

**Tender Notice No: MNREDA/1728/ 2017 (Pt-II)/67**

# **BID DOCUMENT**

**FOR**

**Design, Supply, Installation, Testing & Commissioning of Aggregate Capacity of 3.0 MWp under CAPEX Mode Grid Connected Solar Rooftop PV Power Plants including 5 Years Operation and Maintenance in Meghalaya**

**Under Central Finance Assistance (CFA) Scheme  
of Ministry of New & Renewable Energy, Government of India**

**Meghalaya New and Renewable Energy Development Agency**

Near BSF Camp, Mawpat, Shillong-793019 (Meghalaya)

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## TENDER NOTICE

**NO:MNREDA/1728/2017(Pt-II)/67 Dated, the Shillong 29.10.2019**

Sealed tenders are invited along with non-refundable IPO of Rs. 20.00 in favour of The Director, Meghalaya New and Renewable Energy Development Agency (MNREDA), payable at Shillong from eligible bidders under Grid Connected Solar Power Plants Programme for complete Design, Supply, Installation, Testing, Commissioning of Aggregate Capacity of 3.0 MWp under CAPEX Mode Grid Connected Rooftop Solar PV Projects including Operation and Maintenance (O&M) for a period of 5 years for CAPEX Mode after commissioning of the Projects as per MNREDA's acceptance, under **TWO PART BID SYSTEM**, under Central Financial Assistance (CFA) Scheme of MNRE for Residential Sector in Meghalaya, as detailed below:

Name of the Work	Estimated Cost may be considered as per latest MNRE, GoI Benchmark cost for the FY 2019-20 (Rs. /per Wp)	Earnest Money Deposit (EMD) /Bid Security (Rs.)	Cost of Bid document (Rs.)	Period of completion (from the date of issue of work order)
Design, Supply, Installation, Testing, Commissioning of Aggregate Capacity of 3.0 MWp under CAPEX Mode (O&M for 5 Years) Grid-connected Solar Rooftop PV Power Plants in Meghalaya.	As per MNRE, GoI Benchmark cost: Up to 10 kWp -59/- >10-100 kWp -53/- >100-500 kWp-50/-	<b>For CAPEX Mode</b> a) <b>New Entrepreneur (Open Category):</b> Rs. 590/- Per kWp or part thereof (1% of total Benchmark Cost). b) <b>For regular Vendors:</b> Rs. 1180/- per kWp or part thereof (2% of total Benchmark Cost).	<b>New Entrepreneurs:</b> Rs. 10,000/- and <b>General Categories/ Others:</b> Rs. 25,000/-	120 Days

The cost of Tender Document & Bid Security shall be deposited in the form of:

- Crossed Demand Draft issued from any Nationalized / Scheduled Bank, or its subsidiary banks in favour of **Director, Meghalaya New and Renewable Energy Development Agency (MNREDA) payable at Shillong.**

**OR**

- FDR in favour of **Director, Meghalaya New and Renewable Energy Development Agency (MNREDA) payable at Shillong.**
- Bank Guarantee as per prescribed format (**Annexure-VII**).

The copies of the DD/FDR/BG are to be enclosed along with Technical Bid only. The detailed notice, eligibility criteria and tender document can be downloaded from e-procurement website of Meghalaya (<https://meghalayatenders.gov.in>). Detailed Tender document is also available at MNREDA website ([www.mnreda.gov.in](http://www.mnreda.gov.in))

Any further notice/information related to this tender shall be uploaded on online mode and will also publish on e-procurement website and MNREDA website. Meghalaya New and Renewable Energy Development Agency (MNREDA) reserves the right to reject any or all bids without assigning any reason thereof.

**Details of Tender Schedule of e-bid:**

Sl. No.	Name of event	Starting Date	Starting Time	Ending Date	Ending Time
1	Tender Published	29.10.2019	14:00 Hrs	20.11.2019	16:00 Hrs
2	Tender Download	29.10.2019	14:00 Hrs	20.11.2019	16:00 Hrs
3	Tender Submission	29.10.2019	14:00 Hrs	20.11.2019	16:00 Hrs
4	Pre- bid meeting	11.11.2019	11:00 Hrs		
5	Technical Bid opening (Cover-1)	21.11.2019	12:00 Hrs		
6	Financial Bid opening (Cover-2)	<b>To be notified after Technical Bid evaluation is completed.</b>			

**Note:**

- 1.) In case of any Holiday on the scheduled day, same time on the next working day shall be considered unless notified.
- 2.) Technical Bid online should also be submitted in original along with cost of Tender Document and Bid Security. The same will be accepted by Meghalaya New and Renewable Energy Development Agency (MNREDA) **before the closing date of Tender.**

Online mode of submission of Technical and Financial Bid is mandatory. A hard copy of the Technical Bid should also be submitted to MNREDA **before the closing date of the Tender.**

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Only Manual submission of any bid will not be accepted and will be rejected without any notice thereof. Financial bids will be opened only if bidders duly qualify in the Technical Bid.

**Director(MNREDA)**

**Copy to:**

1. **The PS to the Hon'ble Minister of Power**, Meghalaya for favour of kind information.
2. **The Chairman**, Meghalaya New and Renewable Energy Development Agency (MNREDA), Shillong (Meghalaya) for favour of kind information.
3. **The P.S. to the Commissioner and Secretary** to the Government of Meghalaya, Power Department for favour of kind information.
4. **The Deputy Secretary (Solar)**, Ministry of New and Renewable Energy, Government of India, Block-14, CGO Complex, Lodhi Road, New Delhi-110003 for favour of kind information.
5. **The Joint Secretary** to the Government of Meghalaya, Power Department for favour of kind information.
6. **Shri N.Y. Dinesh Babu, Team Leader**, The World Bank-MNRE-SBI (SUPRABHA) Technical Assistance (TA) Program for Solar Rooftop for favour of kind information and necessary action.
7. **MNREDA** Notice Board.

**Director(MNREDA)**

## **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 tender document.
3. While this tender document has been prepared in good faith, neither MNREDA nor their employees or advisors/consultant 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: 29.10.2019**

## **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 to give effect to each part.
5. The table of contents and any headings or sub headings in the contract has been inserted for case of reference only & shall not affect the interpretation of this agreement.

### CHECK LIST:

Sl. No	Particulars / Bid Enclosure	Yes/No	Page No.
1.1	IPO of Rs. 20.00		
1.2	Tender Cost amount as specified in the form of DD of <b>Rs. 10,000/- for New Entrepreneurs and Rs. 25,000/- for Other</b> in favour of <b>The Director, MNREDA, payable at Shillong</b>		
2	Whether the Tender is submitted in Two covers (Technical Bid and Financial Bid)?		
3	Whether Two covers are put into an outer cover?		
4	<b>Whether Technical Bid (Envelope- A) contains the following:</b>		
4.1	Earnest Money Deposit (EMD)/Bid Security amount as specified in the form prescribed in RfP of requisite amount in favour of <b>The Director, MNREDA, payable at Shillong</b>		
4.2	In case of Consortium, Letter of Association from the Associate company/ies on their Letter Head agreeing to work with the Lead Company along with Board Resolution to the effect work with seal.		
4.3	Power of Attorney along with Board Resolution from company for signing the Tender document on behalf of company with seal.		
4.4	Bidder's undertaking covering letter as per <b>Annexure- V</b> in the Letter Head signed by the authority & stamped.		
4.5	All pages of the Blank Tender document in full signed by the authority & stamped.		
4.6	Filled up Technical Bid signed by the authority & stamped		
4.7	Supporting documents to meet the <b>Technical and Financial Eligibility Criteria</b> . All documents shall be in English only. Documents in any other language shall be accompanied by an accurate translation in English, duly notarized and signed by the authority and stamped in all pages.		
4.8	<b>Copies of following documents of the Bidder need to be enclosed:</b> i. Certificate of Incorporation /Registration ii. PAN iii. CGST No. and /or SGST No.		

