



## MEGHALAYA NEW AND RENEWABLE ENERGY DEVELOPMENT AGENCY

Near BSF camp Mawpat, Shillong 793019 Phone: 0364-2953755/ Fax No.0364-2537611

Email: [mnreda\\_dir@gmail.com](mailto:mnreda_dir@gmail.com) Website: [www.mnreda.gov.in](http://www.mnreda.gov.in)

No.MNREDA/HCM/2023-24/02

Dated: Shillong, the 10<sup>th</sup> January 2024

### TENDER NOTICE

Tenders are hereby invited from experience and reputed solar pv system integrators/ manufacturer for "Design, Supply, Testing, Installation & Commissioning of 10 kWp Off-Grid SPV Power Plants with Battery Backup for Server Room and Network Room at 11 (Eleven) Permanent Court Complexes i.e., High Court and the Court Complexes of Khliehtyrshi Jowai Baghmara, Mawkyrwat, Khliehriat, Mairang, Sohra, Dadenggre, Ampati, Amlarem, Resubelpara in the state of Meghalaya". The details of the tender may be downloaded from the [www.meghalayatenders.gov.in](http://www.meghalayatenders.gov.in) and [www.mnreda.gov.in](http://www.mnreda.gov.in).

Bidders are advised to regularly check the said website for any amendment(s)/ corrigendum/ clarification (s). The details of the particulars of the tender are as mentioned below:

### PARTICULARS OF TENDER


S.No.	Particulars	Details
1.	Tender Notice No.	MNREDA/HCM/2023-24/02 Dated 10 <sup>th</sup> January 2024
2	Name of the work	Design, Supply, Testing, Installation & Commissioning of 10 kWp Off-Grid SPV Power Plants with Battery Backup for Server Room and Network Room at 11 (Eleven) Permanent Court Complexes i.e., High Court and the Court Complexes of Khliehtyrshi Jowai Baghmara, Mawkyrwat, Khliehriat, Mairang, Sohra, Dadenggre, Ampati, Amlarem, Resubelpara in the state of Meghalaya
3	Quantity	10 kW x 11
3	Period of contract	Two (02) Months from the date of issuance of work order
4	Tender Fee	INR 15,000/- + 18% GST
4	Date of publication of NIT on website:	11 <sup>th</sup> January 2024 @ 1700 Hrs



5	Date & time of Pre-bid meeting	15 <sup>th</sup> January 2024 @ 1330 Hrs
6	Starting & time for receipt of bids in MNREDA HQ	19 <sup>th</sup> January 2024@ 1330 Hrs
7	Last date & time for receipt of bids in MNREDA HQ	19 <sup>th</sup> February 2024 @ 1300 Hrs
8	Submission of original copies of Bid fee & EMD (Offline)	19 <sup>th</sup> February 2024@ 1300 Hrs
9	Technical Bid Opening Date	19 <sup>th</sup> February 2024@ 1400 Hrs
10	Name & address of office inviting tender	Dr Joram Beda, IAS Director, Meghalaya New and Renewable Energy Development Agency, Near BSF Camp, Nongmensong, Shillong, Meghalaya - 793019 E-mail: <a href="mailto:mnreda.dir@gmail.com">mnreda.dir@gmail.com</a> Website: <a href="http://www.mnreda.gov.in">www.mnreda.gov.in</a>

Tender Fee and Earnest Money Deposit (EMD) shall be deposited in original to the office of MNREDA HQ. The selected bidder shall have to deposit 3% of the contract value as bid security deposited in the form of DD/ Bank Guarantee from any nationalised bank in favour of "Director, MNREDA" payable at "Shillong" along with a printed copy of uploaded Technical Bid.

Incomplete Bid Documents will be rejected without any notice. The Director, MNREDA reserves the right to reject any or all bids without assigning any reason thereof.


  
(Director, MNREDA)

Memo No.MNREDA/HCM/2023-24/02-A

Dated: Shillong, the 10<sup>th</sup> January 2024

Copy to:

1. The Registrar General, High Court of Meghalaya (Shillong) for your information.
2. Sh Osterwell Swer, Director/ Scientist-E, NIC, Shillong, with request to kindly upload the same over the state e-procurement portal ([www.meghalayatenders.gov.in](http://www.meghalayatenders.gov.in))
3. Notice Board/ Relevant File.

  
(Director, MNREDA)

**Tender Document  
on  
Design, Supply, Installation, Testing,  
Commissioning, and 5 years CMC for capacity of  
10kWp Off-Grid SPV Power Plant at 11 (Eleven)  
Permanent Court Complexes i.e., High Court and  
the Court Complexes of Khliehtyrshi Jowai  
Baghmara, Mawkyrwat, Khliehriat, Mairang,  
Sohra, Dadenggre, Ampati, Amlarem,  
Resubelpara. in the State of Meghalaya**

**Tender Notice No. MNREDA/HCM/2023-24/02**

**Dated: 10-01-2024**

**Closing Date: 19-02-2024**



**Meghalaya New and Renewable Energy Development  
Agency (MNREDA), Near BSF Camp, PO-Nongmensong,  
District – East Khasi Hills, Meghalaya – 793019**

E-mail: [mnreda.dir@gmail.com](mailto:mnreda.dir@gmail.com)

Website: [www.mnreda.gov.in](http://www.mnreda.gov.in)

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### **DISCLAIMER**

1. Though adequate care has been taken while preparing the Tender Document, the Bidders shall satisfy themselves that the Document is complete in all respect. Intimation regarding any discrepancy shall be given to this office immediately. If no intimation is received from any Bidder within Ten (10) days from the date of notification of Tender Notice / issuance of e-Tender documents, it shall be considered that the document is complete in all respect and has been received / acknowledged by the Bidder(s).
2. Meghalaya New and Renewable Energy Development Agency (MNREDA) reserves the right to modify, amend or supplement this document.
3. While this tender Document has been prepared in good faith, neither MNREDA nor their employees or advisors make any representation or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statements or omissions herein, or the accuracy, completeness or reliability of information, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this document, even if any loss or damage is caused by any act or omission on their part.

**Place: Shillong**

**Date: 10-01-2024**

### **INTERPRETATIONS**

1. Words comprising the singular shall include the plural & vice versa.
2. An applicable law shall be construed as reference to such applicable law including its amendments or re-enactments from time to time.
3. A time of day shall save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time.
4. Different parts of this contract are to be taken as mutually explanatory and supplementary to each other and if there is any differentiation between or among the parts of this contract, they shall be interpreted in a harmonious manner so as to give effect to each part.
5. The table of contents and any headings or subheadings in the contract has been inserted for case of reference only & shall not affect the interpretation of this agreement.

**PART- I**  
**GENERAL DETAILS**

**Date.....**

**FROM** (Full name and address of the tenderer)

M/s

To,

**Dr Joram Beda, IAS**

Meghalaya New and Renewable Energy Development Agency  
'Near BSF Camp, Nongmensong, Shillong, Meghalaya – 793019

**E-mail:** [mnreda.dir@gmail.com](mailto:mnreda.dir@gmail.com)

**Website:** [www.mnreda.gov.in](http://www.mnreda.gov.in)

**Subj:** Offer in response to Tender Notice No.....

Sir,

We hereby submit our offer in full compliance with terms & conditions of the attached tender. The tender is being submitted in sealed envelopes marked (Technical Bid).

(Signature of Tenderer)

Seal

## PARTICULARS OF TENDER

1	Name of the work	Design, Supply, Testing, Installation & Commissioning of 10 kWp Off-Grid SPV Power Plants with Battery Backup for Server Room and Network Room at 11 (Eleven) Permanent Court Complexes i.e., High Court and the Court Complexes of Khliehtyrshi Jowai Baghmara, Mawkyrwat, Khliehriat, Mairang, Sohra, Dadenggre, Ampati, Amlarem, Resubelpara in the state of Meghalaya
2	Estimated Cost	Confidential
3	Period of contract	60 Days
4	Date of publication of NIT on website:	11 <sup>th</sup> January 2024 @ 1630 Hrs
5	Date & time of Pre-bid meeting through email	15 <sup>th</sup> January 2024 @ 1330 Hrs
6	Start date & time for receipt of bids	19 <sup>th</sup> January 2024 1330 Hrs
7	Last date & time for receipt of bids	19 <sup>th</sup> February 2024 @ 1300 Hrs
8	Submission of original copies of Bid fee & EMD (Offline)	19 <sup>th</sup> February 2024 @ 1300 Hrs
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11	Helpline no. of e-procurement	Customer Support: +91-124-4001002, 4001005, (from for any technical queries 24*7 Service available), Email: support-eproc@nic.in

(\*Exemption for payment of EMD amount will be given to Micro, Small & Medium Enterprises (MSMEs) registered firm /registered under State of Meghalaya SSI unit / National Small Industries Corporation Ltd. (NSIC). However, relevant valid documents / Certificates need to be submitted without which bidders are not entitled for any kind of exemption.)

