of Manufacturer of SPPs with Full Address	
	1.	SPV SLs
	2.	PV Module
	3.	Luminary
	4.	Battery
20.	Particulars of Earnest Money	
21.	Quantity Quoted for W-LED Solar Street Light	
22.	Name of the Test Center where the testing of Components SSL has been performed	
23.	Test Report No. of components SPP mentioning date of test	
24.	Specify MNRE specification as in the test report	
25.	Place where Materials will be Manufactured	
26.	Place where Materials will be Available for Inspection	
27.	Whether the Bidder has submitted details with regard to supplies made to important organizations.	
28.	Details of any existing service network in Manipur (Name & address of service centre)	
30.	Other details and remarks, if any	

Yours faithfully,

(Signature of Authorized Signatory)

Name :  
 Designation :  
 Company seal :

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



**10.Proforma - 4**

**Details of Orders Received and Executed in Past Years**

NIB No.: MANIREDA/SSL/TOURIST/2016/4

Date:.....

Details of Orders Received & Executed by the Manufacturer/Supplier for Supply of SPPs to SNA/ Govt. Organization/ Govt. Deptt. during past Years.

<b>Sl. no.</b>	<b>Name of Agency/ Organization</b>	<b>Purchase Order No., Date &amp; Ordered Qty.</b>	<b>Name of Model</b>	<b>Delivery Schedule</b>	<b>Qty. Supplied Within Delivery Schedule</b>	<b>Qty. Supplied After Delivery Schedule</b>	<b>Date of Full Supply</b>

Yours faithfully,

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

Note:

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

**11.Proforma - 5**

**No Deviation Certificate**

NIB No.: MANIREDA/SSL/TORIST/2016/4

Date:.....

To,

The Director

Manipur Renewable Energy Development Agency (MANIREDA),

2<sup>nd</sup> Floor, South Block, Secured Office Complex, AT Line, Near Imphal Hotel,

Imphal-795001.

Dear Sir,

We understand that any deviation/exception in any form from our bid against the above mentioned reference number may result in rejection of our bid. We, therefore, certify that we have not taken any exceptions/deviations anywhere in the bid and we agree that if any deviation is mentioned or noticed, our bid may be rejected.

Yours faithfully,

(Signature of Authorized

Signatory) Name :

Designation :

Company seal :

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

**12.Proforma - 6**

<p><b>Format for Guarantee Card to be Supplied with W-LED Solar Street Light</b></p>
--------------------------------------------------------------------------------------

NIB No.: MANIREDA/SSL/TOURIST/2016/4

Date:.....

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

**Guarantee Card**

1.	Name & Address of the Manufacturer/ Supplier of the System	
2.	Name & Address of the Purchasing Agency	
3.	Date of Supply of the System	
4.	Details of PV Module(s) Supplied in the System	
	(a) Name of the Manufacturer	
	(b) Make	
	(c) Model	
	(d) Serial No.	
	(e) Wattage of the PV Module(s) under STC	
	(f) Guarantee Valid Upto	
5.	Details of Battery	
	(a) Name of the Manufacturer	
	(b) Make	
	(c) Model	
	(d) Batch/Serial No(s).	
	(e) Month & Year of Manufacture	
	(f) Rated V & AH Capacity at C/10 Rated at 27 <sup>o</sup> C	
	(g) Guarantee Valid Upto	
6.	Details of Luminary & Other BOS Items	
	(a) Name of the Manufacturer	
	(b) Make	
	(c) Model	
	(d) Serial No(s).	
	(e) Month & Year of Manufacture	
	(f) Guarantee Valid Upto	
7.	Designation & Address of the Person to be Contacted for Claiming Guarantee Obligations	

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

13. Proforma - 7

**Format for Certificate of Supply, installation & commissioning of W-LED Solar Street Light  
Received by the Consignee as Proof of Compliance by the Supplier**

NIB No.: MANIREDA/SSL/TOURIST/2016/4

Date:.....

**CERTIFICATE**

Consignee .....  
Name of Department .....  
Address .....