**Tender Document for Design, Supply, Installation & Commissioning of Aggregate Capacity of 3.0 MWp under CAPEX Mode Grid Connected Solar Rooftop PV Power Plants including 5 years Operation and Maintenance in Meghalaya**

<b>Sl. No</b>	<b>Particulars / Bid Enclosure</b>	<b>Yes/No</b>	<b>Page No.</b>
4.9	Audited Annual Accounts for latest three preceding financial years towards meeting the average annual turnover / net worth criteria;  <b>OR</b> PerformaAccounts/BalanceSheetcertifiedbythe StatutoryAuditor		
4.10	Copy of Work Orders along with proof for satisfactory performance of that work (issued preferably by Government Organizations, DISCOM, SNA, etc).		
4.11	Bidder's undertaking letter for <b>not currently blacklisted</b> .		
4.12	Test Certificates / Reports as per Clause 8.1.9 for Module and PCU.		
4.13	TechnoCommercialBidFormatasper <b>Annexure-Ito Annexure - XI(Envelope-A)</b>		
5	Whether Financial Bid as per <b>Annexure – XII (Envelope-B)</b>		
6	Signature and Stamp in all the pages of the Technical and Financial bid is mandatory		

**\*Please flag the and write number in the flag.**

**(Signature of Bidder with Seal)**



### **PARTICULARS OF TENDER**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Details</b>
<b>1</b>	<b>Tender Notice No.</b>	<b>MNREDA/1728/2017 (Pt-II)/67 dated, the Shillong 29.10.2019</b>
2	Particulars of the works	Design, Supply, Installation, Testing, Commissioning of Aggregate Capacity of 3.0 MWp under CAPEX Mode Grid Connected Solar Rooftop PV Power Plants including 5 Years Operation and Maintenance in Meghalaya.
3	Aggregate Capacity of the Solar PV Power Plant:	3.0 MWp under Residential Sector
4	Period of Contract:	120 Days (4 Months) or till the completion of entire proposed works, whichever is earlier.
5	Cost of Tender document:	<b>New Entrepreneurs:Rs. 10,000/- and Regular Vendors: Rs. 25,000/-</b>
6	Earnest Money Deposit (EMD) / Bid Security:	<b>a) New Entrepreneurs:</b> @ Rs.590/-Per kWp or part thereof (1% of total Benchmark cost). <b>b) For regular vendors:</b> @ Rs.1180/- Per kWp or part thereof (2% of total benchmark cost).
7	Validity of the Bid and the rate quoted:	Validity of the Bid and the rate quoted is "365 days from date of opening of Financial Bid and Discovered rate will be valid for 120 Days or till completion of project (whichever is earlier)".
8	Place of opening of Tender:	Meghalaya New and Renewable Energy Development Agency (MNREDA), Near BSF Camp, P.O.-Mawpat, Shillong-793019 (Meghalaya)
9	Contract Performance Guarantee (CPBG):	10% of the total contract value.The amount is to be deposited by the selected bidders along with acceptance of the offer only before issuing final work orders for CAPEX Projects.

**Note:**

1. The tender document can be obtained from e-procurement website of Meghalaya( <https://meghalayatenders.gov.in>).
2. It can also be available at MNREDA's website(<http://www.mnreda.gov.in>).
3. Tender document submitted online will only be considered valid.

**Tender Document for Design, Supply, Installation & Commissioning of Aggregate Capacity of 3.0 MWp under CAPEX Mode Grid Connected Solar Rooftop PV Power Plants including 5 years Operation and Maintenance in Meghalaya**

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4. All relevant required documents along with evidence are to be inserted in Technical Bid and only quoted rates (as per Format enclosed) is to be enclosed in the Financial Bid Section.
  5. Financial Bid will be opened of those bidders who duly qualify in the Technical Bid.

**DECLARATION BY THE BIDDER**

***(Regarding Tender No MNREDA/1728/2017 (Pt-II)/67 dated, the Shillong 29.10.2019)***

I/We .....

(Hereinafter referred to as 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, specification etc. as mentioned in the tender document do hereby declare that:

1. The Bidder 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 Bidder 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. The Bidder is requested to visit all sites and take in to consideration the scope and limitations before quoting.
3. The Bidder is capable for executing and completing the work as required in the tender and is financially solvent and sound to execute the tendered work. The Bidder is sufficiently experienced and competent to perform the contract to the satisfaction of Meghalaya New and Renewable Energy Development Agency. The Bidder gives the assurance to execute the tendered work as per specifications, terms and conditions of the tender on award of work.
4. The Bidder has not been influenced by any statement or promises by Meghalaya New and Renewable Energy Development Agency (MNREDA) or any of its employees but only by the tender document.
5. The Bidder 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.
6. The Bidder has never been debarred from similar type of work by any Government undertaking/Department. ***(An undertaking on Stamp paper in this regard shall be submitted)***

7. The Bidder accepts that the Earnest Money / security deposit may be absolutely forfeited by Meghalaya New and Renewable Energy Development Agency (MNREDA) if the selected bidder fails to sign the contract or to undertake/ complete the work and hand over within stipulated time.
8. This Offer shall remain valid for entire 120 days from proposed date of opening of Technical Bid.
9. All the information and the statements submitted with the tender are true and correct to the best of my knowledge and belief.

**(Signature of Bidder)**

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Date:

Place:

Seal:

## **DETAILED TENDER NOTICE**

**Name of Work:** Design, Supply, Installation, Testing, Commissioning of Aggregate Capacity of 3.0 MWp under CAPEX Mode (O&M 5 Years) Grid Connected Rooftop Solar PV Projects including Operation and Maintenance (O&M) for a period of 5 years after commissioning of the Projects as per MNREDA's acceptance, under **TWO PART BID SYSTEM**, under Central Financial Assistance (CFA) Scheme of MNRE, for Residential Sector in Meghalaya.

