

# **TENDER BID DOCUMENT**

**e-TENDER for**

- (i) Design & Supply of 25kWp SPV Power Plant,**
- (ii) Installation & Commissioning of 25kWp SPV Plant,**
- (iii) 5(five) years of Maintenance & Performance Warranty Contract (MPWC)**

**at**

**Directorate of Economics and Statistics, Lamphelpat, Imphal,  
Manipur.**

**Tender No. MANIREDA / SPP / DES /2016-17/9**

**Under**

**Jawaharlal Nehru National Solar Mission  
of**

**The Ministry of New and Renewable Energy**

**For the Year 2016-17**

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

2<sup>nd</sup> Floor, South Block, Secured Office Complex, Near 2<sup>nd</sup> M.R. Gate, Imphal-Dimapur Road,  
Imphal-795001

e-mail : manireda99@yahoo.com

Website : [www.manireda.com](http://www.manireda.com)

(This tender document is having 39 pages including this page)

Cost of bid document: Rs 1,500/-

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**1. NOTICE INVITING BID**

Imphal, dated: **15<sup>th</sup> December, 2016**

NIB No. 62/14/2014/DES/MANIREDA/: Online tenders are invited from reputed manufacturers of MNRE approved channel partners for;

Item(s)	Tender No.	Total Capacity	Cost of Tender Document (Rs.)	Earnest Money (Rs.)
1) Design, supply, installation and commissioning of 25kW SPV Power Plant incl. 5yrs Maintenance and Performance Warranty Contract (MPWC) at Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur.	MANIREDA/SPP/DES/2016-17/9	25 kW	500	2 Lakhs
2) Design, supply, installation and commissioning of 700 Nos. of 7W White LED based Solar Street Lighting Systems (SSLS) aggregating 28 kWp incl. 5yrs Maintenance and Performance Warranty Contract (MPWC) at areas of Imphal West Zilla Parishad in the State of Manipur.	MANIREDA/SSLS/ZP/IW/2016/10	700 Nos.	1000	<b>3.5 Lakhs</b>

Last date & time for submission of E-Tender online	Last date & time for submission of Hard Copies	Date & time for opening of E-Tender
<b>10/01/2017</b> <b>upto 12.00 Noon sharp</b>	<b>11/01/2017</b> <b>upto 12.30 P.M.</b>	<b>11/01/2017</b> <b>at 1.00 P.M.</b>

Tender Document can be downloaded from the website [www.manipurenders.gov.in](http://www.manipurenders.gov.in) or [www.manipur.gov.in](http://www.manipur.gov.in) or [www.manireda.com](http://www.manireda.com). Bidders have to upload their bid at [www.manipurenders.gov.in](http://www.manipurenders.gov.in)

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 -  
 (L. Manglem Singh)  
 Director, MANIREDA

### Bid Details

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

Sl	Description	Details
1.	Tender No.	MANIREDA/SPP/DES/2016-17/9
2.	Scope of work	(i) Design, Manufacturing, supply of 25 kWp SPV Plant, (ii) Installation & commissioning of 25 kWp SPV Plant, (iii) 5(five) years Maintenance and Performance Warranty Contract (MPWC) of 25kW SPV Power Plant at Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur. Estimated quantity to be installed is 1 No. of 25 kW SPV Power plant. 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/ Pre-Bid Meeting	Manipur Renewable Energy Development Agency (MANIREDA), 2 <sup>nd</sup> Floor, South Block, Secured Office Complex, Near 2 <sup>nd</sup> M.R. Gate, Imphal-Dimapur Road, Imphal-795001. Website : <a href="http://www.manireda.com">www.manireda.com</a> , E-mail : <a href="mailto:manireda99@yahoo.com">manireda99@yahoo.com</a>
4.	Last date of uploading of bid document in the e-tender	<b>Date : Up to 12.00 noon of 10<sup>th</sup> January, 2017.</b> e-tendering site : <a href="https://manipurtenders.gov.in">https://manipurtenders.gov.in</a>
5.	Last date & time of submission of Hard copy of bids	<b>Date : 11<sup>th</sup> January, 2017.</b> Time : Upto 12:30 P.M.(submission of documents after 12:30 P.M will not be accepted at any circumstances).
6.	Date & time of opening of Technical Bid	<b>Date : 11<sup>th</sup> January, 2017.</b> Time : at 1.00 P.M. Venue : 2 <sup>nd</sup> Floor, South Block, Secured Office Complex, Near 2 <sup>nd</sup> M.R. Gate, Imphal-Dimapur Road, Imphal-795001.
7.	Date & time of opening of Financial Bid	Financial Bids will be opened for only Technically qualified bidders. Date : Will inform accordingly & also upload in <a href="http://www.manireda.com">www.manireda.com</a> Time : - Venue : Office of the Director, MANIREDA, 2 <sup>nd</sup> Floor, South Block, Secured Office Complex, 2 <sup>nd</sup> M.R. Gate, Imphal-Dimapur Road, Imphal – 795 001.
8.	Cost of bid document (Non-refundable)	Rs. 500/- in the form of D.D. favouring Director MANIREDA payable at Imphal.
9.	Earnest Money (Refundable)	Rs. 2,00,000/- (Two lakhs only) in the form of D. D. favoring Director MANIREDA, payable at Imphal.
10.	Time of completion	Within five (5) months from the date of work order .
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, Near 2<sup>nd</sup> M.R. Gate, Imphal-Dimapur Road, Imphal-795001,  
e-mail : manireda99@yahoo.com. Website : [www.manireda.com](http://www.manireda.com)

Tender No. : MANIREDA/SPP/DES/2016-17/9

Date: 15/12/2016

- Sub : (i) Design, Manufacturing, supply of 25 kWp SPV Plant,  
(ii) Installation & commissioning of 25 kWp SPV Plant  
(iii) 5(five) years Maintenance and Performance Warranty Contract (MPWC) of 25kW SPV Power Plant at Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur under Jawaharlal Nehru National Solar Mission(JNNSM) scheme of MNRE,GOI.

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 39 pages 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. 500/-, as applicable along with Technical Bid.
- 2.2 Bid applications without the cost of bid document will be rejected.

#### 3. Exemption of Cost of Bid and Earnest Money Deposit (EMD)

Exemption from deposition of cost of Tender and Earnest Money will be allowed for Firms having both MSME and NSIC Certificates. In case of claim for exemption from deposition of cost of Tender and Earnest Money, sufficient proof in support of claim for exemption of EMD as prescribed in Govt. of India Notification and other competent authority is to be attached with the Bid.