### Note:

1. The tender document can be downloaded from <https://meghalayatenders.gov.in> or [www.mnreda.gov.in](http://www.mnreda.gov.in)
2. Tender document submitted with original tender fee and EMD/ Bid Security only will be considered valid. All relevant required documents along with evidence are to be inserted in “Techno-Commercial bid” only and the hard copy in sealed envelope must reach MNREDA office on or before the closing date & time as mentioned above.
3. The price bid should be submitted in separate sealed envelope only.
4. It should be noted that Offline Technical document envelope shall not contain any information/document relating to Price Bid. Financial bid will be opened for those bidders who would duly qualify in the technical bid.

## GENERAL PARTICULARS OF BIDDERS

Sl No	Particulars	Details
1.	Name of Tenderer/Firm	
2.	Postal Address	
3.	E-mail address for communication	
4.	Telephone, Fax No.	
5.	Name, designation & contact number of the representative of the tenderer to whom all references shall be made.	
6.	Nature of the firm (Individual/ Partnership /Public Ltd. Co. /Public Sector etc.) Attach attested copy of Registration & Partnership deed/Memorandum of Association	
7.	Year of Incorporation	
8.	Certificate of Incorporation of Bidder (Applicable for Private /Public Limited	
9.	Amount and particulars of the earnest money deposited.	
10.	Annual Turnover and IT return for last three years (Attach proof)	
11.	Name and address of the Indian/foreign collaboration if any.	
12.	PAN No., GST No., MNRE test certificates etc. (evidence are to be attached).	
13.	Has the tenderer/firm ever been debarred by any institution for undertaking any work?	
14.	Any other information attached by the tenderer (Details and Annexure / page no. where its enclosed)	
15.	Does tenderer have any relative working in MNREDA? If yes state, the name and designation.	

Tenderers are requested to give their full particulars and legal and financial status.

(SEAL)

Signature of Tenderer or  
their Authorized Representative:  
Dated:

## DECLARATION BY THE BIDDER

I/We.....

(Hereinafter referred to as Tenderer/Bidder) being desirous of tendering for the work, under this tender and having fully understood the nature of the work and having carefully noted all the terms and conditions, specifications etc. as mentioned in the tender document do hereby declare that-

1. The tenderer is fully aware of all the requirements of the tender document and agrees with all provisions of the tender document and accepts all risks, responsibilities and obligations directly or indirectly connected with the performance of the tender.
2. The tenderer is fully aware of all the relevant information for proper execution of the proposed work, with respect to the proposed place of works/ site, its local environment, approach road and connectivity etc. and is well acquainted with actual and other prevailing working conditions, availability of required materials and labour etc. at site.
3. The tenderer is capable of executing and completing the work as required in the tender and is financially solvent and sound to execute the tendered work. The tenderer is sufficiently experienced and competent to perform the contract to the satisfaction of MNREDA. The tenderer gives the assurance to execute the tendered work as per specifications, terms and conditions of the tender on award of work.
4. The tenderer has no collusion with other tenderers, any employee of MNREDA or with any other person or firm in the preparation of the tender.
5. The tenderer has not been influenced by any statement or promises by MNREDA or any of its employees but only by the tender document.
6. The tenderer is familiar with all general and special laws, acts, ordinances, rules and regulations of the Municipal, District, State and Central Government that may affect the work, its performance or personnel employed therein.
7. The tenderer has never been debarred from similar type of work by any Government undertaking /Department. **(An undertaking in this regard shall be submitted)**
8. The tenderer accepts that the earnest money / security deposit may be absolutely forfeited by MNREDA if the selected bidder fails to undertake the work within stipulated time.
9. This offer shall remain valid for acceptance for 90 days from the proposed date of opening of the Technical Bid.
10. All information and the statements submitted with the tender are true and correct to the best of my knowledge and belief.

(SEAL)

Signature of Tenderer or  
Their Authorized Representative:  
Dated

## PART 2

### INSTRUCTIONS TO BIDDERS

#### 1. INTRODUCTION:

Design, Supply, Testing, Installation & Commissioning of 10 kWp Off-Grid SPV Power Plants with Battery Backup for Server Room and Network Room at 11 (Eleven) Permanent Court Complexes i.e., High Court and the Court Complexes of Khliehtyrshi Jowai Baghmara, Mawkyrwat, Khliehriat, Mairang, Sohra, Dadenggre, Ampati, Amlarem, Resubelpara in the state of Meghalaya

#### ELIGIBLE TENDERERS/BIDDERS:

The tenderer shall provide sufficient documentary evidence to satisfy the following conditions that the tenderer:

- Is an indigenous system manufacturer/supplier/integrator of the Solar PV Systems or experienced EPC contractor in the field of Solar PV Power Plant (evidence to be submitted).
- The tenderer fulfils the terms and conditions of eligibility for supply of indigenous Solar PV Systems in accordance with the directions of Ministry of New and Renewable Energy, Government of India.
- Has adequate financial stability and status to meet the financial obligations pursuant to the scope of work. This must be the individual Company's turnover and not that of any group of Companies. (The bidder must have average annual turnover of **minimum Rs. 50.00 Lakhs** during last three years.)
- The bidder must have done installation, testing, commissioning, and maintenance in the field of Solar PV systems of **minimum 100 kW** cumulative capacity including at least one **10 kWp off-grid power plant at a single location** in the last five years. The details must be submitted in the Proforma given in Technical- Bid section of tender document.
- Has Valid Test Certificate of the Solar PV module, Battery, Inverter and other equipment's as specified and required in the Technical- Bid of this tender document.
- Bidder should not be blacklisted by Central/State Government organization, PSU, etc.
- Fulfils all requirements as per provisions under MNRE, GoI.
- The Bidder must have a local office in Meghalaya / should set up a local office before signing of LoA. Proof of the office in Meghalaya must be submitted at the time of signing of LoA.

The above stated requirements are compulsory, and to be fulfilled by the tenderer. MNREDA may also ask for any additional information as may be deemed necessary in public interest.

#### 2. TENDER DOCUMENT

##### CONTENT OF TENDER DOCUMENT

The tender procedure and contract terms are prescribed in the tender document. In addition to the invitation of tender, the tender document includes various other documents as given in the table of particulars of tender.

The tenderer is expected to examine all instructions, terms and conditions, specifications, forms, and formats etc. as mentioned/ enclosed in the tender document. Failure to furnish all information required in the tender document or submission of a

tender not substantially responsive to the tender document in every respect will be at the tenderer's risk and is likely to result in out-right rejection of the tender.

### **INFORMATION REQUIRED WITH THE PROPOSAL**

The tender must clearly indicate the name of the manufacturer, the types and model & make of each principal item of equipment proposed to be supplied. The tender may also contain details of specifications and other comprehensive descriptive materials in support of technical specifications.

The above information may be provided by the tenderer in the form of separate sheets, specifications, catalogues etc.

### **CLARIFICATION OF TENDER DOCUMENT**

Any prospective tenderer requiring any clarification on the tender document regarding various provisions / requirements/ preparation/ submission of the tender, may contact MNREDA in writing by letter or fax/ email within one week (7 days) from the date of publication/up-loading of tender at Website. Queries received later shall not be entertained.

Verbal clarifications and information shall not be entertained in any way.