Certified that .....nos. (in word.....) of W-LED Solar Street Light ( 40 Wp SPV Module, 12V/40AH tubular Gel Type VRLA battery complete with 9W (minimum) Luminaire with Control Electronics, Pole, Cables, etc.) has been supplied, installed and commissioned at designated sites in Tourist attracted area of Manipur by M/s ..... with funding from Ministry of New and Renewable Energy(MNRE), Govt. of India and Govt. of Manipur as per terms of Work Order No.....dtd.....

Signature of Consignee.....

Name.....

Designation.....

Seal.....

Signature of Consignee.....  
Name:.....  
Designation:.....  
Seal .....

## 14. Proforma - 8

**Format for Location-wise Detail of the Module & Battery Utilisation Report of W-LED based Solar Street Light (SSLs) Installed Under Solar Photo Voltaic Programme (SPV) JNNSM of MNRE, Govt. of India**

NIB No. : MANIREDA/SSL/TOURIST/2016/4

Date : .....

**Name of Manufacturer/Supplier** : .....

**Name of Consignee** : .....

**Address of Consignee** : .....

Sl. No.	Name of beneficiary (DC) with District	Module			Battery			Luminaire with Control Electronics			Date of Installation
		Number	Make	Year of Manufacture	Number	Make	Year of Manufacture	Number	Make	Year of Manufacture	

**15.Proforma - 9**

**Format for Submitting the PRICE SCHEDULE/FINANCIAL BID (To be uploaded ONLINE only) for Design, Supply, Installation & Commissioning with 5 years of Maintenance & Performance Warranty Contract (MPWC) of 40Wp SPV Module W-LED Solar Street Lighting system at Tourist attracted area of Manipur**

NIB No.: MANIREDA/SSL/TOURIST/4

Date : .....

To,

The Director

Manipur Renewable Energy Development Agency (MANIREDA),

2<sup>nd</sup> Floor, South Block, Secured Office Complex, AT Line, Near Imphal Hotel,

Imphal-795001.

**Price Schedule**

Sl.	Item	Total Bid Quantity	Price in Rupees	
			Unit	Total Price
1	2	3	4	5 = 3 x 4
<b>1.0</b>	<b>System Cost on Supply of W-LED Solar Street Light</b>			
1.01	SPV Module (40W)	400		
1.02	Pole & accessories	400		
1.03	Battery (12V 40 AH at C/10) VRLA GEL Tubular	400		
1.04	Luminary(9W)	400		
1.05	Balance of Systems (BOS)	400		
	<b>System Cost</b>			
2.00	Transit Insurance	400		
3.00	Transportation	400		
3.01	Service Tax @3.625% on Transportation	400		
4.00	Installation & Commissioning charge	400		
4.01	Labour Cess @1% on Installation	400		
4.02	Service Tax@14.5% on Installation	400		
4.03	VAT @ 6% on Installation	400		
5.00	MPWC (Maintenance & Performance Warranty)	400		
5.01	Labour Cess @1% on MPWC	400		
5.02	Service Tax@14.5% on MPWC	400		
6.00	Total (A)(1.01 to5.02)	400		
6.01	Add 3% Contingency on Total (A) above	400		
7.00	Total (B) (6.00+6.01)	400		
7.01	Add Agency Charges @ 11.75% of Total (B)	400		
8.00	Grand Total (C) (7.00+7.01)	400		
	Total in words			Rupees only

**(DO NOT SUBMIT FINANCIAL BID IN PHYSICAL FORM, TO BE UPLOADED ONLINE ONLY)**

Certified that rates quoted for SPP are as per specifications, terms & conditions mentioned in the bid document

Yours faithfully,

(Signature of Authorized Signatory)

Name: Designation:

Company seal :

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

The following information/documents are to be annexed and flagged by the bidders along with the BID