#### 4. Earnest Money

- 4.1 The bidder should submit in Technical Bid the earnest money in the form of Demand Draft from a Nationalised Bank/scheduled bank of requisite value.
- 4.2 Unexempted Bidders failing to submit earnest money will be rejected.
- 4.3 The request for adjustment of earlier dues in place of earnest money will not be entertained.
- 4.4 The earnest money shall be returned to all unsuccessful bidders in technical evaluation, within three weeks.
- 4.5 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.

**5. Security Deposit:**

Security Deposit @ 5% of the total contract value is to be deposited on acceptance of the Work Order within 10 days, of which Earnest Money Deposit (Rs 2.00lakh) shall be adjusted and balance has to be deposited physically by Demand Draft in order to make up full Security Deposit. Security Deposit shall be released on completion of the project.

**6. Performance Guarantee**

Performance Warranty Bond shall be deposited by the Contractor @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 Contractor shall submit the Original Warranty documents of SPV Modules, PCU and Battery etc. to MANIREDA during the supply of the systems.

**7. Submission of Bids:**

**Bidders have to upload the document mentioned in Para 2.1 in the e-tender website (<https://manipur.tenders.gov.in>). Bidders shall also have to submit hard copies of the uploaded documents as well:**

- 7.1 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.
- 7.2 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.
- 7.3 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.
- 7.4 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.
- 7.5 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.
- 7.6 Hard copy of Bid Document should be submitted in Hard Bond or Spiral Binding .
- 7.7 The Bid Document should have proper paging and flagging of Annexures/details .
- 7.8 Any Overwriting /illegible/erasing, etc. in the documents submitted by the firms shall not be accepted and will not be considered in the evaluation.

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

**8.1 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(Off Grid SPV Power Plants only) - Proforma-4
- (vi) Document for being valid Channel Partner of MNRE for Off-Grid and De-Centralised Solar applications under JNNSM(SPV) with credit rating
- (vii) Certificate of manufacturing SPV Cell/Module or Solar Inverter/PCU conforming relevant

**national/international standards**

- (viii) Test Reports of components like PV module, Inverter, Battery from approved/competent testing centres.**
- (ix) A statement of Cumulative experience of bidders of Off grid SPV Power plant with at least a single 25 kWp capacity or more capacity whose work order issued in the name of the bidder to Govt.aided/Govt Deptt/Institutions.**
- (x) A summarized sheet of turnover for last 3yrs certified by registered Chartered Accountant.**
- (xi) Letter of authorized dealer/service provider registered as per MVAT Act in Manipur**
- (xii) ISO 9001 certificate**
- (xiii) ISO 14001 certificate.**
- (xiv) Registration Certificate of Company/Firm.**

**8.2. 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://manipurtenders.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.**

**8.3. The bidder need not submit BOQ/Price Bid in hard copy as done in previous tenders.**

**8.4. The bidder also must submit Hard copy of documents stated above with all supporting document like copies of work orders in support of cumulative experience clearly indicating Amount and capacity of work.**

**8.5 In addition, the bidder must submit hard copy of other remaining Proformas and Annexures as listed in the Check list with supporting documents.**

**8.6 The hard copy of Technical Bid should be submitted in a sealed envelope superscribed "Tender No. : MANIREDA/SPP/DES/2016-17/9(Technical Bid)", to the office MANIREDA, 2<sup>nd</sup> Floor, South Block, Secured Office Complex, Near 2<sup>nd</sup> M.R. Gate, Imphal-Dimapur Road, 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.**
- 8.7 Only one copy of Technical Bid (hard copy) should be submitted.**
- 8.8 The hard copy with earnest money and cost of tender document has to be submitted during the period upto **12.30 P.M. of 11<sup>th</sup> January, 2017** failing which no late comers would be entertained.**

## **9.0 Scope of Work**

**9.1 The scope of work shall be as indicated in the Bid Details.**

**9.2 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.**

**9.3 The Bidder shall carefully check the specifications and shall satisfy himself regarding the technical requirement and completeness of the equipment/system.**

**9.4 Bidder should be capable and agree to install the 25 kW SPP at Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur. MANIREDA reserves the right to award work to any bidders at its discretion.**

**9.5 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.**

**9.6 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.**

## **10.0 Price**

- 10.1 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.
- 10.2 The price should be inclusive of all taxes, duties, levies, etc. as on date.

## **11.0 Terms of Payment**

- 11.1 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.

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

- 12.1 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.

## **13.0 Eligibility and Qualification Criteria**

- 13.1 The bidder should be:

A Registered Manufacturing Company/Firm/Corporation in India of SPV Cells/Modules or Solar Inverters/PCU (Conforming to relevant National/International Standards). Cumulative Experience of the Bidders should be of executing contracts of Off-Grid Solar Power Plants (installed & commissioned). **The Bidders should have designed, manufactured, supplied, installed & commissioned at least 1(one) 25 kWp Off-Grid Solar Power Plant in Govt aided/Govt Institution with Work Order awarded in Bidder's Name/Firm.** (Copies of work orders must be enclosed to support the cumulative experience). **Experience should be of Design, manufacture, supply, installation & commissioning Off-Grid Solar Power Plants only. Experience of On-Grid Solar Power Plants will not be counted.**

- 13.2 The bidder should be a MNRE accredited off-Grid Channel Partner having credit rating (from MNRE Accredited Rating Agency).
- 13.3 Bidder should have Test Certificate for the components of tendered 25 kWp Solar Power Plant like PCU/Inverter, PV module, battery etc from an approved/competent testing centres as per requirements under the JNNSM scheme of the MNRE, GOI.
- 13.4 The Bidder should have valid CST /State VAT/ TIN registration certificate. A copy of which should be enclosed.
- 13.5 Overall Average Annual Turnover of the Company/Firm/ Corporation in the last three financial years (2013-14, 2014-15 & 2015-16) should be at least 1.00 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)
- 13.6 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.
- 13.7 The bidder should have ISO 9001 certification
- 13.8 The bidder should have ISO 14001 certification.

## **14.0 Validity of Offer**

- 14.1 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.

## **15.0 Other Terms & Conditions**

- 15.1 Insertion, post-script, addition and alteration in Hard Copy shall not be recognized unless confirmed by bidder's signature and stamp.
- 15.2 Incomplete tender or tenders not submitted as per requirement as indicated in the NIB are likely to be rejected.
- 15.3 Bidders shall submit their offer strictly as per terms and conditions of the tender document without any deviation.
- 15.4 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.

- 15.5 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.
- 15.6 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.
- 15.7 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.
- 15.8 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.
- 15.9 The bidder must fulfill both uploading documents and submission of hard copy in the manner mentioned above.