All the notices related to this tender which are required to be publicized shall be uploaded only on <https://meghalayatenders.gov.in> or <https://mnreda.gov.in>

## **3. PREPARATION OF TENDER**

### **LANGUAGE OF TENDER AND MEASURE**

The tender prepared by the tenderer along with all the related documents shall be in English. Unit measurements shall be metric in accordance with International System. All correspondence between the tenderer and MNREDA shall also be in English.

### **EARNEST MONEY AND SECURITY DEPOSIT / CONTRACT PERFORMANCE GUARANTEE**

The tenderer shall furnish earnest money as mentioned in the "Particulars of Tender".

The earnest money of the successful tenderer shall be released after acceptance of work order and deposition of security money. The selected bidder shall have to deposit security money amounting to 3% of the contract value along with acceptance letter in the form of DD/ Bank Guarantee (format at Annexure I) from any nationalized bank in favour of "**Director, Meghalaya New and Renewable Energy Development Agency**" payable at Shillong within 7 days from the date of issue of LoA/Work Order.

The bank guarantee should be valid for a period of 1 years from the date of signing of the contract agreement with an additional claim period of 3 months. The responsibility of the extension of the same lies with the bidder. No written communication will be made to the bidder in this regard. The Security Deposit will be released after 1 years or date of successful completion of the work, whichever will be earlier from the date of installation of the system.

The Security Deposit amount will be forfeited in case of non-execution of the work against the work order placed.

The earnest money of all unsuccessful bidders shall be released soon after selection of successful bidder against submission of their written intimation regarding release of the EMD.

### **PERIOD OF VALIDITY OF TENDER**

Validity of the offer should be 3 months from the proposed date of opening of the technical bid.

Tenders without this validity will be rejected.

In exceptional circumstances, MNREDA may solicit the consent of the tenderers to an extension of the period of validity of offer. The request and the response there of shall be made in writing.

#### **FORMATS AND SIGNING OF TENDER**

The tender must contain the name and places of business of the firm/person/persons participating in the tender and must be signed and sealed by the tenderer with his usual signature. The name and designation of all persons signing the tender document should be written below the signatures.

The original copy of the tender should be signed in every page.

The tender shall contain no interlink actions, erasers or overwriting except as necessary to correct the errors made by the tenderer in the preparation of tender. The person or persons signing the tender shall also sign at all such corrections.

#### **PRICE AND CURRENCIES**

The tenderers shall have to submit their rates in Indian Rupees including all latest applicable taxes & duties of Govt. of Meghalaya as well as Govt. of India.

### **4. SUBMISSION OF TENDER**

#### **SEALING AND MARKING OF TENDER**

The tender must be completed in all technical and commercial respect and should contain requisite certificates, informative literature etc. as required in the tender document.

In Technical bid (sealed envelope) (Part-I), following documents are to be inserted: -

- i) Copy of GST No. & PAN
- ii) Equipment Test certificates and commissioning protocols, Installation and maintenance manual, Factory testing quality protocol from competent authority.
- iii) Brochures, literature, and other documents regarding technical specifications.

The complete tender document in original (excluding financial bid) downloaded from the website should be submitted by the tenderer and also in the sealed envelope after furnishing all the required information on relevant pages. Each page of the tender document should be signed & stamped. Tenders with any type of change or modification in any of the terms/ conditions of this document shall be rejected. If necessary, additional papers may be attached by the tenderer to furnish/ submit the required information.

Financial Bid to be submitted in only in the prescribed format.

Any term/condition proposed by the tenderer in his technical bid which is not in accordance with the terms and conditions of the tender document or any financial conditions, payment terms, rebates etc. mentioned in financial bid shall be considered as a conditional tender and will make the tender invalid.

#### **DEADLINE FOR SUBMISSION OF TENDER**

Tender must be received by MNREDA before the date & time of submission as specified in tender document.

Any tender received after the specified date & time of submission will be rejected and returned unopened to the tenderer.

### **5. TENDER OPENING AND EVALUATION**

#### **OPENING OF TENDER**

The procedure of opening of the tender shall be as under:

Sealed envelope bearing **TENDER NO. MNREDA/HCM/2023-24/02** dated: 27-12- 2023 and super scribed "Technical Bid" shall be opened by MNREDA's representatives at the time and date mentioned in the "Particulars of Tender", in the presence of tenderers who choose to be present. The technical suitability of offers will be examined by MNREDA in detail. If required, clarifications regarding the suitability of the offers will be obtained.

"Financial bid" shall be opened to those tenderers who would duly qualify in technical bid.

Financial bids of only the techno - commercially qualified bidders will be opened for evaluation. However, Director MNREDA shall not be bound to accept the lowest rate.

#### **CLARIFICATIONS REGARDING THE SUBMITTED TENDERS**

During the process of evaluation of the tender, MNREDA may at its discretion ask the tenderer for a clarification of their tender. The request for clarification and the response shall be in writing.

Any query regarding any clarification required by MNREDA on the information submitted by the tenderer, must be replied by the tenderer within the following time schedule.

- Email query should be replied by email within 3 days.
- Query by letter must be replied by letter within 7 days of receipt of the letter.

#### **6. AWARD OF CONTRACT**

##### **EVALUATION CRITERION**

The whole work shall be on Turnkey basis. The tender shall be finalized on the basis of total cost of Solar Power Plant system including installation & commissioning and CMC as offered by the tenderer in his Financial Bid.

##### **NOTIFICATION OF AWARD**

Prior to the expiry of validity period of offer, MNREDA will notify the successful tenderer by registered Letter/Email/ Fax that his tender has been accepted.

##### **AWARD OF WORK CONTRACT**

Complete/Partial work shall ordinarily be awarded to the lowest tenderer only. The denial of the lowest bidder to undertake the whole work shall be treated as breach of contract and MNREDA may forfeit EMD amount submitted by him.

##### **RIGHT TO VARY QUANTITIES**

The authority reserves the right of awarding the work in a phase manner. MNREDA may increase or decrease the quantity mentioned in the tender notice at the time of award of contract.

##### **RIGHT TO ACCEPT/REJECT ANY OR ALL TENDERS.**

MNREDA reserves all the right to reject any or all the tenders, accept any tender in total or in part.

##### **COMPLETION PERIOD**

The completion period of the entire work shall be 60 days/ 2 Months after issue of work order. The work shall have to be completed within time and shall be binding on the contractor.

#### **PART-3**

## **GENERAL CONDITIONS OF CONTRACT**

### **1. DEFINITIONS**

In the deed of contract unless the context otherwise requires: -

“MNREDA” shall mean The Director or his representative of “Meghalaya New and Renewable Energy Development Agency, with its Head office at Nongmensong, Shillong – 793019 (Meghalaya). The “Contractor” shall mean the Firm/ Person (whose tender has been accepted by MNREDA) and shall include his legal representatives, successor in interest and assignees.

The contract shall be for Design, Supply, Testing, Installation & Commissioning of 10 kWp Off-Grid SPV Power Plants with Battery Backup for Server Room and Network Room at 11 (Eleven) Permanent Court Complexes i.e., High Court and the Court Complexes of Khliehtyrshi Jowai Baghmara, Mawkyrwat, Khliehriat, Mairang, Sohra, Dadenggre, Ampati, Amlarem, Resubelpara in the state of Meghalaya shall be valid till the completion of all related works. However, the validity of rates may further be extended to a specified period of time and/or to other locations in Meghalaya on the mutual consent of both the parties.

### **2. INSPECTION / CHECKING / TESTING**

All materials / equipments manufactured by the bidder/consortium of bidders against the Letter of Award shall be subject to inspection, check and/or test by the MNREDA or his authorized representative at all stages and place, before, during and after the manufacture. All these tests shall be carried out in the as per technical specifications and bidder shall submit the relevant test reports. If upon delivery the material / equipment does not meet the specification, the materials / equipment shall be rejected and returned to the bidder for repairs / modification etc. or for replacement. In such cases all expenses including the to-and-fro freight, repacking charges, any other costs etc. shall be to the account of the bidder.

Pre-Dispatch Inspection (PDI) of each component, test report of equipment's, warranty certificates and calibration certificates should be provided by the bidder.

Successful bidder has to submit the PDI request as per work order given by MNREDA.