Sl. No	Annexure and Proforma No.	Particulars	Yes/No, Flag No.	To be done
1	Annexure-I	Details of Earnest Money(D.D from any nationalized bank and validity for at least 3months from the last date of submission of bids		Both uploading & hard copy
2	Annexure-II	A copy of the document/certificate that the bidder is Company/Firm/ Corporation registered in India, manufacturing SPV Cells/Modules/Luminaire (conforming to relevant National/International Standards)		Both uploading & hard copy
3	Annexure-III	A copy of the Certificate for solar module as per IEC Standards.		Both uploading & hard copy
4	Annexure-IV	Test Certificate conforming to MNRE approved specifications of the components of W-LED Solar Street Light like Luminary, Battery, Module, etc. from a MNRE authorised testing centres/NABL accredited(Test Certificate should have been issued on or after April,2009)		Both uploading & hard copy
5	Annexure-V	A copy of valid CST/State VAT/TIN registration Certificate		Hard copy
6	Annexure-VI	A summarized sheet of cumulative experience of the bidder of Design, manufacture, supply, I&C of W-LED Solar Street Light whose work order should be in the name of the bidder.		Statement for uploading but details of work orders in hard copy
7	Annexure-VII	Overall Average Annual Turnover of the Company/Firm/Corporation in the last 3 financial years (A summarized sheet of turnover of last 3 Financial Years certified by registered CA)		Both uploading & hard copy
8	Annexure-VIII	MNRE accredited Channel Partner/Programme Administrator with Credit Rating(from MNRE Accredited Rating Agency)		Both uploading & hard copy
9	Annexure-XI	Copy of MoU signed for Pre-bid tie-up		Hard copy
10	Annexure-XII	Demand Draft for cost of bid document/Photocopy of Demand Draft		Hard copy
11	Annexure-XIII	Letter of acceptance to furnish the information in Proforma - 7, Proforma - 8, Proforma - 9,		hard copy
12	Annexure-XIV	Photographs of MD or Two Directors (in case of Ltd. Company.)		Hard copy
13	Annexure-XV	Technical Particular data sheet of SSL of Bidder		Hard copy
14	Annexure-XVI	Copy of audited Balance Sheet and Profit & Loss Account for last 3 (three) years		Hard copy
15	Annexure-XVII	Photographs of Registered Office & Factory attested by Gazetted Officer or Notary Public.		Hard copy
16	Annexure-XVIII	A tentative overall supply schedule in the form of Bar Chart		Hard copy
17	Proforma - 1	Forwarding Letter		Both

				uploading & hard copy
18	Proforma - 2	Authority Letter for Attending Bid Opening Meeting and Signing of Bid Document.		Both uploading & hard copy
19	Proforma - 3	Information about the Bidding Firm		Both uploading & hard copy
20	Proforma - 4	Details of Orders Received and Executed in Past Years		Both uploading & hard copy
21	Proforma - 5	No Deviation Certificate		Hard copy
22	Proforma-10	Price Bid		<b>Only Uploading</b>

**Please ensure:**

1. That all information is provided strictly in the order mentioned in the check list mentioned above.
2. Note that this is a zero deviation tender. Bidders are advised to strictly confirm compliance to bid conditions and not to stipulate any deviation/conditions in their offer. Subsequent to bid submission, MANIREDA may or may not seek confirmations/clarifications and any offer(s) not in line with Bid conditions shall be liable for rejection.
3. Any clarification/confirmation bidder may require shall be obtained from MANIREDA before submission of the bid.
4. Bidder shall submit complete bidding document including subsequent amendment, modification and revision, duly signed and stamped as a token of having read, understood and accepted all the terms and condition mentioned therein.



**17. Proforma-10**  
(On the Letter Head of the Firm)

<b>PROFORMA OF APPLICATION FOR PAYMENT</b>
--------------------------------------------

Unit Reference:

Date:

Name of Contractor:	Contract No.:
Contract Name :	
Application Serial No. :	Contact Value :

To,

The Director  
Manipur Renewable Energy Development Agency (MANIREDA),  
2<sup>nd</sup> Floor, South Block, Secured Office Complex, AT Line, Near Hotel Imphal,  
Imphal-795001.

Dear Sir,

APPLICATION FOR PAYMENT

Pursuant to the above referred Contract dated .....the undersigned hereby applies for payment of the sum of .....(Specify amount and currency in which claim is made).