## **GENERAL TERMS & CONDITIONS**

### **1.0 Scope of Work**

- 1.1 The Scope of work for 25 kW SPV Power Plant includes (i) Design, manufacturing, shop testing, packing & forwarding, transportation, transit insurance, supply of 25 kWp SPV Power Plant at Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur via transit godown of MANIREDA for checking/store entry,(ii) installation, testing & commissioning & (iii) 5 years Maintenance & Performance Warranty Contract (MPWC) of SPP 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, Near 2<sup>nd</sup> M.R. Gate, Imphal-Dimapur Road, Imphal-795001** 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 SPV Power Plant on the Total Price (P):- (a) System cost including CST, insurance, transportation etc FOR at Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur (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 Tender Committee of MANIREDA/Higher Tender Committee to undertake the work at the approved rate and on approval of the Chairman, MANIREDA.

#### 4.0 Capacity 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 Proforma of Application for Payment shall be given to the Contractor which shall be submitted by the Contractor to detail the particulars of claim with necessary schedules/documents like Warranty document, Consignment Challan, Invoice, Insurance Certificate, Test Certificates of Module, Luminaries, Batteries, etc.

(i) 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.

(ii) 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 (or at least 50% value of work) and in good condition subject to availability of fund from MNRE, GOI or other sources and submission of the following:-

- a. Certificate of Supply of SPP received by Scheme Officer/consignee as specified.
- b. Commercial invoice of the supply made in triplicate.
- c. Copy of delivery challan/transportation challan/lorry receipt.
- d. Material Inspection Certificate.

(ii) 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 as mentioned in *Para No. 22 (Completion Report)* subject to availability of fund from MNRE, GOI or other sources.

(iii) 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.
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(iv) MPWC charges shall be released on five (5) equal yearly installments on satisfactory performance. The record of performance sheet duly attested by the authority of Beneficiary Organisation shall be submitted to MANIREDA on half yearly basis, by 15th of the next corresponding 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 has 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, Transportation and Delivery at Worksite:**

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.

13.2 The contractor shall make necessary arrangement including transportation upto the installation site, handling including transit insurance for door delivery of the materials on FOR MANIREDA Store Basis. The Contractor shall arrange for transportation, loading, unloading and safe storage of materials at worksite. **For transportation of materials upto Worksite in Manipur, Invoice of materials to be transported should be provided to MANIREDA. Upon the submission of Invoice of materials, Road Permit "Form 27" shall be obtained from Taxation Deptt and issued to the Contractor by MANIREDA.**

13.3 The Contractor shall be responsible for security and insurance of the system & components till the systems are handed over to MANIREDA after completion in all respect.

**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 three(3)months. Installation and commissioning shall be done within two(2)months and **five (5) months shall be duration for completion of the project in all respect.** The completion schedule shall start from the date of issue of the Work Order.

**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 SPPs 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:**

- 17.1 The Supplier/contractor shall not assign or sub let, 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 week of such delay, or part thereof, subject to maximum of 5% of the Total Contract Value.
- 18.3 The liquidated damages for delayed completion shall be recovered from the 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 warranty 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.

**22. Completion Report:**

The Contractor shall submit 3(three) copies of Completion Report in prescribed format of MNRE,GOI to MANIREDA, both in Hard and Soft copies wherein the details of equipment such as Serial Nos. of the SPV modules, PCU/inverter, Charge Controlling Unit, batteries, ACDB, DCDB, etc. and also details of civil construction, cabling etc. alongwith photographs (both soft & hard copy)of the systems installed. In addition, the firm shall submit the following documents to pass bill for payment:

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. Certificate of Commissioning from the beneficiary countersigned by officer concerned.

## TECHNICAL SEPCIFICATIONS FOR 25kWp SPV POWER PLANT

TITLE: (i) Design, manufacturing, supply of 25kWp Off Grid Solar PV Power Plant  
(ii) Installation & Commissioning of 25kWp SPV Power Plant  
(iii) 5(five) years of Maintenance & Performance Warranty Contract (MPWC)

Sl.No.	Item description	Firm to specify details in this column
1.	SCOPE OF WORK	
1.1	Site survey and Layout Planning, Design, development and supply of all components of the SPV power Plant and erection of the PV system including the transportation	
1.2	Detailed planning of smooth execution of the project	
1.3	Testing, Installation & commissioning of the complete system up to AC Distribution Board	
1.4	Training of the staff deputed by DES, Imphal, Manipur as well as Local Operator of the Firm	
1.5	Providing a comprehensive Maintenance & Performance Warranty Contract for 5years including break down maintenance.	

	SPECIFICATIONS OF MAJOR COMPONENTS OF THE SYSTEM	The manufacturer/supplier should specify details of their product, name of make etc in this column
1	<p><b>SPV ARRAY:</b></p> <p>The Solar PV Modules shall be of made of Multi Crystalline Silicon Solar Cells and of capacity 250 Wp or above with Solar cells of 60/72 nos. connected in series to give required 250 Wp or above Solar Modules. For the 25 kWp Solar PV Power plant, the SPV Modules shall be of 24 V, 250 Wp or above as per IEC standard. The blocking diodes prevent discharge of the Battery Bank at night through the source circuit.</p> <p><b>TECHNICAL SPECIFICATION OF SPV MODULE:</b></p> <p>Model No. :  Type : Multi-Crystalline Silicon Solar Module  Cell size : +/-156mm x 156mm  Cell Qty. : 60/72 pcs.  Module size : +/- 1939mm x 982mm x 42 mm  Junction Box :Four Terminals with IP65 Protection  Diode : 15A15 bypass  Nominal Rating : 24 V, 250W or above under STC  Vmax : &gt; 31.0V  Imax : &gt; 8.0A  Voc : &gt; 36.00V  Isc : &gt; 8.5A  FF : &gt; 70.00%  Efficiency (Module) : &gt; 14.00%</p>	