### **3. COMPLETION PERIOD**

The completion period of the entire work shall be 60 days after issue of final work order. The work shall have to be completed within time and shall be binding on the contractor. In case of any urgency, the contractor may be asked to complete the work even earlier and contractor will be bound to fulfil the requirements.

In case the contractor fails to execute the said work or related obligations within stipulated time, MNREDA will be at liberty to get the work executed from the open market at the risk and cost of the contractor, without calling any tender and without any notice to the contractor. Any additional cost incurred by MNREDA during such execution of the work shall be recovered from the contractor.

If the cost of executing the work as aforesaid shall exceed the balance payments due to the contractor and the contractor fails to make good the “additional cost”, MNREDA may recover it from the contractor's pending claims against any work in MNREDA or in any other lawful manner. All risks & responsibilities related to the execution of the said work and fulfilment of related obligations directly or indirectly connected with the performance of the contract shall be the sole responsibility of contractor.

The calculation of aforesaid “**additional cost**” will be finalized by the MNREDA at its sole discretion. The contractor shall have no right to challenge the mode or amount relating to calculation at any forum. For completion of the work through any other agency, in case some changes are required in terms and conditions of the contract; the contractor shall not have any right to challenge the decision of MNREDA.

**4. LIQUIDATED DAMAGES**

If the contractor fails to perform the work within the time periods specified in the work orders or within the extended time period if any, MNREDA shall without prejudice to its other remedies under the contract, deduct from the contract price as liquidated damage, a sum equivalent to 1% of the price of the un-performed work/ services for each week of delay until actual completion of work, up to a maximum deduction of 10%. Once the maximum is reached, MNREDA may consider termination of the contract.

**5. FORCE MAJEURE**

Notwithstanding the provisions of clauses contained in this deed; the contractor shall not be liable for forfeiture of its performance security, liquidated damages, termination for default, if he is unable to fulfil his obligation under this deed due to force majeure circumstances.

For purpose of this clause, "Force majeure" means an event beyond the control of the contractor and not involving the contractor's fault or negligence and not foreseeable, either in its sovereign or contractual capacity. Such events may include but are not restricted to Acts of God, wars or revolutions, fires, floods, epidemics, quarantine restrictions and fright embargoes etc. Whether a “Force majeure” situation exists or not, shall be decided by the Director, MNREDA & his decision shall be final and binding on the contractor and all other concerned.

If a force majeure situation arises, the contractor shall notify MNREDA in writing promptly (at the most within 10 days from the date such situation arises). After examining the cases MNREDA shall decide and grant suitable addition time for the completion of the work.

For other justified cases also, not covered under force majeure conditions, MNREDA may consider the request of contractor and additional time for completion of work may be granted.

**6. QUALITY, WARRANTEE/ GUARANTEE AND ANNUAL MAINTENANCE**

The contractor shall warrant the Solar PV Power Plant as per applicable standards of quality. Anything to be furnished shall be new, free from all defects and faults in material and workmanship. The manufacture shall be in accordance with the specified technical parameters and should be of the highest grade and consistent with established and generally accepted standards for material. It shall be in full conformity with the drawing or samples if any and shall operate properly if operable.

After installation of the Solar PV Power Plant at site, the contractor shall ensure satisfactory performance of the equipments for a period of time as specified in the scope of work.

The contractor shall rectify defects developed in the Systems within Warrantee/ CMC period promptly. In case the contractor does not rectify the defects within 3 days of the receipt of complaint, MNREDA may restore the System in working condition on contractor's expenses (from CMC charge).

**7 STANDARDS**

The goods supplied and works executed under this contract shall confirm to the standards mentioned in the technical specification and where no applicable standard is mentioned, the latest version of Indian Standard Institution or Bureau of Indian Specification shall be applicable.

**8 SPARE PARTS**

The contractor shall make arrangement to maintain a sufficient stock of essential materials, spares, tools & tackles, logistics and accessories as well as keep men, which are necessary or usual for satisfactory and trouble-free operation and maintenance of the above equipment.

**9 PACKING FORWARDING**

Contractors, wherever applicable shall properly pack and crate all materials in such a manner as to protect them from deterioration and damage during transportation. The contractor shall be responsible for all damage due to improper packing. The contractor shall inform the Director, MNREDA and Project site officer regarding the probable date of each shipment of materials from his works.

**10 TRANSPORTATIONS**

The contractor is required to deliver the goods at location as defined in the scope of work.

**11. DEMURRAGE WHARFAGE, ETC**

All demurrage, wharf age and other expenses incurred due to delayed clearance of the material, or any other reason shall be on the account of the contractor.

**12. INSURANCE**

**The power plant** installed under the contract shall be fully insured against loss or theft for the period of 5 years.

**13. LIABILITY FOR ACCIDENTS AND DAMAGES**

**During the Warrantee** period, the contractor shall assume all responsibilities for direct damages covering all type of accident, injury or property damage caused by manufacturing defects or faulty installation on the systems.

**14. DUTIES AND TAXES**

The rates/ prices mentioned in the price-schedule include all latest applicable taxes, duties of Govt. of Meghalaya as well as Govt. of India and applicable taxes will be deducted at source against which necessary tax deductions certificates will be issued as and when required. No additional payments shall be made by MNREDA on this account. If any new tax/duty is levied during the contract period, the same will be borne by the firm exclusively.

**15. RIGHT TO VARY QUANTITIES**

MNREDA reserves all the rights to increase or decrease the quantity of goods mentioned in the contract, at the time of placement of orders without any change in price or other terms and conditions.

**16. LOCAL CONDITIONS**

It will be imperative on contractor to have full information of all local conditions and factors which may have any effect on the execution of the works. The contractor shall be deemed to have collected all the relevant information regarding the proposed place of works/ site, its local environment, approach road and connectivity etc. and be well

acquainted with actual working and other prevailing conditions.

The contractor is advised to pre-visit the site before quoting for as well as starting the work. MNREDA shall not entertain any request of contractor for clarifications related to such local conditions and shall bear no responsibility in this regard.

**17. TOOLS & TACKLES**

The contractor shall provide all necessary tools & tackles for proper execution of work and operation/ maintenance of systems after installation. MNREDA shall in no way, responsible for supply of any tools & tackles.

**18. TERMINATION FOR DEFAULT**

MNREDA without prejudice to any other remedy for violate of contract, by written notice of default sent to the contractor, may terminate the contract in whole or in part:

If the contractor fails to deliver the Services within the allocated time period(s).

If the contractor fails to perform any other obligation(s) under the contract. However, in the event of termination of the contract in part, the contractor shall continue performance of the contract to the extent not terminated.

**19. TERMINATION FOR INSOLVENCY**

MNREDA may at any time terminate the contract by giving written notice to the contractor without compensation to the contractor if he becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to MNREDA.

**20. TERMINATION FOR CONVENIENCE**

MNREDA may vide a written notice sent to the supplier; terminate the contract, in whole or in part at any time for its convenience. The notice of termination shall specify that termination is for the purchaser's convenience in the interest of MNREDA.

**21. SCOPE OF WORK**

**The Scope of Work of a bidder shall include the following:**

Design, Supply, Testing, Installation & Commissioning of 10 kWp Off-Grid SPV Power Plants with Battery Backup for Server Room and Network Room at 11 (Eleven) Permanent Court Complexes i.e., High Court and the Court Complexes of Khliehtyrshi Jowai Baghmara, Mawkyrwat, Khliehriat, Mairang, Sohra, Dadenggre, Ampati, Amlarem, Resubelpara in the state of Meghalaya

**OPERATION & MAINTENANCE**

**The contractor shall be entrusted to carry out the total O&M activities of the Solar Photovoltaic Power Plant(s):**

- a) Deputation of qualified and experienced engineers Supervisors & Technicians.
- b) Supply of all spares, consumables and fixing / application as required.
- c) Supply & use of spares, consumables, tools, logistics and skilled manpower throughout the maintenance period as per recommendations of the equipment manufacturers and requirement of the Plant & other associated infrastructure developed under the scope of EPC works.
- d) Submission of half-yearly & Yearly CMC reports to MNREDA.
- e) Remote Monitoring System

**The Connectivity of the RMS is under the scope of bidder for 5 Years till the completion**

of CMC period. The following minimum essential parameters should be available in the Remote Monitoring portal and app:

- A. Daily energy (in kWh) production data recorded.
- B. Inverter DC Input
- C. Inverter AC Output
- D. Battery voltage
- E. System failure alert

**The CMC shall include (but not limited to) the following mentioned activities:**

**a) Solar Modules:**

- i. Visual inspection of modules and mounting clamps
- ii. Washing and cleaning of modules and structures
- iii. Observe snail trail, browning on cells, moisture ingress
- iv. Observe any hot spot development
- v. Measure string level IV- curve with IV tracer and record for analysis
- vi. Check modules for any broken glass/ discoloration, misaligned modules

**b) Module mounting structure:**

- i. Visual inspection of mounting structures, screws and fasteners
- ii. Tightening of screws and fasteners periodically.