### **INTRODUCTION**

- i. Ministry of New and Renewable Energy (MNRE), Government of India (GoI) has accorded sanction for installation of cumulative capacity of 3.0 MWp Grid-connected Solar Rooftop Power plants in Meghalaya.  
The solar power generated may be utilized for captive application and the surplus power may be fed to the grid as per the grid connectivity specified in Meghalaya State Electricity Regulatory Commission (MSERC) "**Grid Interactive Solar PV Regulations-2015**" dated **02.05.2015 on Net metering**. The scheme aims to reduce the fossil fuel based electricity and make buildings self-sustainable from the point of electricity to the extent possible.
- ii. Meghalaya New and Renewable Energy Development Agency (MNREDA) was set-up on 14.09.87 as a State Nodal Agency for the Ministry of New and Renewable Energy Sources, Govt. of India. The Agency was registered under the Meghalaya Societies Registration Act 12 of 1983. The aims and objective of the Agency is to formulate and implement demonstration, experimental, promotional and extension projects and programmes related to New and Renewables Energy.
- iii. Meghalaya New and Renewable Energy Development Agency (MNREDA) has envisaged a cumulative target of 3.0 MW grid interactive Rooftop power plants under CAPEX Mode in Meghalaya based on net metering scheme for residential sector. The grid connected roof top solar PV plants are of present eligible for Central Financial Assistance @70% of competitive project cost discovered through e- bidding or benchmark cost, whichever is lower (with fixed subsidy @70% of MNRE Benchmark Cost for FY 2019-20) as per MNRE Norms.
- iii. In furtherance of the objective of MNRE to promote Solar Rooftop, MNREDA calls for "**Empanelment of Vendors**" for the purpose of Implementation of Design, Supply, Installation, Testing, Commissioning of Aggregate Capacity of 3.0 MWp of Grid Connected Rooftop Solar PV Projects under CAPEX Mode including Operation and Maintenance (O&M) for a period of 5 years after commissioning of the Projects as per MNREDA's acceptance, under **TWO PART BID SYSTEM**, with Central Financial Assistance as per MNRE Norms of competitive project cost arrived through e- bidding or benchmark cost, whichever is lower as per the norms of MNRE for Residential Sector in

Meghalaya.

- iv. The bidders, who are Techno-Commercially qualified, shall be empaneled, who wish to provide their services on Lowest project cost discovered through e-bidding or MNRE bench mark cost, whichever is lower under CAPEX Model with MNRE Central Financial Assistance @70% of MNRE Benchmark. ***The tenure of empanelment shall be 2 (Two) years from the date of empanelment letter issued by MNREDA. MNREDA at it's sole discretion and as per the requirement may renew the tenure of empaneled agencies.***

## 1. BID DETAILS:

MNREDA has envisaged the distribution of the aggregate tendered capacity of 3.0 MWp as under:

Sr. No.	Category	Capacity (MWp)	Minimum Bidding Capacity per Bidder	Maximum Capacity per Bidder
	<b>CAPEX Mode</b>			
1	1 kWp – 10 kWp	3.0	250 kWp	1,000 kWp
2	> 10 kWp – 100 kWp			
3	> 100 kWp – 500 kWp			

- 1.1 The Capacities mentioned above are indicative only. In case of insufficient response is received in a category, MNREDA can transfer these capacities from one category to category to other at any stage of the tender process, if required.

### 1.2 **Open Category:**

- a. MNRE vide its notification No.03/88/2015-16/GCRT dated 08.09.2016 provides for keeping up to 30% capacity under **Open Category**, which shall be kept open for all Project Developers/New Entrepreneurs. In the light of this notification and with a view to establish firm base of local developers in the State, out of the total capacity of 3.0 MWp, MNREDA has decided to reserve **500 kWp** under CAPEX Mode, to be offered to ***New Entrepreneurs, having their registered office/GST registration located in the State of Meghalaya as on the date of issue of this Tender.***
- b. These New Entrepreneurs need not have any prior experience of installing grid connected solar rooftop plants and need not meet the Technical Eligibility Criteria in section given below. **However, during allocation of capacities as per clause 1.2 (d) below, due consideration and preference will be given to New Entrepreneurs who have received training certificate from MNREDA under its Entrepreneurship Development Programs, past and current experience in implementing grid connected and off-grid rooftop solar projects etc., at the sole direction of MNREDA.**

- c. The New Entrepreneurs applying under this **Open Category**, shall be required to meet the Financial Eligibility criteria proportionate to a minimum capacity of **50 kWp**. These New Entrepreneurs shall not be required to submit any Financial Proposals and merely must agree to match the L1 quote under **Tender Category** within 7 days of the opening of the Financial Bid.
- d. On fulfilment of these conditions, the New Entrepreneurs may initially be allocated a capacity of **50 kWp** each by MNREDA. Subsequently, based on satisfactory progress on the initially allotted **50 kWp capacity, further capacities may be allotted within a period of one month, to these New Entrepreneurs by MNREDA on first come first serve basis, till allocation of 500 kWp capacity kept reserved under Open Category is completely exhausted.**

1.3 **Tender General Category:**

- a. Bidder under tender category is required to submit for **Minimum bid capacity of 250 kWp and a maximum of 1,000 kWp. Offer of the Vendors who will submit quote less than the minimum tender capacity or more than the maximum tender capacity shall be out rightly rejected.**
- b. A Bidder shall be allowed to participate only either on its own or as part of a Consortium under the **Tender Category (General Category)**. The Bidders participating under **Open Category (Reserved Category)**, shall not be allowed to participate under **Tender Category (General Category)**, either individually or as a Consortium Partner. Further, under the Open Category, the Bidders shall be required to participate alone, and Consortium **shall NOT be allowed.**
- c. Under scheme of Ministry of New & Renewable Energy (MNRE) vide notification no. 30/11/2012-13/NSM dated: 26.06.2014 and subsequent amendments vide notification no.03/88/2015-16/GCRT dated:04/03/2016 and 02.09.2016 provides 70% of Benchmark cost as CFA (Central Financial Assistance) in following category:

Sl. No.	Category	Coverage of Buildings
(i)	Residential	All types of residential buildings

- 1.4 MNREDA hereby invites interested companies to participate in Empanelment and bidding process for the selection of Successful Bidder(s) for installation of “Grid connected solar rooftop power plants in the State in **Residential Sector, which are eligible at present for 70% of Central Financial Assistance (CFA) from Ministry of New and Renewable Energy (MNRE), GoI**”.

1.5 The above categories shall exclude Government Buildings and Government Institutions, which are eligible for **Achievement Linked Incentives** and all commercial and industrial sector, which are not eligible for any CFA by MNRE, Gol.

1.6 The subsidy structure applicable is tabulated as below:

**For CAPEX Mode: -**

Category	Eligible CFA		
	>1 kWp – 10 kWp	>10kWp-100 kWp	>100 – 500 kWp
Residential Building/ Sector	70% x Rs. 59.00/Wp, x (100% - L1 percentage rate determined through bidding process)	70% x Rs. 53.00/Wp, x (100% - L1 percentage rate determined through bidding process)	70% x Rs. 50.00/Wp, x (100% - L1 percentage rate determined through bidding process)

**Note: However, the release of CFA shall be done based on the fund disbursement from MNRE under sanctioned category and size.**

1.7 The Bidder is advised to read carefully all instructions and conditions appearing in this document and understand them fully. All information and documents required as per the bid document must be furnished. Failure to provide the information and / or documents as required may render the bid technically unacceptable.

1.8 The bidder shall be deemed to have examined the bid document to have obtained his own information in all matters whatsoever that might affect carrying out the works in line with the scope of work specified elsewhere in the document at the offered rates and to have satisfied himself to the sufficiency of his bid. The bidder shall be deemed to know the scope, nature and magnitude of the works and requirement of materials, equipments, tools and labour involved, wage structures and as to what all works he must complete in accordance with the bid documents irrespective of any defects, omissions or errors that may be found in the bid documents.

## 2 INSTRUCTION TO THE BIDDER

2.1 Bidder must meet the eligibility criteria independently as a Bidding Company or as a Bidding Consortium of a maximum of three companies with one of the members, acting as the Lead Member of the Bidding Consortium. However, **Consortium Biddings shall not be allowed in Open Category, which shall be reserved for New Entrepreneurs having their registered office in Meghalaya.** The Bidder/Consortium will be declared as Technically qualified, based on



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meeting the eligibility criteria and as demonstrated based on documentary evidences submitted by the Bidder in the Bid.