	<p>Power Tolerance : <math>\pm 3\%</math></p> <p>RFID Tag : Inside the lamination</p> <p>PV Module standard : IEC 61215 and IEC 61730-1 &amp; IEC 61730-2</p> <p>Weight : 22.0 kg. (approximate)</p> <p>RFID Tag : The PV module will have a RF Identification tag (RFID), which will contain the following information. The RFID will be inside the module laminate to withstand harsh environmental condition:</p> <ol style="list-style-type: none"> <li>Name of the manufacturer of PV Module</li> <li>Name of the manufacturer of Solar Cells</li> <li>Month and year of the manufacture (Solar Cell &amp; Module)</li> <li>Country of Origin (Solar Cell &amp; Module)</li> <li>I-V curve for the module</li> <li>Peak Wattage, <math>I_m</math>, <math>V_m</math> and FF for the module</li> <li>Unique Serial No. &amp; Module No. of the Module</li> <li>Model or Type Number</li> <li>Date &amp; year of obtaining IEC PV Module Qualification Certificate</li> <li>Name of the Test Lab issuing IEC Certificate</li> <li>Other relevant information on traceability of the Solar Cell &amp; Modules as per ISO.</li> </ol> <p><b>Monogram:</b></p> <p>Monogram of MANIREDA along with following details in English script to be screen printed in indelible ink or paint on the back side of each PV module:</p> <ul style="list-style-type: none"> <li>Solar Photo Voltaic Program 2016-17 (25 kWp SPP)</li> <li>Not for sale or transfer</li> <li>Statutory action would be taken by MANIREDA, if it is found sold or transferred under different Sections of IPC.</li> </ul> <p><b>Warranty:</b></p> <p>PV modules used in solar PV power plants/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.</p>	
2	<p><b>MODULE MOUNTING STRUCTURE:</b></p> <p>The mounting structure shall have to be designed by the Contractor after spot verification. The module mounting structure is made of hot dip galvanized MS angles of size 50 mm x 50 mm x 6 mm. The thickness of galvanization is 80 micron. All the nuts, bolts are made of good quality Stainless Steel (SS). Space must be provided in between rows for proper maintenance and cleaning. Mounting Structure must be designed to withstand all weights of modules and cleaner and to withstand wind speed of 200km/hr. <b>Anti-theft Nut &amp; Bolts must be used for modules.</b></p> <p><b>TECHNICAL SPECIFICATION OF MODULE MOUNTING STRUCTURE</b></p> <p>Type : Hot deep galvanized minimum 80 microns</p> <p>Material : MS Angle / Channel</p> <p>Angle Size : 50mm. x 50 mm. x 6 mm.</p> <p>Tilt angle : At least 22degree to horizontal as per suitable.</p> <p>Nut &amp; Bolt : All stainless steel Nuts and Bolts (Anti-theft) &amp; washer of good quality MS or SS.</p> <p>Specification : As per IS</p>	

3	<p><b>ARRAY SUB JUNCTION BOX &amp; MAIN JUNCTION BOX</b></p> <p>The Array Junction boxes shall be dust, vermin and water proof and made of FRP / powder coated Aluminium with full dust / ABS / Thermo Plastic. The Junction Boxes confirms to IP 65 standard and IEC 62208. J.Bs have hinged door with EPDM rubber gasket to prevent water entry. The terminals shall be connected to Copper bus bar arrangement of proper size. The junction boxes shall have suitable cable entry points fitted with cable glands of appropriate sizes for both incoming and outgoing cables. All the wire/cables must be terminated through cable lugs. The J.Bs shall be such that input &amp; output termination can be made through suitable cable gland. Suitable marking shall be provided on the bus bar for easy identification and cable ferrules shall be fitted at the cable termination points for identification. Each J.Bs have suitable earthing provision. It will placed at 5 feet height or above as per site requirement for easy accessibility. Each Junction Box shall have suitable arrangement monitoring and disconnection for each of the groups.</p>	
4	<p><b>DC DISTRIBUTION BOARD :</b></p> <p>The DCBD shall be provided in between Solar Array and Power Conditioning Unit.</p> <p>It consists of MCCB of suitable ratings for connection and disconnection of array input and also Volt meters, Ammeters &amp; Charging Discharging Amp Hour Meters.</p> <p>It has LED indication for ON and OFF status as per requirement..</p> <p><b>TECHNICAL SPECIFICATION OF DCDB</b></p> <p>Enclosure material : Sheet Steel Epoxy Powder coated</p> <p>Mounted type : Wall mounting type</p> <p>Cable entry : Bottom</p> <p>No. of glands with cable size : 6 nos. for 95 sq. mm cable size</p> <p>MCCB : 2 nos., 200 A</p> <p>DC Am-meter : 1 nos. (0 to 150 A) for measuring Solar display</p> <p>DC Am-meter : 1 no. (-150 to 0 &amp; 0 to +150 A) for measuring Battery Charge &amp; discharge display</p> <p>DC Volt Meter : 2 no. (0 to 400 V DC) for SPV &amp; Battery</p> <p>DC Ampere Hour Meter : 1 no.</p> <p>Earthing terminal size : M75</p> <p>Accessories : as per requirement</p> <p><b>TECHNICAL SPECIFICATION OF BATTERY ISOLATION DEVICE</b></p> <p>Fuse : 1 no. , 200 A 500 V DC HRC Fuse with DC insulator</p> <p>Fuse Holder : 1 no., 200 A 500 V DC</p> <p>Link Cupper rating : 200 A (-)</p> <p>No of incoming glands with cable size : 02 nos. for 95 sq. mm cable size</p>	
5	<p><b>POWER CONDITIONING UNIT (PCU):</b></p> <p>As SPV array produces direct current (DC), it is necessary to convert this to alternating current (AC) and adjust the voltage levels before powering equipment designed for nominal mains AC supply. Conversion shall be achieved using an electronic inverter and the associated control and protection devices. All these components of the system are termed the Power Conditioning Unit or simply the PCU. In addition, the PCU shall also house MPPT (Maximum Power Point Tracker), to maximize Solar PV array</p>	



energy input into the system. PCU refers to combination of Charge controller and inverter and shall be supplied as integrated unit or different units of charge controller and inverter depending on rating & size of the power plant.

**Maximum Power Point Tracker (MPPT) :**

Maximum Power Point Tracker (MPPT) shall be integrated into the PCU to maximize energy drawn from the SPV array. The MPPT should be Microprocessor / Microcontroller based to minimize power losses.

**CHARGE CONTROLLER (MPPT /PWM):**

DC electricity from the array is used to feed inverter as well as charge the battery bank for night time use. The total energy received from the array being dependent upon the availability of sunshine during the day which in turn varies from season to season; there may be occasions when the Power Plant generate surplus energy. Similarly in monsoon season, prolonged overcast sky could cause Battery Bank getting drained beyond the maximum allowed depth of discharge (DOD). To guard against battery overcharge or deep discharge, the charge controller is incorporated.

**INVERTER:**

It is a hybrid inverter based on PWM technology. The DSP controller is used for controlling the whole unit in quick time. Input voltage range being 300-800V DC it is ideally suitable for 240V 800 AH battery operation. Rating of the inverter is 25kVA, 240V DC/415 (±3%)V AC, 3 phase, 50 (±5%) Hz, sine wave inverter with inbuilt PWM / MPPT Charge controller of rated 240-415 V DC with the output power of 25 kW. The output voltage wave is good quality sine wave. External battery charging facility through AC is also be provided.