**c) DC/AC Combiner Box:**

- i. Checking and tightening of solar inter connections
- ii. Visual inspection of combiner boxes and wiring
- iii. Tightening of any interconnections as needed

**d) Inverters:**

- i. Observe inverter temperature at operating condition
- ii. Cleaning of air filters and ventilation passages on regular basis
- iii. Check LCD displays of inverters.
- iv. Check integrity of wiring
- v. Visual inspection of mechanical fixings of inverters

**e) Cables:**

- 1. Visual inspection of DC and AC cables
- 2. Check if any cable insulation is damaged could possibly be damaged
- 3. Check if any cable is laying on the floor
- 4. Check if there is any possibility of eater logging in cable routes
- 5. Check if any cable is hanging
- 6. Check earthing conductor continuity up to earth pit.
- 7. Replacement of cables if damaged.

## **22. COMPLETION OF WORK**

On completion of the work, Contractor has to complete the following tasks:

- The contractor shall intimate MNREDA through letter or email regarding completion of the work on or before the last date and request for joint inspection (format at Annexure II) of the completed work.
- In case of delay beyond scheduled commissioning period, the bidder shall be liable for Liquidated Damages (LD) as per Clause 3 (Part 3).
- The contractor shall submit 2 sets of "Project Completion Report" to MNREDA which will include photographs in hard and soft copy both, drawings and as executed reports of various systems containing details of

installation from the point of view of future maintenance of the installed systems. This report must also contain all Technical Details, Detailed Circuit Diagram of the Electronic/ Electrical components of all the system. The report shall include satisfactory performance report from appropriate authority for each site along with photograph of representative of the authority and the party.

- The contractor has to provide training to at least 2 (two) concerned persons of Court Officials/Site.

## **23. OTHER CONDITIONS**

The contractor shall not transfer, assign or sublet the work under this contract or any substantial part thereof to any other party without the prior consent of MNREDA in writing.

- MNREDA may at any time either stop the work all together or reduce or cut it down by sending notice in writing to the contractor. If the work is stopped all together, the contractor will only be paid for work done and expenses distinctly incurred by him as on preparation or the execution of the work up to the date on which such notice is received by him. The decision of MNREDA regarding assessment of such expenses shall be final and binding on the contractor. If the work is cut down, the contractor will not be paid any compensation what to ever for the loss of profit which he might have made if he had been allowed to complete all the work awarded to him.
- Work carried out without MNREDA's approval shall not be accepted and MNREDA shall have rights to get it removed and to recover the cost so incurred from the contractor.
- The contractor shall not display the photographs of the work and not take advantage through publicity of the work without written permission of MNREDA.
- The contractor shall not make any other use of any of the documents or information of this contract, except for the purposes of performing the contract.
- MNREDA will not be bound by any Power of Attorney granted/ issued by the contractor or by any change in the composition of the firm made during or subsequent to the execution of the contract. However, recognition to such Power of Attorney and change (if any) may be given by MNREDA after obtaining proper legal advice, the cost of which will be chargeable to the contractor concerned.

## **24. STATUTORY ACTS**

All legal formalities/clearances are to be obtained by the contractor regarding the execution of the said work. In respect of all labour directly or indirectly employed on the work by the contractor, the contractor shall comply with all the provisions of hiring the contract labour and rules of State/ Central Government or any other authority framed from time to time. The rules and other statutory obligations in this regard will be deemed to be the part of this contract.

The contractor shall comply with all the Acts & rules and regulations, laws and bylaws framed by State/ Central Government/ Organization in whose premises the work has to be done. MNREDA shall have no liabilities in this regard.

## **25. APPLICABLE LAW**

The contract shall only be interpreted under Indian laws. The station of MNREDA Headquarter Shillong shall have exclusive jurisdiction in all matters arising under this contract.

**26. RESOLUTION OF DISPUTES / ARBITRATION**

Any dispute arises regarding this tender will be settled under area of jurisdiction of head office of MNREDA.

**27. NOTICES**

Any notice to be given by one party to the other, pursuant to the contract shall be sent in writing. A notice shall be effective when delivered or from the effective date mentioned in the notice, whichever is later.

Notices, statements and other communications sent by MNREDA to the contractor at his specified addresses through registered post/ email/ fax shall be deemed to be delivered to the contractor.

**28. APPLICATION**

These general conditions shall apply to the extent that provisions in other parts of the contract do not supersede them.

**29. PAYMENT TERMS**

- 30% of the contract value as in advance alongwith the work order, to expedite the material procurement and dispatch to the different site locations.
- 40% of the contract value against the supply of material on site and successful verification/ inspection by MNREDA HQ Official.
- 20% of the contract value against the successful installation, commissioning, Testing, Joint Inspection, and acceptance by MNREDA of Solar PV Power Plant Systems at site.
- 10% of the contract value shall be paid against the CMC in 5 equal yearly instalments against satisfactory performance and maintenance of the systems quarterly along with a report (**format at Annexure IV**).
- Payments will be made subject to receipt of funds from the High Court, Meghalaya.

## PART-4

### GENERAL TECHNICAL SPECIFICATIONS

#### 1. PV MODULES:

Size of PV Plant required /Minimum size of Solar PV Array

Plant Capacity at location	Minimum Size of the PV array at location
10 kW Capacity	PV array should not be less than 10000 Wp

- The PV modules must conform to the latest edition of any of the following / equivalent BIS Standards for PV module design qualification and type approval:
- Crystalline Silicon Terrestrial PV Modules IEC 61215 / IS14286
- In addition, the modules must conform to IEC 61730 Part 1- requirements for construction & Part 2 - requirements for testing, for safety qualification.
- Variation in overall SPV array wattage from the specified wattages shall be within zero percent to +10 percent.
- Module to Module wattage mismatch in the SPV array mismatch shall be within  $\pm 3$  percent.
- The PV Modules must be warranted for output wattage, which should not be less than 90% of the rated wattage at the end of 12 years and 80% of the rated wattage at the end of 25 years.
- The RFID must be inside of module lamination. The module laminate but must be able to withstand harsh environmental conditions.
- Only MNRE list of manufacturers and models of Solar PV Modules enlisted under Approved list of Models and Manufacturers (ALMM) order.