2.The above amount is on account of :[TICK whichever is applicable]

- Initial advance
  - Interim Payment as advance
  - Progressive payment against dispatch of equipment
  - Progressive payment against receipt of equipment at site
  - Progressive payment against Erection/installation & commissioning
  - Ocean freight & marine insurance
  - Inland transportation
  - Inland insurance
  - Price adjustment
  - Extra work not specified in Contract  
(Ref. Contract Change order No.....)
  - Other (specify)
  - Final payment
- As detailed in the attached Schedule (S) which form an integral part of this application.

3.The payment claimed is as per item(s) No.(s) .....of the payment schedule annexed to the above – mentioned Contract.

4.The application consists of this page, a summary of claim statement and the following signed schedule

- i).....
- ii).....
- iii).....

The following documents are also enclosed

- a).....
- b).....
- c).....

Signature of Contractor/  
Authorised Signatory.

## 18. Proforma-11

<b>MATERIALS INSPECTION CLEARANCE CERTIFICATE (MICC)</b>
----------------------------------------------------------

- 1. Name of the Work:** Design, manufacture, supply, installation and commissioning of 400 Nos. of W-LED Solar Street Lighting Systems including 5 years MPWC in Manipur.
- 2. Name of Worksite/Location:** Tourist attracted area of Manipur.
- 3. Name of the Firm/Contractor:** : .....
- 4. Work Order No.:** ..... dated .....
- 5. Shipment No.:**.....
- 6. Date shipped:**.....,
- 7. Shipped From** ..... **8. Shipped To** Imphal

SL. No.	Item Description	Qty./ system	Invoice No. & date	Challan No. & date	Make	Unit price	Amount	Remarks
1	2	3	4	5	6	7	8	9
1.(a)	SPV Module							
(b)	Module Structure							
2.(a)	Luminaire							
(b)	Electronics							
3.(a)	Storage battery							
(b)	Battery box							
4.(a)	Pole							
(b)	R.C.C. foundation							
5.	Cable							
6.(a)	Manual							
(b)	Others if any							

**9. Enclosed documents:** Packing List with model numbers, Invoice, Challan, Goods Consignment Note, Way Bill etc.

**10. Receiver's Use:** Quantities shown in column 2 were received in apparent good condition except as noted.

Date of received:

Signature of authorized MANIREDA representative

Name:

Designation: Field Assistant as Store Assistant

**11. Inspected on:** .....and ..... jointly by MANIREDA officials and representative of M/s .....at store of MANIREDA/warehouse of the Firm at Imphal treated as transits store of MANIREDA and found okay.

**12. Destination:** Acceptance of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.

Date:

Signature of authorized MANIREDA representative

Name:

Designation: Scheme Officer

**19. Proforma - 12**

**COMPLETION CERTIFICATE**

- 1. Name of the Work:** Design, manufacture, supply, installation and commissioning of 400 Nos. of W-LED Solar Street Lighting Systems including 5 years MPWC at Tourist attracted area in Manipur.
- 2. Name of Worksite/Location:** Tourist attracted area of Manipur.
- 3. Name of the Firm/Contractor. :** .....
- 4. Work Order No.:** ..... dated .....
- 5. Date of Completion of Installation:**.....
- 6. Date of Commissioning of the SSL:**.....

SL. No.	Item Description	Qty.	Make	Product Serial No.	Remarks if any
1	2	3	4	5	9
1.(a)	SPV Module				
(b)	Module Structure				
2.(a)	Luminaire				
(b)	Electronics				
3.(a)	Storage battery				
(b)	Battery box				
4.(a)	Pole				
(b)	R.C.C. foundation				
5.	Cable				
6.(a)	Manual				
(b)	Others if any				

**9. Enclosed documents:** 3 copies of Completion Reports along with photographs of the system installed are hereby submitted to MANIREDA, both in hard and soft copies wherein details of equipment given in format above.

**10. Signature of Beneficiary:** Quantities shown in column 2 were received, installed and tested at the location intimated by us.

Date of received and installed:  
Name:  
Designation:

Signature of Scheme Officer, MANIREDA

**11. Inspected on:** .....and ..... jointly by MANIREDA officials and representative of M/s .....  
.....at the site and found okay.

**12. For Contractor Use only:** Endorsed and certified the above report on behalf of M/s.....  
..... End of the Bid Document .....