**TECHNICAL SPECIFICATION OF THE INVERTER:**

**25 kVA INVERTER :**

1.	Rating of the PCU	25kVA 440V AC 3 phase 4 Wire Sine wave with inbuilt MPPT Charge Controller suitable to charge 240V 800AH Battery Bank
2.	Nominal DC Input Voltage (SPV Array)	300V - 800V DC
3.	Low Voltage cut off ( SPV Array)	400V
4.	High Voltage cut off (SPV Array)	600V
5.	Nominal DC Input Voltage (Battery)	240V
6.	Low Voltage cut off (Battery)	220V
7.	High Voltage cut off (Battery)	290V
8.	Type of Controller	MPPT PWM based
9.	Switching device	IGBT Based

	10.	Continuous Rating	25 kVA		
	11.	Over Load Capacity	150% for 30 sec.		
	12.	Output wave form	Pure sine wave output.		
	13.	Total harmonic Distortion	<3% with resistive load.		
	14.	Output Voltage	440 + 5% V AC (3P)		
	15.	Output Frequency	50Hz + 0.05%		
	16.	Efficiency	>90% at full load.		
	17.	Cooling	Forced air cooling with temperature controlled cooling fan		
	18.	Ambient temperature	0-55°C		
	19.	Humidity range	0-95%		
	20.	LED/LCD Display	Display will indicate system major functional parameter like- Main status, Solar status, Charging status, Battery status etc		
	21	Protection	Battery over/ under voltage, Output short circuit, Over load, Phase reversal, Mains high/ low, Voltage cut off, high temperature, Battery wire removal, Reverse flow of current, Input surge voltage, surge current, over/ under frequency		
	22	Enclosure	Rust & moisture resistance sheet metal with powder coating Painting.		
	23	Standard	IEC 61683, IEC 60068 2 (1, 2, 14, 30)		
6	<b>DATA LOGGER/MONITORING SYSTEM</b>				
	<p>Data logging system shall also be an integrated part of the inverter or a separate unit. All the relevant information will be stored in a data logger. The inverter should be equipped with a Modem with a facility of incorporating a GSM Mobile SIM to access Internet through GSM Network for Remote Monitoring system. The expenditure of using the Mobile SIM shall be borne by the bidder/contractor during the MPWC period of 5 years. Data logging system shall record the performance of the Plant in an interval of every 6 hours. The software for Remote Monitoring system shall be installed in PC/laptop of MANIREDA and beneficiary organization, DES, Manipur. The hard copy/printout of the daily performance data of the Plant for every quarter (3 months) shall be submitted to MANIREDA quarterly during the MPWC period.</p>				

7	<p><b>BATTERY BANK:</b>  240V Maintenance Free Tubular Gel Type VRLA Battery Bank having a storage capacity of 800AH. The Battery Bank should be comprised of 120 nos. of 2V 800Ah each (under Standard Test Condition), Maintenance Free Tubular Gel Type VRLA Battery having long service life (minimum 5 years). Battery Bank connection to the PCU is taken through DCDB for preventing damage to the battery.  The Storage Batteries/Battery Bank must conform to the latest edition of IEC/ equivalent BIS Standards as specified below:  General Requirements &amp; Methods of Test - IEC 61427.</p> <p><b>TECHNICAL SPECIFICATION OF BATTERY</b></p> <p>Manufacturer : Exide Industries Ltd./HBL Power Systems/Southern Batteries (Others not allowed)</p> <p>Battery Type : Maintenance Free Tubular Gel Type VRLA Battery, solar grade.</p> <p>Storage Capacity : 240V 800AH (@C/10)</p> <p>Cell Voltage (cell) : 2 Volt</p> <p>Container : Polypropylene with carrying handle.</p> <p>Cover : Protective cover of Polypropylene</p> <p>Efficiency : Amp hour ≥90% and Watt hour ≥75%</p> <p>Max Depth of Discharge : 80%</p> <p>Cell cut off voltage : 1.85 V / cell.</p> <p>Standard : IS 1651.</p> <p>Accessories : Each Battery Bank will contain suitable metal or wooden rack, hydrometer, thermometer, cell connector and connecting leads etc.</p> <p>Design Cycle : 1500 cycle at 80 % DOD  4000 cycle at 40 % DOD  7500cycle at 20 % DOD</p> <p>Charge Efficiency : Shall be more than 90% up to 70% state of charge.</p> <p>Rack : Metal or Wooden of suitable size and adequately strong Battery Rack should be supplied with each Battery Bank with a minimum performance life span of 5 years.</p>	
8	<p><b>AC DISTRIBUTION BOARD :</b>  Sheet metal enclosure with powder coating painting having AC MCB / MCCB. ACDB also have LED Indicator. <b>One Electronic Energy Meter, ISI make, Three Phase, of good quality shall be installed in ACDB suitably placed to measure the consumption of power from SPV Power Plant.</b></p> <p><b>TECHNICAL SPECIFICATION OF ACDB</b></p> <p>Enclosure material : Sheet Steel Epoxy Powder coated</p> <p>Mounted type : Wall mounting type</p> <p>Earthing terminal size : M20</p> <p>Cable entry : Bottom</p> <p>No. of glands with cable size : 6 nos. for 95 sq. mm.</p> <p>Accessories : per requirement</p> <p>MCB/ MCCB : MCB/ MCCB for connection &amp; disconnection of PCU from load</p> <p>MCB : MCB for power supply to control room &amp; Battery room loads</p> <p>Feeder : Output to control panel through MCB</p>	
9	<p><b>CABLES :</b></p>	