#### 2. BATTERY BANK:

- Batteries should be Tubular Gel VRLA type of 2/12 Volts cell.
- 80 % of the rated capacity of the battery should be between fully charged & load cut off conditions.
- The battery will have a minimum rating as per following:

S.No	Plant capacity	Minimum Size of the Battery Bank @C/10
1	10 kW capacity	Battery Capacity = 7.2 Vah*10000 W

Batteries must conform to the latest edition of IEC/ equivalent BIS Standards as specified below:

Description	Standard Number
General Requirements & Methods of Test	IEC 61427
Valve Regulated Tubular Lead Acid (VRLA)	IS 15549

#### 3. INVERTERS (POWER CONDITIONING UNITS):

### Details of Hybrid Inverter:

IEC Rating	IEC 62116, IEC 61727, IEC 61683, IEC 60068-2-(1,2,14,30), EN 50530, IEC 60529, IEC 62109 (1,2), IEC
Inverter Rating	10 kW
Nominal Battery Voltage	120 V/ 240 V
Nos of Phases	1 Phase/ 3 Phase
Nominal Output Voltage Frequency	230/400 V (+ 10% & -20% in Grid synchronized mode/50 Hz $\pm$ 2%
Voltage Regulation (in Standalone	$\pm$ 2%
Freq. Regulation (in Standalone Mode)	$\pm$ 0.5 Hz
THD	< than 5%
Load Power Factor	Unity
Auto Bypass Feature	Provided
Parallel Operation with Grid/ DG	Provided
Grid Synchronization & Anti-Islanding	Provided
Grid Charging	Enable / Disable ( User Settable)
Power Export to Grid Facility	Enable / Disable ( User Settable)
<b>SOLAR CHARGE CONTROLLER</b>	
Charge Controller Type	MPPT
Charger Topology	Buck Type
PV Nominal Capacity (Total in kW)	Same as Inverter Capacity
No. of MPPT Channels	1
Max. Open Circuit PV Volts ( $V_{oc}$ )	630/620 V
MPPT Upper Range	299/515 V
MPPT Lower Range	165/330 V
Battery type Supported*	VRLA/ LMLA
Peak Charging Efficiency	$\geq$ 94%
<b>GRID CHARGER</b>	
Grid Voltage Range (Voltage Sync.	+10 % & -20 % VAC
Grid Frequency range (Freq. Sync	+5% & -5% Hz
Max Grid Import Power	as per inverter rating
Peak Charging Efficiency	up to 85 %
<b>PROTECTION</b>	
PV Side	Reverse Polarity, Surge Protection (Class D)
Battery Side	Reverse Polarity, Over/ Under Voltage, Current Limit, Temperature Compensation
Grid Side	Over/ Under Voltage, Over/ Under Frequency, Surge Protection (Class D)
Load Side	Overloads, Short circuit
System Protection	Over Temperature trip Breakers at all Inputs, Emergency stop
<b>USER INTERFACE</b>	
Display Interface	Graphical LCD with back light (128x64)
Setting Input	Membrane Keypad for Settings Input

Battery Parameters	Voltage, Current, Cumulative Import Energy
PV Parameters	Voltage, MPPT Charger O/P Amps, Power, Energy, Cumulative Generation
Grid Parameters	Phase Voltage, Frequency, Power, Power Factor, Reactive Power, Average Power, Peak Power, Cumulative Exported Energy
Load Parameters	Phase Voltage, Phase Current, Frequency, Power, Power Factor, Average Load, Peak Load
System level Parameters	Mode of Operation, Active Faults, Heat Sink / IGBT temperature, System Mimic
LED Indications	Mains On, Alarm, Buzzer Mute
<b>MONITOR</b>	
RS 485	RS-485 based monitoring showing all parameters through MODBUS
GPRS(Optional)	GPRS based remote monitoring systems

- The PCU/ inverters should be tested from the MNRE approved test Centres / NABL /BIS accredited testing- calibration laboratories.
- In case of imported power conditioning units, these should be approved by international test houses.

#### 4. STRING COMBINER BOXES:

- The string combiner boxes shall be dust, vermin and waterproof and made of thermo plastic or metallic and shall have protection minimum as per IEC 62208 and IP 65 type, Class II protection.
- The string combiner box will also have suitable surge protection.
- The string combiner boxes should be designed to operate at 50 degrees Celsius and 85% humidity
- The string combiner boxes should provide arrangement for disconnection for each of the groups.
- It should provide a test point for each sub-group for quick fault location to provide group array isolation.
- The current carrying rating of the string combiner boxes shall be suitable with adequate safety factor to interconnect the Solar PV array.
- The string combiner boxes shall have suitable cable entry points fitted with cable glands of appropriate sizes for both incoming & outgoing cables.
- Suitable markings shall be provided on the bus bar for easy identification & cable ferrules shall be fitted at the cable termination points for identification.

5. **BALANCE OF SYSTEM (BoS) ITEMS/ COMPONENTS:** The BoS items / components of the Solar PV Power Plant/ systems must conform to the latest edition of IEC/ equivalent BIS Standards as specified below:

a

BoS item/component **	Applicable IEC/equivalent BIS Standard	
	Standard Description	Standard Number
<b>Power Conditioners/ Inverters*</b>	Efficiency Measurements Environmental Testing	IEC 62116, IEC 61727, IEC 61683, IEC 60068-2- (1,2,14,30), EN 50530, IEC 60529, IEC 62109 (1,2), IEC 61000
<b>Charge controller/ MPPT units*</b>	Design Qualification Environmental Testing	IEC 62093 IEC 60068 2 (6,21,27,30,75,78)

<b>Cables</b>	<b>General Test and Measuring Methods PVC insulated cables for working Voltages up to and including 1100 V-Do-, UV resistant for outdoor installation</b>	<b>IEC 60189 IS 694/ IS 1554 IS/IEC 69947</b>
<b>Switches/Circuit Breakers /</b>	General Requirements Connectors-safety	IS/IEC 60947 part I,II,III EN 50521
<b>Junction Boxes/</b>	General Requirements	IP 65 IP 21 IEC
<b>SPV System Design</b>	PV Stand-alone System design verification	IEC 62124
<b>Installation Practices</b>	Elect. installation of building requirements for SPV power supply	IEC 60364-7-712

\*\* BoS Must additionally conform to the relevant national/international Electrical Safety Standards.

## 6. PROTECTIONS:

The system should be provided with all necessary protections like earthing (towards AC and DC side) and Lightning as follows:

- a) **Lightning Protection:** The SPV power plant shall be provided with lightning & earthing protection. The main aim in this protection shall be to reduce the over voltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors. Lightning protection should be provided as per IEC 62305 standards. The protection against induced high voltages shall be provided by the use of Metal Oxide Varistors (MOVs) and suitable earthing such that induced transients find an alternate route to earth.
- b) **Earthing Protection:** Each array structure of the PV yard should be grounded/ earthed properly as per IS:3043 -1987. In addition, the lightning arrester/masts should also be provided inside the array field. Provision should be kept for shorting and grounding of the PV array at the time of maintenance work. All metal casing/shielding of the plant should be thoroughly grounded in accordance with Indian Electricity Act/IE Rules.

The earthing conductor shall be rated for the maximum short circuit current and shall be 1.56 times the short circuit current. The area of cross -section of conductor shall not be less than 1.6 sq mm in any case. The earthing pits shall be made at locations approved by beneficiary.

## 7. MODULE MOUNTING STRUCTURE

- Modules shall be mounted on a non-corrosive support structures towards due south and at a suitable inclination to maximize annual energy output.
- Support structures shall be manufactured with steel angles & channels; spray galvanized to IS 1477 Part -1 with thickness of 80 microns on each side as per IS 5905. Structure shall be designed for mounting of offered Solar Modules with angle adjustment facility from 5° to 30° with an interval of 5°.
- In case the proposed section is made up of Aluminium, anodized coating shall be Gr AC25 and shall conform to IS:1868. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from SPV panels at the same time.
- Two numbers of anti-theft fasteners of stainless steel on two diagonally opposite corners for each module shall be provided. All the fasteners and washers (packing & spring) for

Module Mounting Structure and Module shall be adequately protected from atmosphere and weather prevailing in the area. Fasteners and washers to be used for erection of mounting structures and those for fixing Module over MMS shall be of stainless steel grade SS 316 equivalent and must sustain the adverse climatic conditions to ensure the life of the structure for atleast 25 years.

- The foundation for Module Mounting structures shall be 1:2:4 PCC Construction. There shall be minimum necessary clearance between ground level and bottom edge of SPV modules.

**8. Remote Monitoring System**

The Connectivity of the RMS is under the scope of bidder for 5 Years till the completion of CMC period. The following minimum essential parameters should be available in the Remote Monitoring portal and app:

- Daily energy (in kWh) production data recorded.
- Inverter DC Input
- Inverter AC Output
- Battery voltage
- System failure alert
- Grid availability with phase voltage and current
- Other needful parameters.

**9. ORIENTATION AND TILT OF PV MODULE**

Modules alignment should be due south and tilt angle shall be 15 - 30 degrees with horizontal.

**10. DC DISTRIBUTION BOARD (DCDB)**

A DCDB shall be provided in between PCU and Solar Array. It shall have MCCB of Suitable rating for connection and disconnection of array section. It shall have meters for measuring Array voltage and Array current.