2.2 ***In case of Bidding Consortium, the Financial Eligibility criterion like Annual turnover or Net worth as indicated in Annexure -VI, shall be fulfilled by the Lead Member or Parent Company or Affiliate of the Lead Member or Parent Company or Affiliate of the Lead Member, while Technical Eligibility Criterion shall be fulfilled by consortium members. In case bidder is a consortium, a Consortium Agreement as per Annexure-X shall be furnished along with the bid.***

2.3 Financial Consortium is not allowed in this Bidding Process. Consortium is only permitted for Technical partnership as per **Annexure- XI**. Further in-case where the bidding company has used the financial eligibility criteria of its parent company then it needs to be ensured that no change in the controlling equity of the Bidding Company is done before 2 years from the date of commissioning of the sanctioned capacity requires prior approval of MNREDA. All members of the consortium should be registered as a Company only.

2.4 Members of Consortium may form Project Company or Affiliate as specified in **Clause 4.1.1** Bidder including its member of the consortium can submit one bid only under tender. Bidder can however use the technical and financial strength of its Parent Company or Affiliate to fulfil the Technical and/or Financial Eligibility criteria. In such case, Bidders shall submit an Undertaking from the Parent Company as per **Annexure- IX** and furnish a certificate of relationship of Parent Company or Affiliate with the Bidding Company as per **Annexure-VIII**, Company Secretary certificate towards shareholding pattern of the Parent Company and the Bidding Company along with a Board resolution from the Parent Company.

### **3 E-TENDER:**

3.1 The Special Instructions (for e-Tendering) supplement **Section 3.2 'Instruction to Bidders'**, as given in this Request for Selection (RfS) Document. Submission of Online Bids is mandatory for this Tender.

3.2 e-Tendering is a new methodology for conducting Public Procurement in a transparent and secured manner. For conducting electronic tendering, MNREDA has decided to use of e-Tendering Process by using e-Procurement system of Government of Meghalaya ([www.https://meghalayatenders.gov.in](https://meghalayatenders.gov.in)). This system is based on the most 'secure' and 'user friendly' software.

3.3 Benefits to Suppliers are outlined on the Home-page of the portal.

3.4 **Digital Certificates:** For integrity of data and authenticity / non-repudiation of electronic records, and to be compliant with IT Act 2000, it is necessary for each user to have a

Digital Certificate (DC). Also referred to as Digital Signature Certificate (DSC) of Class II or above, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA) (<http://www.cca.gov.in>) for their participation in the e-Tendering process.

- 3.5 **Registration:** To use the Government's e-procurement system at <https://meghalayatenders.gov.in/nicgep/app>, vendors need to register on the portal. Registration of each organization is to be done by one of its senior persons who will be the main person coordinating for the e-tendering activities. In NIC terminology, this person will be referred to as the Super User (SU) of that organization. For further details, please visit <https://meghalayatenders.gov.in> link under 'Registration' (on the Home Page), and follow further instructions as given on the site.

**Important Note:**

Interested bidders should download official copy of the documents after login into NIC Portal of Meghalaya (<https://meghalayatenders.gov.in/nicgep/app>). If the official copy of the documents is not downloaded from NIC Portal within the specified period of downloading, bidder will not be able to participate in the tender.

To minimize teething problems during the use of NIC (including the Registration process), it is recommended that the user should peruse the instructions given under 'NIC User-

Guidance Centre' located on NIC Home Page, including instructions for timely registration on NIC. The instructions relating to 'Essential Computer Security Settings for Use of NIC' and 'Important Functionality Checks' should be especially taken into cognizance.

Please note that even after acceptance of your registration by the Service Provider, to respond to a tender you will also require time to complete activities related to your organization, such as creation of users, assigning roles to them, etc.

**4 ELIGIBILITY CRITERIA:**

**4.1 The Bidder should meet the eligibility criteria in following manner:**

- 4.1.1 **Minimum Criteria:** The Bidder should be a company incorporated under Companies Act, 1956 or 2013 including any amendment thereto. In case, Bidder is a Consortium/ Joint Venture (JV), all members of the Consortium/JV should be registered individually in India under Companies Act, 1956 or 2013 including any amendment thereto.

**4.1.2 Documents Required:**

- a) Certificate of Incorporation issued under Indian Companies Act 1956 or 2013 from Registrar of Companies to be submitted. In addition to above, copy of PAN and applicable CGST and SGST Certificate should also be submitted.
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- b) In case of Open Category, the Bidder should also submit proof of location of registered office in the State of Meghalaya as on the date of issue of this Tender.
- a) ***Bidder (All members in case of Consortium) should not be black-listed by Central/State Government organization, PSUs etc.***
- a) The Bidder must have a local office in Meghalaya / should set up a local office atleast 10 days before signing of Letter of Award. Proof of the office in Meghalaya must be submitted at the time of signing of Letter of Award.

4.2 **Technical Eligibility Criteria: *The Technical Eligibility Criteria are as follows:***

4.2.1 ***For Projects under Tender Category:*** The Bidders should have designed, supplied, installed and commissioned ***cumulative of capacity of not less than 100 kWp of Grid connected Solar PV Power Projects, which should have been commissioned at least six months prior to Techno-Commercial Bid Opening date.*** The list of projects commissioned at least 4 months prior to Technical Bid Opening date, indicating whether the project is grid connected, along with a scanned copy of the Commissioning certificate and Work order / Contract / Agreement/ from the Client/Owner shall be submitted (online) in support.

4.2.2 ***For Projects under Open Category (CAPEX Mode only):*** The Open Category shall be reserved for New Entrepreneurs having registered office in the State of Meghalaya on the date of issue of this Tender. The Bidder shall be exempted from the requirement of having experience in design, supply, installation and commissioning of Grid connected Solar PV Power Projects. However, the Bidders should necessarily be a company having its registered office located in the State of Meghalaya, as on the date of issue of this Tender. Further, ***Consortium are strictly NOT Allowed in case of Open Category. Further, the Bidder participating under Open Category shall not be allowed to participate under Tender Category, either individually or as a Consortium Partner.***

4.2.3 ***Documents Required:*** Bidder should submit copy of Work Order and Commissioning Certificate issued by the Client/Owner, preferably Government Organization like - DISCOM, State Nodal Agency, PSUs, SECI, etc. Bidder should also submit proof of release of subsidy, in case such project is eligible for the same.

4.3 ***Financial Eligibility Criteria:*** The Financial Eligibility Criteria for various sub-categories are as follows:

4.3.1 ***For Projects under Tender Category:*** The Bidder/Consortium must have a ***minimum average annual turnover of Rs. 20,000 per kWp*** of bidding capacity over last 3 (three) financial years. Bidders are directed to attach copy of audited annual accounts for last three financial years preceding Bid Deadline (subjected to the condition that the Bidder

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should at least have completed one financial year) alongwith Statutory Auditor's Certificate, certifying for meeting the financial qualification criteria.

**OR**

The Bidder/Consortium must have a **minimum net worth of Rs. 15,000 per kWp** of bidding capacity as per latest audited accounts. The Computation of Net worth shall be based on unconsolidated audited annual accounts of the last financial year immediately preceding the Bid Deadline. Share premium can be included in the Net-worth calculation in case of listed companies in India only. For the purposes of meeting financial requirements, only unconsolidated audited annual accounts shall be used.