	<p>Cables from Control Room of the Plant to the Main Distribution Box (DB) of Directorate of Economics &amp; Statistics, Lamphelpat, Imphal and also from main DB to Control Room for Grid Charging should be taken overhead with suitable supports to prevent sagging or underground as per the convenience considering the safety point of view for both the Plant &amp; People.</p> <p>Type : PVC insulated and sheathed  Materials : All DC Cables shall be of Copper &amp; AC Cables of Aluminium. AC Cables shall be of XLPE insulation  Working voltage : Up to 1100 V  State voltage : 650 V/1.1 KV  Color : To suit Red, Black, Blue  Temperature : -15 deg. C to + 70 deg. C  Standard : IS 1554 part -1/ 694-1990 &amp; IS 7098  Cable Size &amp; Schedule : 95 sq.mm.</p>	
10	<p><b>LIGHTNING AND OVER VOLTAGE PROTECTION SYSTEM:</b>  The SPV Power Plant is provided with lightning and over voltage protection connected with proper earth pits. The lightning conductor should be made of 20-25mm diameter, 3000-3500mm. long GI spike as per provisions of IS.  The lightning conductor should be grounded through 25mm. X 5mm. thick GI strip with earth pit. Their shall be required no of suitable lightning arrestors installed in array field.</p>	
11	<p><b>EARTHING SYSTEM:</b>  Each array structure of the PV yard should be grounded properly. In addition the lightning arrestor should also be provided inside the array field. Provision should be kept be provided inside the array field. Provision should be kept for shorting and grounding of the PV array at time of maintenance work. All metal casing/ shielding of the plant should be thoroughly grounded in accordance with IEC acts/ IE Rules. PCU ACDB &amp; DCDB will be earthed properly.  Earthing for array and distribution systems and power plant equipments are made with GI pipe 2000-3000 mm. long 25-30 mm. diameter including accessories and using charcoal and salt as per IS 3043. The array structure is grounded to earth pit through 25mm X 5mm. GI strip. Earthing Resistance should be not more than 2.5 ohms</p>	
12	<p><b>FIRE EXTINGUISHER:</b>  2 (Two) Nos. of 9 kg or above BIS standard Fire extinguisher with sand bucket will be provided in the control room &amp; battery room for fire caused by electrical short circuits which shall be always functional during the MPWC period.</p>	
13	<p><b>SPECIFICATION OF CHANGE OVER SWITCH:</b>  A separate change over switch of 3Ø, 415 V of suitable ampere rating for 25kW load should be installed outside ACDB to isolate the existing connected load from the SPV system and cater the power to the existing load from conventional/grid line, in case of emergency.</p>	
14	<p><b>SPECIFICATION OF SAND BUCKETS:</b>  The sand bucket to be wall mounted made from at least 24 SWG sheet with bracket fixing on wall conforming IS 2546.</p>	

15	<p><b>SPECIFICATION OF SIGN BOARD:</b> A SIGN BOARD of size 4ft. x 6 ft. in the following manner described below shall be installed in the work site.</p> <div style="border: 2px solid black; padding: 10px; text-align: center;"> <p><b>25 kWp Solar Photovoltaic Power Plant at Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur.</b></p> <p>Capacity: 25 kWp Commissioned on: .....</p> <p><b>Funded by:</b> (i) Ministry of New and Renewable Energy (MNRE), Govt. of India under Jawaharlal Nehru National Solar Mission (JNNSM). (ii) Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur.</p> <p><b>Implemented by:</b> MANIREDA.</p> <p><b>Installed by:</b> .....</p> </div>	
16	<p><b>SPECIFICATION OF DANGER PLATES:</b> Danger plate to be installed wherever require as per Indian IE rule. The Danger plate should be vitreous enamelled white on both sides, and with inscription in signal red colours on front side as required. The inscription should be in Manipur (Bengali script) and English. The details specifications are as follows:-</p> <ol style="list-style-type: none"> <li>1. Size : 200 mm X 150 mm X 2 mm.</li> <li>2. Material : M.S</li> </ol>	
17	<p><b>SPECIFICATION OF EXHAUST FAN:</b> The exhaust fan shall be fitted in the battery room and the control room. The exhaust fans shall be 250 mm in diameter and suitable for AC 230 V, 50 Hz supply.</p>	
18	<p><b>SPECIFICATION OF WIRING MATERIALS:</b> Control room wiring to be done by casing capping type 2C x 2.5 Sq. mm PVC insulated 1.1 KV grade Cu wire.</p>	
19	<p><b>Documentation</b> An operation, instruction, maintenance manual in English should be provided with the Solar Power Plant. The following minimum details must be provided in the manual :</p> <ol style="list-style-type: none"> <li>(i) About Photovoltaic</li> <li>(ii) About Solar Power Plant – its components and expected performance</li> <li>(iii) About PV Module. In case of imported modules it is mandatory to provide a copy of the international product qualification certificate to the test centre</li> <li>(iv) About PCU/Inverter. The make, model number and technical characteristics of PCU/Inverter should be stated in the product data sheet and furnished to the test centers</li> <li>(v) About Battery and electronics used</li> <li>(vi) Clear instructions about Mounting of PV Module(s)</li> <li>(vii) About Electronics</li> <li>(viii) About Charging and Significance of Indicators.</li> <li>(ix) DO's and DON'Ts</li> <li>(x) Clear instructions on operation, Regular Maintenance and Trouble Shooting of SPP</li> <li>(xi) Name and address of the person or service center to be contacted in case of failure or complaint.</li> </ol>	

## 5(FIVE) YEARS MAINTENANCE & PERFORMANCE WARRANTY CONTRACT (MPWC)

### 1.0 Maintenance & Performance Warranty Contract (MPWC):

A Maintenance & Performance Warranty Contract (MPWC) shall be comprehensive which shall include servicing & replacement guarantee for parts and components (like module, PCU, battery, cables etc.) of Solar Power Plant for 5(five) years. The date of MPWC maintenance period shall begin from the date of actual commissioning of the Solar Power Plant.

The Maintenance & Performance Warranty Contract (MPWC) shall be as described below:

- i) The Contractor should keep a person permanently (present round the clock) for day today operation, troubleshooting, maintenance etc. at the worksite during the MPWC period. All preventive/routine maintenance and breakdown/corrective maintenance required for ensuring maximum uptime shall have to be provided.
- ii) **Any fault/defect occurred on the plant shall be intimated by the Plant operator to the Contractor as well as MANIREDA within 24 Hours. Any minor fault shall be rectified by the Contractor within 3 days and major fault shall be rectified by the Contractor within 10 days and action taken report should be submitted to MANIREDA as soon as the fault is rectified. Penalty @ 0.1% of the total contract value per week shall be levied if the Contractor fails to rectify the fault within the stipulated time mentioned.**
- iii) The Contractor will bear the cost of all consumables, spare parts and repairing expenses during the MPWC period.
- iv) The deputed personnel /plant operator of the Contractor at the power plant shall be qualified and well trained so that he can handle any type of operational hazards quickly and timely. He should also be in a position to check and test all the equipment regularly, so that, preventive maintenance & repair, if required, could be taken well in advance to save any equipment from damage. The deputed personnel will operate the plant in accordance with the availability of solar energy stored in the battery bank. Under no circumstances, the operator shall run the power plant damaging the battery bank. In case of non-availability of solar power, suitable notice may be displayed prominently in front of control room to avoid local problems.
- v) During operation and maintenance period, if there is any loss or damage of any equipment/component of the power plant due to mishandling/mismanagement or due to other reasons, whatsoever, the contractor shall be responsible for immediate replacement/rectification. The damaged component may be repaired, if it is understood after examination that after repairing, the performance of the component shall not be degraded, otherwise the defective component shall have to be replaced by new one without any extra cost.
- vi) The deputed personnel of the contractor at the Solar Power Plant shall maintain and record daily performance data in a Record/Log Book of the plant and shall furnish a performance report of the Power Plant quarterly (for every three months) and submit to MANIREDA by 15<sup>th</sup> of the next month. Format of the performance report will be provided by MANIREDA. **If the Contractor fails to submit the performance report of the Power Plant within the stipulated 15 days, penalty @Rs. 500/- shall be imposed for every month delayed.** This amount will be deducted during the release of MPWC Charges.