**11. OPERATION MANUAL**

An Operation, Instruction and Maintenance Manual, in English and the local language, should be provided with the Solar PV Power Plant and detail of Wiring and Connection Diagrams will also be provided with the manual.

**12. WARRANTY/ GUARANTEE**

The complete Solar PV Power Plant must be warranted against any manufacturing/ design/ installation defects for a minimum period of 2 years.

PV modules used in Solar PV Power Plant must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 12 years and 80% at the end of 25 years.

**13. TEST REPORTS**

The test certificate of various components of the proposed SPV system should be in accordance with guidelines of MNRE for off grid Solar PV systems and related Addendums/ Minutes of meeting published on MNRE website. Test certificates from MNRE approved test centers shall also be considered valid.

**14. SOCIETAL RESPONSIBILITY:**

As a part of societal responsibility as well as commitment towards protection of the environment, the party is to ensure plantation of at least 10 saplings per site of local variety of trees including fruits, medicinal plants or ornamental variety involving the community. They will also stand socially committed towards survival of such trees throughout the project execution period of 5 years. MNREDA may further facilitate sourcing such saplings from local nurseries of Forest department, Govt of Meghalaya.

**PART-5**  
**TECHNICAL BID**  
**TECHNICAL DETAILS OF THE PROPOSED COMPONENTS**  
**(To be submitted on the letterhead of Bidding Company)**

Particulars	System Design Details	Proposed by the Bidder
<b>SPV MODULES</b>	Make / Name of Manufacturer:	
	Type of Solar Cell (Mono crystalline / Poly crystalline)	
	Capacity of each module (W)	
	Module efficiency (%)	
	V <sub>oc</sub>	
	V <sub>mp</sub>	
	I <sub>sc</sub>	
	I <sub>mp</sub> :	
	FF efficiency:	
	Enclose test report/certificate of Solar PV Module from IEC/NABL accredited laboratory as per relevant IEC standard (IEC 61215 edition II / IS 14286 and IEC 61730 Part 1- requirements for construction & Part 2 - requirements for testing, for safety qualification)	Enclose test report (Yes/No)
<b>Battery</b>	Make / Name of Manufacturer:	
	Type:	
	Battery Capacity: (V & Ah) @ C/10	
	Total nos. of batteries	
	Enclose test reports/ certificate of proposed battery from accredited laboratory as per relevant IEC standard or latest BIS standard. <b>(The batteries should conform to IS 1651 / IS 13369/ International standards)</b>	Enclose test report (Yes/No)
<b>Battery Rack/Trolley</b>	Make / Name of Manufacturer:	
	Material:	
<b>Mounting Structure</b>	Make / Name of Manufacturer:	
	Material:	
<b>Charge Controller</b>	Make:	
	Type	
<b>Hybrid PCU</b>	Make:	
	Rating	
	AC Output:	
	DC Input voltage	
	Enclose test reports/ certificate of proposed PCU from IEC/NABL accredited laboratory as per relevant IEC	Enclose test report (Yes/No)
<b>DC/AC Distribution Box</b>	Make / Name of Manufacturer:	
<b>Cables</b>	Make / Name of Manufacturer:	
	Type:	

Signature of Authorised signatory with  
seal

**PART-6**  
**FINANCIAL BID**

Tender No.

Date:

**Name of work: Design, Supply, Testing, Installation & Commissioning of 10 kWp Off-Grid SPV Power Plants with Battery Backup for Server Room and Network Room at 11 (Eleven) Permanent Court Complexes i.e., High Court and the Court Complexes of Khliehtyrshi Jowai Baghmara, Mawkyrwat, Khliehriat, Mairang, Sohra, Dadenggre, Ampati, Amlarem, Resubelpara in the state of Meghalaya**

SL. No	System Details	Quantity	Quoted Amount per 10 kWp SPV Power Plant (In INR) (inclusive of applicable taxes, Duties &	Total Amount in words (inclusive of applicable taxes, Duties & Transportation etc.)
1	Design & Supply (10 kWp SPV Power Plant)	1		
2	Installation & Commissioning (10 kWp SPV Power Plant)	1		
3	5 years CMC (10 kWp SPV Power Plant)	1		
	<b>Total</b>			

(SEAL) Signature of Tenderer or

Their Authorized Representative:

Dated:

Name & Address of Tenderer:.....

Phone No:.....

Fax no:.....

E-Mail:.....

*Note: The rate should be quoted inclusive of all applicable taxes, duties, transportation etc. and applicable tax will be deducted at source for which necessary tax deduction certificate will be issued as and when asked for.*

**Other terms and conditions**

1. The Bidder shall indicate in the Price Bid, the unit prices in (INR) and total Bid prices of the Goods & Services in the prescribed format only.
2. The bidder should compulsorily quote for all heads in the price-bid format for which separate analysis/ reasonable estimation of all heads should be done by the bidder before quoting the rates in the financial bid. Any contravention may lead to rejection of offer submitted.
3. If there is a discrepancy between words and figures, the amount written in words will prevail.
4. Any other item as required for commissioning the system for reliable and efficient operation to be provided within the quoted price.
5. Successful bidder should mandatorily register himself under GST act in respective state, where the goods/services will be rendered.
6. The bidder shall submit GST No. & PAN.
7. Please note that selection of the bidder will be done on the technically acceptable and L-1 (Lowest One) price basis. Bidder should quote for complete scope of work as defined above.
8. Prices will remain firm till the execution of the contract.
9. The bidder shall quote the price on f o r Destination basis and are expected to quote considering the districts where Solar power plant have to be installed and commissioned.
- 10. Payment will be made subject to receipt of funds from the office of Registrar, Hon'ble High Court of Meghalaya, Shillong - 793001.**

I/We have read all the terms and conditions of tender document and the annexures thereto and agree to accept and abide by the same into. The above quotation has been prepared after taking into account all the terms and conditions of the tender document.

(SEAL)

Signature of Tenderer or

Their Authorized Representative:

Dated:

Name & Address of Tenderer:.....

Phone No:.....

Fax no.:.....

E-Mail:.....

**SECURITY DEPOSIT BY WAY OF DEMAND DRAFT/ PERFORMANCE BANK  
GUARANTEE (PBG) FORMAT**

To,

**Dr Joram Beda, IAS**

Meghalaya New and Renewable Energy Development Agency

'Near BSF Camp, Nongmensong, Shillong, Meghalaya – 793019

**E-mail:** [mnreda.dir@gmail.com](mailto:mnreda.dir@gmail.com)

**Website:** [www.mnreda.gov.in](http://www.mnreda.gov.in)

OUR LETTER OF GUARANTEE NO.:..... Date of issue.....  
in consideration of Meghalaya New and Renewable Energy Development Agency, 'Near BSF  
Camp, Nongmensong, Shillong, Meghalaya – 793019(hereinafter referred to as "MNREEDA"  
which expression shall unless repugnant to the content or meaning thereof include all its  
successors, administrators and executors) and having issued Work Order  
No..... dated:.....  
with/ on M/s.....  
(here in after referred to as "The Agency" which expression unless repugnant to the content or  
meaning thereof, shall include all the successors, administrators, and executors).

WHEREAS the Agency having unequivocally accepted to perform the services as per terms and  
conditions given in the Work Order/ Sanction Order  
No..... dated:..... and MNREDA having  
agreed that the Agency shall furnish to MNREDA a Security Deposit by way of Performance  
Guarantee for the faithful performance during the entire contract, of the value of  
Rs.....

**In case of Bank Guarantee:**

We,..... ("The Bank") which shall include  
OUR successors, administrators and executors herewith establish an irrevocable Letter of  
Guarantee No.....dated..... in your  
favour for account of .....(The Agency)  
in cover of performance guarantee in accordance with the terms and conditions of the Work Order/  
Sanction Order.

Hereby, we undertake to pay up to but not exceeding Rs.....  
(say.....only) upon receipt by us  
of your first written demand accompanied by your declaration stating that the amount claimed is  
due by reason of the Agency having failed to perform the Work Order/ Sanction Order and despite  
any contestation on the part of above named-agency.