Bidders shall furnish documentary evidence as per the **Annexure-VIII** (online as well as offline), duly certified by Authorized Signatory and the Statutory Auditor/Practicing Chartered Accountant of the Bidding Company in support of their financial capability.

**4.3.1 For Projects under Open Category:** In case of Open Category, the Bidder shall be required to meet the above-mentioned requirement of either of the minimum average annual turnover or minimum net worth (latest), only to the extent of initial allotment capacity envisaged by MNREDA, i.e. equivalent to the 50 kWp at a time. However, in case of further allotment of additional capacities by MNREDA on first come first serve basis, based on satisfactory progress on the initially allotted 50 kWp capacity, further capacities more than 50 kWp, may be allotted, subject to meeting the financial eligibility criteria proportionate to such higher capacity. However, the decision of allotting a capacity higher than 50 kWp at a time, after the first round of allotment, shall be on the sole discretion of MNREDA, subject to remaining available capacity under Open Category.

**4.4 The formula of calculation of net-worth shall be as follows:**

***Net-worth = (Paid up share capital) + {(Free reserves + Share premium) + Share premium of listed companies} - (Revaluation of reserves) - (Intangible assets) - (Miscellaneous expenditure to the extent not written off and carry forward losses).***

Paid up share capital will include Paid up equity share capital, Fully, compulsorily and mandatorily convertible preferential shares, and Fully, compulsorily and mandatorily convertible Debentures.

Free reserves mean reserves created out of profits and securities premium account but does not include reserves created out of revaluation of profits, write back of depreciation and amalgamation or any capital reserve. Securities Premium will be part of net worth only in those cases where it has been realized/received in the form of cash. However, this may not be applicable in case of listed companies.

The Net Worth of the Bidder as on the last day of the preceding financial year (FY 2016-17 or FY 2017-18, whichever is available as latest audited accounts) shall not be less than total paid-up

sharecapital.

- 4.5** For the purposes of meeting financial requirements, only audited annual accounts of the Bidder shall be used. However, audited consolidated annual accounts of the Bidder may be used for financial requirements provided the Bidder has at least Twenty Six percent (26%) equity in each company whose accounts are merged in the audited consolidated accounts and provided further that the financial capability of such companies (of which accounts are being merged in the consolidated accounts) shall not be considered again for evaluation of the Bid.
- 4.6** In case of Bidder being a Company having audited accounts available for less than three financial years, the minimum average annual turnover criteria shall be applied for the number of financial years for which audited accounts are available since incorporation.
- 4.7** In case of Bidder being a new Company having no audited accounts available at all, then the minimum average annual turnover shall not be applied. In such case, the net worth criteria shall be applied based on the Performa Balance Sheet as at date at least seven (7) days before the closing date of this tender, duly certified by the Statutory Auditor of the Company.
- 4.8** ***A Bidder can't participate both singly as well as part of a consortium. Further, the Bidder participating under Open Category shall not be eligible to participate either singly or as a member of consortium under Tender Category.***
- 4.9** The Bidders shall mandatorily furnish a certificate issued by the Statutory Auditor of the Bidding Company in support of fulfilment of their financial eligibility criteria. In case of Consortium, if the financial eligibility criteria are being met jointly by the consortium bidders, then the Lead Bidders shall additionally submit a certificate issued by a Practising Chartered Accountant in support of their meeting the financial eligibility criteria jointly.
- 4.10** The eligible Bidder participating under Open Category shall submit Technical Proposal only. To get capacity allotment from MNREDA, they shall be required to match the L1 financial bid of Tender Category. However, they shall be assigned only 50 kW capacity initially. Based on fortnightly progress report of the assigned capacity and/or physical inspection by MNREDA, additional quantity may be assigned progressively based on their financial capability, till the capacity available under Open Category is exhausted. In case the performance of bidder is found to be unsatisfactory, entire capacity shall be allotted other successful Bidder(s) having capability and satisfactory performance, on the sole discretion of MNREDA.
- 4.11 Incorporation of a Project Company:**
- 4.11.1** In case the Bidder wishes to incorporate a Project Company, in such a case Bidder if selected as Qualified Bidder can incorporate a Project Company. Bidder shall be responsible to get all clearance required/ obtained in the name of the Bidding Company transferred in the name of the Project Company.
- 4.11.2** The aggregate equity share holding of the bidder in the issued and paid up equity share

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capital of the Project Company shall not be less than fifty-one percent (51%) up to a period of Five (5) years from the date of commissioning of the entire Sanctioned Capacity of the Project Developer.

**4.12 Pre-bid Meeting:** Pre-Bid Meeting shall be held on the date and time mentioned in SI.N.4-Details of Tender Schedule of e-bid at page-4. The aim of the pre-bid meeting is to allow prospective bidders to seek clarification regarding any doubt regarding the Tender Bid and also to offer suggestions to improve the bidding process.

## **5 SCOPE OF WORK**

**5.1** The Scope of work for the bidder include Identification of MePDCL's consumers (or beneficiary), Obtaining No Objection Certificate (NOC)" from MePDCL for grid connectivity, entering into appropriate contract with the identified consumer (or beneficiary), complete design, engineering, manufacture, supply, storage, civil work, erection, testing & commissioning of the grid connected rooftop solar PV project including 5 Years Operation and Maintenance (O&M) of the project under CAPEX Mode after commissioning of the projects as per MNREDA's acceptance.

### **5.2 The detailed work would involve (include but not limited to) following major activities:**

**5.2.1** Bidder shall identify buildings and obtain necessary approvals from MePDCL (DISCOM)/Building Owners on behalf of the beneficiary for installation of Solar Rooftop System.

**5.2.2 Bidder will conduct awareness activities in the State through various means including door to door campaign, putting canopies, camps, distributing pamphlets, etc. for attracting the identified consumer categories to offer their roofs for setting up the grid connected solar rooftop systems under CAPEX Mode.**

**5.2.3** Upon identification of building, bidder shall sign Joint Agreement with beneficiary for installation of Solar Rooftop System as per **Annexure-XIII**. It will be sole responsibility of bidder that Joint Agreement is signed with Legal/Authorized Owner or Leasee of rooftop only. Bidder shall check relevant property documents, power of attorney, etc. as applicable. MNREDA reserves right to demand such documents from the bidder for verification purpose.

**5.2.4 Bidder shall submit project sanction documents to MNREDA as below to get go ahead for the project:**

- I. Feasibility Report of identified building/project
- II. Joint Agreement signed with beneficiary
- III. No Objection Certificate (NOC) from concerned MePDCL's office for grid connectivity

**5.2.5** Bidder shall prepare route profile drawing along with electrical connection to consumer(s).

**5.2.6** Bill of material shall include PV plant, inverter, distribution boards (AC and DC), cable, combiner box and associated work including protection and monitoring arrangements etc.