### 2. Servicing Centre & After Sales Service and Availability of Spare Parts:

The Contractor shall establish a Repairing and Servicing Center at the State Capital with adequate spares during the MPWC period in order to carry out the MPWC effectively. Minimum stock of supply of spare parts/consumables of the Power Plant shall be readily available at the Servicing Centre all the time. The Supplier shall 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. The representative appointed shall be capable of providing technical support after sales service and

overall co-ordination for smooth and timely implementation of the project. Name, address, telephone number of the Servicing Center, daily working hours etc. must be clearly printed in the Manual for easy service.

**3. O & M Training:**

The contractor will organize training programme for the personnel engaged at the site for operation and maintenance of Solar Power Plant in consultation with MANIREDA. The training programme will focus on operation and maintenance of the Solar Power Plant. The Contractor should also train a person preferably staff of Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur for day today operation, troubleshooting, maintenance etc. in order to facilitate easy operation & maintenance after MPWC period is over. Printed leaflet/literature shall be made available in English by the contractor regarding the operation and maintenance of the Solar Power Plant.

**4.0 Preventive/Routine Maintenance**

4.1 This shall include activities such as, cleaning and checking the health of the SPV Power plant, cleaning of module surface, tightening of all electrical connections, changing of tilt angle of module mounting structure, if altered, cleaning & greasing of battery terminals and any other activity that may be required for proper functioning of the SPV Power Plant as a whole.

**5.0 Breakdown/Corrective Maintenance**

5.1 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.

5.2 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). These records shall include voltage, current, specific gravity, indicator charge, full glow, charge controller operation, electronics, etc.
  - (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 Plant 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
  - (g) Hard copy/printout of the daily performance data of the Plant for the last quarter.

5.3 The records maintained at the Service Center shall be available from time to time to MANIREDA.

5.4 The date of MPWC maintenance period shall begin on the date of actual commissioning of the SPV systems. If during the MPWC period, the Solar Power Plant 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.

5.5 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/DES, Imphal, Manipur.

5.6 Bidder shall furnish details of infrastructure that are presently available for establishing of Service Centers.

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## 7. Proforma – 1

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

Tender No.: MANIREDA/SPP/DES/2016-17/9

To,

The Director

Manipur Renewable Energy Development Agency (MANIREDA),  
2<sup>nd</sup> Floor, South Block, Secured Office Complex, Near 2<sup>nd</sup> M.R. Gate, Imphal-Dimapur Road,  
Imphal-795001.

Sub: Offer in Response to Tender No. MANIREDA/SPP/DES/2016-17/9 for (i) Design, Manufacturing, Supply of 25kWp Solar Power Plant (ii) Installation, Testing & Commissioning Including (iii) 5 Years Maintenance & Performance Warranty Contract (MPWC) of 2.5 kWp Solar Power Plant at Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur under Solar Photovoltaic Programme.

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**

Tender No.: MANIREDA/SPP/DES/2016-17/9

Date:.....

To,

The Director

Manipur Renewable Energy Development Agency (MANIREDA),  
2<sup>nd</sup> Floor, South Block, Secured Office Complex, Near 2<sup>nd</sup> M.R. Gate, Imphal-Dimapur Road,  
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 : .....

Designation : .....

(Signature of Authorized Signatory)

Name : .....

Designation : .....

Company Seal :

Yours faithfully,

(Signature of Authorized Signatory)

Name :

Designation :

Note:

1. To be submitted by bidders on official letter head of the company.
2. Authorization can be for more than one persons or different persons for Bid Opening Meeting.

**9. Proforma – 3**

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

Tender No.: MANIREDA/SPP/DES/2016-17/9

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 SPPs
	2.	PV Module
	3.	Control Electronics/Inverter/PCU
	4.	Battery
20.	Particulars of Earnest Money	
21.	Quantity Quoted for Solar Power plant	
22.	Name of the Test Center where the testing of Components SPP 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**

<b>Details of Orders Received and Executed in Past Years</b>
--

Tender No.: MANIREDA/SPP/DES/2016-17/9

Date:.....

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

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

Yours faithfully,

(Signature of Authorized Signatory 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**

Tender No.: MANIREDA/SPP/DES/2016-17/9

Date:.....

To,

The Director

Manipur Renewable Energy Development Agency (MANIREDA),  
2<sup>nd</sup> Floor, South Block, Secured Office Complex, Near 2<sup>nd</sup> M.R. Gate, Imphal-Dimapur Road,  
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**

<b>Format for Guarantee Card to be Supplied with Solar Power Plant</b>
--

Tender No.: MANIREDA/SPP/DES/2016-17/9

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	
	(f) Rated at 27 <sup>o</sup> C	
	(g) Guarantee Valid Upto	
6.	Details of PCU/Inverter & 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 Solar Power Plant  
Received by the Consignee as Proof of Compliance by the Supplier**

Tender No.: MANIREDA/SPP/DES/2016-17/9

Date:.....

**CERTIFICATE**

Consignee .....

Name of Department .....

Address .....

**Certified that a 25kWp Solar Power Plant comprising of (..... Nos. x .....Wp) SPV Module complete with array structure (each), 120 Nos. x 2V 800AH Maintenance Free Tubular Gel Type VRLA Battery Bank, 25 kVA PCU/Inverter complete with ACDB, DCDB, cables, Solar Stills, Exhaust Fan, Fire extinguisher etc) has been supplied, installed and commissioned at Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur by M/s..... with funding from Ministry of New and Renewable Energy, Govt. of India and Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur, Imphal, Manipur in the state of Manipur as per terms of Work Order No.....dtd.....**

Signature of Consignee.....

Name:.....

Designation:.....

Seal .....