This letter of Guarantee will expire on ..... including 90 days  
of claim period and any claims made hereunder must be received by us on or before expiry date  
after which date this Letter of Guarantee will become of no effect what so ever whether returned to  
us or not.

Authorized signature  
Chief Manager/ Manager Seal  
of Bank

Note: PBG shall be valid till completion of 5 years" O&M period plus 3 months" claim period.

JOINT INSPECTION REPORT

This is to certify that the 10 kWp Off Grid Solar Power Plant installed at <Name and complete Address of the Court> was installed by M/s.....on .....

The above mentioned Off Grid Solar Power Plant has been jointly inspected and checked its performance in the presence of representatives of following officials on.....:

- i) MNREDA
- ii) M/s .....
- iii) <Insert the name of designated Official of Hon'ble High Court of Meghalaya/ District Court>

The Plant has been installed in accordance with MNREDA's Technical Bid document. The quality of the work is found satisfactory; the installation of the plant is found to be completed and was tested during a trial run made in presence of the undersigned.

Signature ..... Authorized Signatory of representative of <b>Vendor</b> with Official Seal & Date	Signature ..... Authorized Signatory of <b>beneficiary</b> with seal & Date	Signature ..... Authorized Signatory of representative of <b>MNREDA</b> with Seal & Date
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### ANNEXURE III

#### INSTALLATION & COMMISSIONING AND HANDING OVER CERTIFICATE

Certified that 10 kWp Solar Power Plant has been installed, commissioned, and tested successfully as per the specification at <Name and complete Address of the Court> and has been handed over to (Beneficiary Organization as per Work Order).....on... (date) with the following assets.

S.No.	Component	Details
Work Order No:		
1.	Name of Project Site with Complete Address	
1.1	Longitude/ Latitude (upto six decimal place)	
1.2	Shadow Free Area	
2	Capacity of the System Installed (kWp)	
3	Specification of the Solar Modules	
3.1	Type of Module (Mon)	
3.2	Make of Module & Years of Manufacturing	
3.3	Wattage of Each Module	
3.4	Numbers of Module Installed	
3.5	Tilt Angle of Modules	
3.6	IEC certificate Date of issue:	
3.6	Solar Modules installed at Ground/ Roof	
4	Hybrid Inverter	
4.1	Hybrid Inverter Make and Rating	
4.2	Capacity of Inverter and Year of Manufacturing	
4.3	AC Output (Single Phase)	
4.4	Enclose Test Certificate as per MNRE, GoI	
5	Batteries	
5.1	Make of Batteries & Year of Manufacturing	
5.2	Type" Tubular Lead Acid/ VRLA/ GEL	
5.3	Rating (in Voltage) and Numbers of Batteries	
6	Structure	
6.1	Tracking/ Non Tracking	
7	Cables Make and Size	
7.1	Enclose Certificate: Rating	
7.2	Voltage of Cable	
8	Distribution Box	
8.1	Name (ACDB and DCDB)	
8.2	Make and Certificate	
9	Earthing and Protections	
9.1	Lightning Arrester (Type)	
10	Date of Commissioning of the system	

11	Generation since Installation (Enclose one month data)	
12	Technical Persons Trained to maintain system Name with Mobile No.	

**Handed Over by:**

For M/s.....  
(Authorized Signatory)

Full Name & Designation  
Seal & Date

**Taken Over by User:**

(Authorized Signatory)

Full Name & Designation  
Seal & Date

**Copies:**

1. Copy to the beneficiary /user
2. Copy to MNREDA
3. Copy to the Successful bidder / contractor.

# ANNEXURE IV :FORMAT FOR QUARTERLY CMC REPORT

Sl.	Particulars	Details
1	Work Order /LOA No:	
2	Inspector name	
3	Inspection date	
4	Name & Address of the Contractor:	
5	Name of Project Site with Complete Address.	
6	Longitude/ Latitude (upto six decimal places)	
7	Shadow Free Area (in Sqmtr)	
8	Capacity of Solar Power Plant installed (kWp)	
9	<b>SOLAR MODULES</b>	
a	Type of Module (Mono/poly crystalline)	
b	Wattage of each module in Wp	
c.	Make of Solar Module:	
d	No of series &Parallel combinations	
e	Tilt Angle of Modules	
f.	Total nos. of module installed	
10	<b>CHECKLIST OF SOLAR MODULE:</b>	
i.	Cracked glass of PV panel?	
ii.	White or brown spot, bubble of air, moisture behind the glass?	
iii.	Junction boxes at backside loose or without cover?	
iv.	Check for physical damage to any PV module?	
v.	Check for loose cable terminations between PV modules?	
vi.	Shading on solar panels removed?	
vii.	PV modules are properly grounded with lugs on each module?	
11	<b>ARRAY INSTALLATION AND WIRING</b>	
i.	Proper insulation on module wiring	
ii.	Proper connectors on array wiring extensions	
iii.	Proper grounding of array & array mount	
12	<b>STRUCTURAL AND ROOF</b>	
i.	Is equipment mounted securely, and level?	
ii.	Any sign of damage to modules or wiring?	
iii.	All roof mounted junction boxes, combiners are securely installed?	
iv.	Are conduit supports rated for the installation and properly installed?	
13	<b>DC CONNECTIONS</b>	
i.	Source Circuit Combiner Boxes	
ii.	DC-rated circuit breakers or fuses with adequate voltage rating	
iii.	Listed equipment	

<b>14</b>	<b>BATTERY BANK ( BATTERY BACKUP</b>	
<b>i.</b>	Terminals protected from shorting	Yes/No
<b>ii.</b>	Maintenance-free vented for cooling	Yes/No
<b>iii.</b>	Check for battery ambient temperature?	
<b>iv.</b>	Make of battery	
<b>v.</b>	Type of battery :	
<b>vi.</b>	Nominal capacity (volts per cell) :	.....V
<b>vii.</b>	Battery capacity/cell (Ah) :	.....Ah
<b>viii.</b>	Battery voltage ( individual battery ) :	.....V
<b>ix.</b>	Battery voltage ( per bank battery ) :	.....V
<b>x.</b>	Battery current ( per bank battery ) :	.....A
<b>xi.</b>	Are there hot battery cells (touch by hand each cell)?:	Yes / No
<b>xii.</b>	Proper insulation around battery-to-battery cables?	Yes / No
<b>xiii.</b>	Incorrect battery connections?	Yes / No
<b>xiv.</b>	Main cables exposed to physical damage?	Yes / No
<b>xv.</b>	Check battery rack and DC distribution box	Yes / No
<b>15</b>	<b>HYBRID INVERTER (PCU)</b>	
<b>i.</b>	Inverter Size:	
<b>ii.</b>	Make of Inverter	
<b>iii.</b>	Model No.	
<b>iv.</b>	Array Voltage	V
<b>v.</b>	PV Current	V
<b>vi.</b>	Battery Voltage	V
<b>vii.</b>	Energy Generated during inspection	kWh
<b>viii.</b>	Total supplied energy since start of operation	kWh
<b>ix.</b>	Check cable connector fasteners for torque values	Yes / No
<b>x.</b>	Checks AC disconnect circuit breakers and its cable connectors?	Yes / No
<b>xi.</b>	Check DC circuit connectors?	Yes / No
<b>xii.</b>	Check DC disconnect circuit breakers and its cable connectors?	Yes / No
<b>xiii.</b>	Check if any damage (e.g. cracks, holes, missing) endangers the operating safety, the battery inverter must be deactivated immediately	Yes / No
<b>xiv.</b>	Cleaning the fan with the aid of a vacuum cleaner (recommended) or a soft paint brush/hand brush if	Yes / No
<b>xv.</b>	Check the functionality regularly whether error messages are present to ensure optimal operation discover hidden faults in the installation or errors in the configuration	Yes / No
<b>xvi.</b>	Generation since Installation( Enclose)	Attached / not Attach

Prepared by:

Mr. \_\_\_\_\_

For M/s. \_\_\_\_\_

(Authorized Signatory)

Name: Full Name & Designation

Seal & Date

Checked by User:

Signature

Seal & Date

\*Photographs with date & time stamped of the plant and the respective equipment installed to be provided by the successful bidder.

\*\*\*\* *End of the Document*\*\*\*\*