- 5.2.7 All installation works should comply Technical Specifications of Grid connected Rooftop and Small Solar PV Power Plant as mentioned in **Section-8**.
- 5.2.8 Design, Supply, Installation, Testing & Commissioning at site and 5 Years Operation and Maintenance (O&M) of the power plant after commissioning for CAPEX Mode.
- 5.2.9 The Project cost for CAPEX Mode shall include all the costs related to above Scope of Work. Bidder shall quote for the entire facilities on a "**singleresponsibility**" basis such that the total Bid Price covers all the obligations mentioned in the Bidding Documents in respect of Design, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance (for a period of 5 years for CAPEX Mode), goods and services including spares required if any during O&M period.
- 5.2.10 The Bidder must take all permits, approvals and licenses, insurance etc., provide training and such other items & services required to complete the scope of work mentioned above.
- 5.2.11 Performance Acceptance Tests after installation & Commissioning must be conducted as per clauses.
- 5.2.12 **Net-Metering:** Metering and grid connectivity of the rooftop solar PV Power Plant under this scheme would be in accordance with the prevailing guidelines of MNREDA and/or Central Electricity Authority (CEA)/ Meghalaya State Electricity Regulatory Commission (MSERC). The cost of net-meter shall be borne by the beneficiary over and above the quoted rate for which proper receipt from MePDCL shall be provided by the Developer to the beneficiary. However, facilitation for the same i.e. submission of application in concerned MePDCL's office, follow-up & liaison etc. shall be in the scope of Bidder.
- 5.2.13 Bidder shall provide Technical Manual, User Manual and Operation and Maintenance (O&M) Manual of the plant to the beneficiary in English language.
- 5.2.14 Bidder shall provide training (General/ Technical/ Safety) to the beneficiary's nominated persons for daily operation, cleaning, monitoring and maintenance of power plant. Bidder shall provide maintenance schedule of the plant to beneficiary.
- 5.2.15 Any other works though not specifically mentioned but are required to finish the project in all respects for its safe, reliable, efficient and trouble-free operation shall also be included and the same shall be supplied and installed by the bidder without any extra cost.
- 5.2.16 **Clean up:** Upon completion of the Work, the contractor shall remove from the vicinity of the work all residues, building rubbish, unused materials, concrete forms and other like materials belonging to him or under his direction during construction to the satisfaction of beneficiary and in the event of his failure to do so within 15 days from the date of commissioning. The cost on account of clean up shall be included in the quoted rate and no additional extra claim shall be entertained.

**5.3 Scope of Comprehensive O&M Activities (Quarterly): The Comprehensive Quarterly O&M schedule shall include (but not limited to) the following mentioned activities:**

**5.3.1 Solar Modules:**

- (i) Visual inspection of modules and mounting clamps
- (ii) Washing and cleaning of modules and structures
- (iii) Check modules for any broken glass/ discolouration, misaligned modules

**5.3.2 Module mounting structure:**

- (i) Visual inspection of mounting structures, screws and fasteners
- (ii) Tightening of screws and fasteners as needed.

**5.3.3 Junction Box:**

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

**5.3.4 Inverters:**

- (i) General Cleaning
- (ii) Check LCD displays of inverters
- (iii) Check integrity of wiring
- (iv) Visual inspection of mechanical fixings of inverters

**5.3.5 Cables:**

- (i) Visual inspection of DC and AC cables
- (ii) Replacement of cables if damaged.

**5.3.6 Remote Monitoring (For projects above 10 kWp capacity):**

- (i) SCADA daily production data recorded
- (ii) Physical verification of RS485 communication cables between equipment and server.
- (iii) Ensure communication between weather station, (Temperature sensor, Wind speed, solar radiation), Inverter output, String monitoring if supplied.
- (iv) Internet connectivity, configuration (Remote connectivity HW) Check the data reports like graphs.



#### **5.4 Conditions of Contract:**

**5.4.1 Sanctioned Period:** Total sanctioned period for Identification of buildings, obtaining No Objection Certificate (NOC) from concerned MePDCL's office for grid connectivity, complete design, engineering, supply, storage, civil work, installation, testing & commissioning of the grid connected rooftop solar PV projects shall be (period of Work Contract) till 120 Days from date of Award, which can be extended subject to approval of MNRE. Commissioning shall mean 'successful operation of the Project/Works by the Developer, for carrying out Performance Ratio (PR) Test.

**5.4.2** However, post sanctioning of projects by MNREDA schedule for complete design, engineering, supply, storage, civil work, installation, testing & commissioning of the grid connected rooftop solar PV projects shall be as follows:

<b>Individual Project Capacity in kWp</b>	<b>Sanctioned Period from the date of Sanction Letter</b>
1 to 10 kWp	45 days
>10-100 kWp	60 days
>100-500 kWp	75 days

**5.4.3** However, MNREDA reserves right to modify above schedule on case to case basis as per requirement of the project at its sole discretion.

#### **5.5 Insurance:**

**5.5.1** The Bidder shall be responsible and take an Insurance Policy for transit-cum-storage-cum-erection for all the materials to cover all risks and liabilities for supply of materials on site basis, storage of materials at site, erection, testing and commissioning. The bidder shall also take appropriate insurance during compulsory O&M period from the date of commissioning.

**5.5.2** The Bidder shall also take insurance for Third Party Liability covering loss of human life, engineers & workmen and covering the risks of damage to the third party/material/equipment/ properties during execution of the contract. Before commencement of the work, the bidder will ensure that all its employees and representatives are covered by suitable insurance against any damage, loss, injury or death arising out of the execution of the work or in carrying out the contract. Liquidation, Death, Bankruptcy etc., shall be the responsibility of bidder.

**5.6 Warrantees and Guarantees:** The Bidder shall warrant that the goods supplied under this contract are new, unused, of the most recent or latest technology and incorporate all recent improvements in design and materials. The SPV panels to be installed by the successful bidder shall be warranted for 25 years from the date of commissioning. The bidder shall also provide warranty covering the rectification of all defects in the design of equipment, materials and workmanship including spare parts for a period of 5 years from the date of commissioning. The successful bidder should transfer all the Guarantees/Warrantees of the different components to the owner of the project. The responsibility of operation of Warranty and Guaranty clauses and claims/settlement of issues arising out of said clauses shall be joint responsibility of the successful bidder and the owner of the project and MNREDA will not be responsible in any way for any claims whatsoever because of the above.

**5.7 Type & Quality of Materials and Workmanship:** The design, engineering, manufacture, supply, installation, testing and performance of the equipment shall be in accordance with latest appropriate IEC/Indian Standards as detailed in the **Section-8** (Technical specifications) of the bid document. Where appropriate Indian Standards and Codes are not available, other suitable standards and codes as approved by the MNRE shall be used. The specifications of the components should meet the technical specifications mentioned in **Section-8**. Any supplies which have not been specifically mentioned in this contract, but which are necessary for the design, engineering, manufacture, supply & performance or completeness of the project shall be provided by the bidder without any extra cost and within the time schedule for efficient and smooth operation and maintenance of the SPV plant.

**5.8 Inspection:** Pre-delivery inspection of solar PV modules and other major components may be carried out by a team of designated officials of MNREDA at the developer's facility. MNREDA shall have the right to conduct tests to be carried out by an independent agency at any point of time, if felt necessary.

**5.9 Operation and Maintenance (O&M):**

**5.9.1** The bidder shall be responsible for all required activities for O&M of the Rooftop Solar PV Power Plant for a period of 5 years after commissioning in case of CAPEX Mode. During this period, the bidder shall be responsible for supply of all spare parts as required from time to time for scheduled and preventive maintenance, major overhauling of the plant, replacement of defective modules, inverters, PCU's etc and facilitating logsheets for operation detail, deployment of qualified engineers for supervision of work, complaint logging & its attending.