**14. Proforma – 8**

**Format for Details of the Module, Battery & Inverter etc Utilization Report of 25kWp Solar Power Plant (SPP) Installed Under Solar Photo Voltaic (SPV) Program**

Tender No.: MANIREDA/SPP/DES/2016-17/9

Date : .....

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

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

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

**(A) Solar Power Plant.**

Sl. No.	Name of Beneficiary with address of site	District	Module			Battery			Inverter/PCU with Charge controller			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 Five years of Maintenance & Performance Warranty Contract (MPWC) of 25 kWp SPV Power Plant at Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur.**

Tender No.: MANIREDA/SPP/DES/2016-17/9

Date : .....

To,

The Director

Manipur Renewable Energy Development Agency (MANIREDA),  
2<sup>nd</sup> Floor, South Block, Secured Office Complex, Near 2<sup>nd</sup> M.R. Gate, Imphal-Dimapur Road,  
Imphal-795001.

**Price Schedule**

Sl.	Item	Total Bid Quantity (Unit)	Price in Rupees		
			Unit Price (Rate)	Total Amount	Amount in Words
1	2	3	4	5 = 3 x 4	6
<b>1.00</b>	<b>System Cost on Supply of 25kWp Solar Plant (SPP)</b>				
1.01	SPV Modules (25 kWp)	1			
1.02	Module Mounting Structures (25 kWp)	1			
1.03	PCU/Inverter (25 kVA)	1			
1.04	Battery Bank (120 Nos. of 2V 800 AH batteries)	1			
1.05	Balance of Systems (BOS)	1			
	<b>System Cost</b>	1			
2.00	Add CST	1			
3.00	Transit Insurance	1			
4.00	Transportation	1			
4.01	Service Tax @3.625% on Transportation	1			
5.00	Installation & Commissioning charge	1			
5.01	Labour Cess @1% on Installation	1			
5.02	Service Tax@15% on Installation	1			
5.03	VAT @ 6% on installation	1			
6.00	MPWC (Maintenance & Performance Warranty Contract)	1			
6.01	Labour Cess @1% on MPWC	1			
6.02	Service Tax@15% on MPWC	1			
7.00	Total (A)	1			
7.01	Add 3% Contingency on Total (A) above	1			
8.00	Total (B) (7.00+7.01)	1			
8.01	Add Agency Charges @ 11.75% of Total (B)	1			
9.00	Grand Total (C) (8.00+8.01)	1			
	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/ PCU/inverter (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 SPV Power Plant like Inverter/PCU, Battery, Module etc from a MNRE authorised testing centres/NABL accredited(Test Certificate conforming to MNRE specification 2013-14 onwards)		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 off-grid solar power plants including I&C of a single 25 kWp SPV Power Plant 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 off-Grid Channel Partner/Programme Administrator with Credit Rating(from MNRE Accredited Rating Agency)		Both uploading & hard copy
9	Annexure-IX	The bidder has ISO 9001 certification		Both uploading & hard copy
10	Annexure-X	The bidder has ISO 14001 certification		Both uploading & hard copy
11	Annexure-XI	Demand Draft for cost of bid document/Photocopy of Demand Draft		Hard copy
12	Annexure-XII	Letter of acceptance to furnish the information in Proforma – 7, Proforma – 8, Proforma – 9,		hard copy
13	Annexure-XIII	Photographs of MD or Two Directors (in case of Ltd. Company.)		Hard copy
14	Annexure-XIV	Technical Particular data sheet of SPP of Bidder		Hard copy
15	Annexure-XV	Copy of audited Balance Sheet and Profit & Loss Account for last		Hard copy

		3 (three) years		
16	Annexure-XVI	Photographs of Registered Office & Factory attested by Gazetted Officer or Notary Public.		Hard copy
17	Annexure-XVII	A tentative overall supply schedule in the form of Bar Chart		Hard copy
18	Proforma – 1	Forwarding Letter		Both uploading & hard copy
19	Proforma – 2	Authority Letter for Attending Bid Opening Meeting and Signing Bid Document.		Both uploading & hard copy
20	Proforma – 3	Information about the Bidding Firm		Both uploading & hard copy
21	Proforma – 4	Details of Orders Received and Executed in Past Years		Both uploading & hard copy
22	Proforma – 5	No Deviation Certificate		Hard copy
23	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 Number. :	Contact Value :

To,

The Director  
 Manipur Renewable Energy Development Agency (MANIREDA),  
 2<sup>nd</sup> Floor, South Block, Secured Office Complex, Near 2<sup>nd</sup> M.R. Gate, Imphal-Dimapur Road,  
 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**

**MATERIALS INSPECTION CLEARANCE CERTIFICATE (MICC)**

1. Name of the Work: Design, manufacture, supply, installation and commissioning of 25kWp Solar Power Plant including 5 years MPWC at Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur.
2. Name of Worksite/Location: Directorate of Economics and Statistics, Lamphelpat, Imphal, 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/array Structure							
(c)	Junction Box							
2.(a)	PCU/Inverter							
(b)	Electronics							
3.(a)	Storage battery							
(b)	Battery rack							
4.(a)	Charge controlling unit							
(b)	ACDB,DCDB							
5.(a)	Cable & Wire							
(b)	Earthing system, Lightning arrester							
(c)	Exhaust Fan, Fire Extinguishers, Sand Buckets, Solar Still, Sign Board.							
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 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 godown of MANIREDA/warehouse of the Firm at Imphal treated as transit Godown 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 25kWp Solar Power Plant including 5 years MPWC at Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur.
- 2. Name of Worksite/Location:** Directorate of Economics and Statistics, Lamphelpat, Imphal, Manipur.
- 3. Name of the Firm/Contractor. :** .....
- 4. Work Order No.:** ..... dated .....
- 5. Date of Completion of Installation:**.....
- 6. Date of Commissioning of the Solar Power Plant:**.....

SL. No.	Item Description	Qty.	Make	Product Serial No.	Remarks if any
1	2	3	4	5	9
1.(a)	SPV Modules				
(b)	Module Mounting Structures				
(c)	Junction Box				
2.(a)	PCU/Inverter (25 kVA)				
(b)	Electronics				
3.(a)	Storage Batteries( 2V 800 AH)				
(b)	Battery Bank Rack				
4.(a)	Charge Controlling Unit				
(b)	ACDB/DCDB				
5.(a)	Cable & wire				
(b)	Earthing, Lightning arrester				
(c)	Exhaust Fan, Fire Extinguishers, Sand Buckets, Solar Still, Sign Board.				
6.(a)	Manual				
(b)	Others if any				

**9. Enclosed documents:** 3 copies(each) 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:

Signature of Scheme Officer, MANIREDA

Name:

Designation:

**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 .....