**5.10 For any issues related to maintenance, a toll-free number/customer care number/single point of contact shall be made available to the rooftop owner/ plant owner to resolve**

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***within 72 hours. If not attended within such stipulated time, a complaint may be raised to MNREDA, pursuant to which, a penalty of Rs. 500 per kWp shall be imposed for total system capacity. Repetition of such instances for more than 2 times a year may lead to the stop the next tranche of subsidy by the MNREDA. This will be applicable till 5 years of O&M period as specified in the tender. In case of CAPEX Mode, O&M activities beyond a compulsory period of 5 years from the date of commissioning shall be based on agreement between the developer and the beneficiary.***

**5.10.1** MNRE/MNREDA reserves the right to make surprise checks/inspection visits at its own or through authorized representative to verify the O&M activities being carried out by the Bidder. Failure to adhere to above guidelines will result in penal action including debarment from participation in next tender.

**5.11 Metering & Grid Connectivity:** Metering and Grid Connectivity of the Rooftop solar PV Power Plant under this scheme would be in accordance with the prevailing guidelines of MePDCL/CEA/MSERC etc.

**5.12 Plant Performance Evaluation:** The successful bidder shall be required to meet minimum guaranteed generation with Performance Ratio (PR) at the time of commissioning as per the GHI levels of the location. PR should be shown minimum of 75% at the time of inspection for initial commissioning acceptance. The PR will be measured at Inverter output level during peak radiation conditions.

$$PR = \frac{\text{Measured output in kW}}{\text{Installed Plant Capacity (kW)}} \times \frac{1000 \text{ W/m}^2}{\text{Measured radiation intensity in W/m}^2}$$

***Minimum CUF of at least 13.50% should be maintained for a period of 5 years for fulfilling one of the conditions for release of PBG. The bidder should send the periodic plant output details to MNREDA for ensuring the CUF:***

**Formula to calculate CUF is as below: -**

CUF = Actual Plant Output in kWh over the year / (Installed Plant Capacity in kWp x 365 x 24)

**Note:**

- a. During grid failure, the SPV system stops generating. Any instances of grid failure need to be mentioned in the periodic plant output report and those instances need to be authorized by local MePDCL's office. Then the period will be excluded in the calculation of PR.
- b. Developer should keep record of daily generation data of commissioned SPV power plant of capacity >10 kWp and submit the same to MNREDA on monthly basis, before the last day of each calendar month. For SPV systems 10 kWp and below, the developers shall collect generation data at the time of undertaking quarterly O&M activities and shall without fail submit the same to MNREDA on regular intervals. MNREDA

reserves right to seek generation data from the Developer as and when required during Guarantee/AMC Period.

***c. For plants of capacity > 50 kWp, PR ratio should be submitted. Hence the Developer should compulsorily installation of irradiation sensor/pyranometer in plants with capacity above 50kWp.***

**5.13 Coordination & Progress Report:** Bidder shall inform the name, address, contact number of the Nodal Officer(s), assigned for executing the project, who will report about their fortnightly/Monthly Progress & Performance of the Project. In case, absence of any information is adversely affecting the progress of work, the issue could be reported to The Director, MNREDA. Bidder shall submit the progress report fortnightly/monthly to MNREDA in prescribed Form as desired. MNREDA will have the right to depute its representatives to ascertain the progress of contract at the premises of works of the Bidder or at site. In addition to this, Bidder should also provide contact details and email id of Management & key Officials of the company.

**5.14 Project Inspection:** The project progress will be monitored by MNREDA and the projects may be inspected for quality at any time during installation / commissioning or after the completion of the project either by officer(s) from MNRE/MNREDA or any authorized agency/ experts. MNRE or MNREDA may also depute technical person(s) from authorized agency/ experts for inspection, third party verification, monitoring of system installed to oversee, the implementation as per required standards and to visit the manufacturer's facilities to check the quality of products as well as to visit the system integrators to assess their technical capabilities as and when required.

**Note:** The Scope of work and Conditions of Contract mentioned above is indicative only; However, MNREDA reserves the right to add/delete items, relocate project area in scope/nature of work for smooth execution and completion of the project.

## 6 ADDITIONAL INSTRUCTIONS TO BIDDERS

- 6.1 Cost of each Tender document:** Rs. 10,000/- (Rupees Ten Thousand only) for New Entrepreneurs and Rs. 25,000/- (Rupees Twenty-Five Thousand only) for others in form of Demand Draft in favour of **Director, Meghalaya New and Renewable Energy Development Agency (MNREDA) payable at Shillong from nationalized or scheduled bank**. The tender document will also be available at Meghalaya e-procurement website ([www.meghalayatenders.gov.in](http://www.meghalayatenders.gov.in)) and MNREDA website ([www.mnreda.gov.in](http://www.mnreda.gov.in)).
- 6.2 Validity period:** The Tender shall remain valid by the period of 365 Days from the date of opening of Financial Bid and Discovered rate will be valid for 120 Days or till completion of project (whichever is earlier).
- 6.3** Tender without requisite amount of Bid Security shall be outrightly rejected. Correspondence on request from any Bidder on exemption of Bid Security will not be entertained by MNREDA.
- 6.4** Required information will be available at the office of Director, MNREDA on all working days except Saturday, Sunday and Public Holidays declared by the Government of Meghalaya, from Date of Publishing of Tender to Last date of Tender Submission. Filled Tender forms will be received through only online and supporting documents may be in Hard Copy.
- 6.5** Bidder should submit the Tender document on or before the date and time specified in the Tender document in *Hard and Soft Copy (Pen Drive/CD)*. *Failure to submit the bid in both the forms i.e. Hard and Soft copy, MNREDA reserves the right to disqualify/reject the bidder.*
- 6.6** All the information furnished and document produced with the Tenders shall be in English language only. The Tender notice and Tender document shall form a part of contract agreement.
- 6.7** Issue or submission of Tender document does not mean that Bidder is qualified for awarding the work.
- 6.8** The Bidder shall not remove any page, Annexure etc. from the original tender.
- 6.9** The Bidder shall sign and put bidder's stamp on each page of the tender.
- 6.10** The original tender documents shall be submitted with all Annexures as per procedure for submission of tender on due date and time.
- 6.11** The conditional tenders will be rejected without any notice thereof.
- 6.12** *The Director, MNREDA reserves the right to reject/ accept any or all Tender without assigning any reason thereof.*
- 6.13** Period of completion of work is by allotted contract period only.
- 6.14** Bids must be submitted in English language only.
- 6.15** Incomplete, telegraphic or conditional bids shall not be accepted.

- 6.16 Financial Bid quoted must be binding and fixed. No variation/escalations shall be allowed.
- 6.17 The bidders must sign at the bottom of each page of the bid documents at the same time uploading the same with unconditional acceptance of the MNREDA's terms and conditions technical specification etc. otherwise MNREDA reserves the right to reject the bidder.
- 6.18 PAN & Valid CGST/SGST certificate duly attested by Chartered Accountant (CA) must be submitted along with the Technical bid.
- 6.19 Deviations in terms and conditions, Specification of material, Inspection clause etc. not be accepted under normal conditions.
- 6.20 Earnest money as specified in bid may be submitted in the form of Demand Draft (DD)/ FDR / Bank Guarantee drawn in favour of **The Director, Meghalaya New and Renewable Energy Development Agency (MNREDA) payable at Shillong** from any nationalized / scheduled bank.
- 6.21 The bidders are required to furnish their offers in the Financial Bid both in words & figures.
- 6.22 Since timely execution of work is of paramount importance, requests for extension of time shall not be ordinarily entertained. Canvassing in any manner shall not be entertained and will be viewed seriously leading to rejection of the bid.
- 6.23 Canvassing in any manner shall not be entertained and will be viewed seriously leading to rejection of the bid.
- 6.24 PV module should be indigenous. Certificate to the effect must be furnished.
- 6.25 Copy of Certificates of required standards mentioned for modules, Inverters, BOM, Structure must be submitted by the bidder.
- 6.26 Power of attorney to sign the agreement on behalf of bidders, if any, should be enclosed along with original bid documents.
- 6.27 Bidders must also furnish Original copy of Consortium Agreement, if any.
- 6.28 Notice inviting tender, bid documents, prescribed Technical bid, price bid, terms & conditions will be the part of the tender. All pages of the bid documents must be signed & sealed by the authorized person on behalf of the bidders.
- 6.29 Bids will be accepted & will be opened as per information mentioned in the Notice Inviting Tender. No receipt against submission of bid through e-Tendering process shall be issued by Meghalaya New and Renewable Energy Development Agency (MNREDA).
- 6.30 The technical bid shall be opened on as per scheduled of Tender Document.
- 6.31 The bid document should be submitted in two parts as detailed below:

**BID-1, TECHNICAL BID (Off-Line and On-Line).** All the relevant papers of bid documents except the price bid duly signed should be submitted in the Technical Bid. Copy of required Earnest Money deposit and cost of bid document in the form of Demand Draft/Bank Guarantee in favour of **The Director, Meghalaya New and Renewable Energy Development Agency (MNREDA)** payable at Shillong should be attached. Since the amount of data that can be uploaded is limited, the documents to be attached in the Technical Bid shall comprise **only Annexure I to XVI, except Annexure XII.** However, Clause 6.5 shall remain valid.

**BID - 2, FINANCIAL BID.** The Financial Bid should be quoted as per prescribed format (**Annexure-XII**). The Financial Bid should consider all Taxes, duties, transportation etc. as may be applicable. **The Director, Meghalaya New and Renewable Energy Development Agency (MNREDA)** is not responsible for providing Road Permits. Necessary Road permit is to be obtained by the selected bidder at their own cost. Only Financial Bids submitted online and in the prescribed format, will be accepted. Financial Bids Not Submitted online or Not in the prescribed format, will be summarily rejected.

- 6.32** Any consequences arising during the execution of the project will be the sole responsibility of the selected bidder.
- 6.33** Any clarification on the technical specification and commercial terms and conditions may be clarified in writing from MNREDA seven (7) days before last date of submission of tender.
- 6.34** Deviation of any commercial terms and condition and technical specifications shall not be entertained under any circumstances and liable for punishable as per law.
- 6.35** Bidders may in their own interest visit the sites where they believe that rooftop system can be installed to estimate the capacity they want to bid, Meghalaya New and Renewable Energy Development Agency (MNREDA) will not be responsible for any incidental or consequential losses of the bidders while execution and till expiry of the period of maintenance.
- 6.36** During the warranty period, MNRE/ State Agencies/ Users reserve the right to cross check the performance of the systems with the minimum performance levels specified in the MNRE specifications.

## **7 BID OPENING, EVALUATION PROCESS AND CAPACITY ALLOCATION:**

### **7.1 Opening and Evaluation of Bids:**

**7.1.1** Opening of duly submitted technical and financial bids will be through online mode only. The procedure of opening of the bid shall be as under:

**7.1.2** "**Technical Bid**" shall be opened at the time & date mentioned in the bid notice by Meghalaya New and Renewable Energy Development Agency (MNREDA) in presence of representative of bidders, who is interested to be present. If necessary, the bidders may be called for Technical Presentation of their product as per the time intimated by Meghalaya New and

Renewable Energy Development Agency (MNREDA).

- 7.1.3 "Financial Bid"** shall be opened after evaluation of technical suitability of the offer. The offer shall be considered technically suitable only if the bidders achieve sufficient points against mentioned points in the table given under technical eligibility criteria. The date for opening of Financial Bid shall be communicated subsequently. Financial Bid will be opened of only those bidders who would duly qualify in the Technical Bid.
- 7.1.4** If due date of receipt/opening of bids happen to be a closed holiday, the bids would be received and opened on the next working day.
- 7.1.5** MNREDA reserves the right to postpone and/or extend the date of receipt/opening of Bids or to withdraw the Tender notice, without assigning any reason thereof. In any such cases, the bidders shall not be entitled to any form of compensation from the MNREDA.
- 7.1.6** MNREDA will scrutinize the technical bid documents submitted by the bidders and shortlist the bidders who qualify based on eligibility criteria, terms and conditions, technical specifications of this tender document.
- 7.1.7** All technically qualified bidders will get empanelled with MNREDA for a period of two (2) years from the date of such notification. However, empanelment period may also be extended for further period based on requirement of project at sole discretion of MNREDA. The empanelment list may be reviewed at any time by MNREDA for any deletion/addition. Further, MNREDA may also conduct Limited Tender/Snap Bidding among these empanelled bidders at later stage whenever required.
- 7.1.8** MNREDA may also opt for separate empanelment at its sole discretion in future.

**7.2 The evaluation process comprises the following four steps:**

- Step I - Responsiveness check of Techno Commercial Bid
- Step II - Evaluation of Bidder's fulfilment of Eligibility Criteria as per **Section 4**
- Step III - Evaluation of Price Bid
- Step IV - Successful Bidders(s) selection



### **7.3 Step I - Responsiveness Check of Techno Commercial Bid:**

**7.3.1** The Techno Commercial Bid submitted by Bidders shall be scrutinized to establish responsiveness to the requirements laid down in the Bid Document. Any of the following may cause the Bid to be considered "**Non-responsive**", at the sole discretion of MNREDA, and liable for rejection:

- a. Bids that are incomplete, i.e. not accompanied by any of the applicable formats *inter alia* covering letter, power of attorney supported by a board resolution, Bid Security, etc.;
- b. Bid not accompanied by the contents of **Envelop A**.
- c. Bid not signed by authorized signatory and /or stamped in the manner indicated in this Document;
- d. Material inconsistencies in the information /documents submitted by the Bidder, affecting the Eligibility Criteria;
- e. Information not submitted in the formats specified in this Document;
- f. Bid being conditional in nature;
- g. Bid not received by the Bid Deadline;
- h. Bid having conflict of interest
- i. Bidder making any misrepresentation
- j. Bidding Company or any Member of the Consortium submitting two bids as part of the tender;
- k. Bidding Company or any Member of the Consortium participating in Tender Category also submitting bid under Open Category or vice versa;
- l. Bidder delaying in submission of additional information or clarifications sought by MNREDA as applicable;

**7.3.2** Each Bid shall be checked for compliance with the submission requirements set forth in this Document before the evaluation of Bidder's fulfilment of Eligibility Criteria is taken up. **Section 4** shall be used to check whether each Bidder meets the stipulated requirement.

**7.3.3** MNREDA will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed and stamped and whether the Bids are otherwise in order.

**7.3.4** Arithmetical errors will be rectified on the following basis. If there is a discrepancy between words and figures, the amount written in words will prevail.

**7.4 Step II - Evaluation of Bidder's Fulfilment of Eligibility Criteria:**

- 7.4.1** Evaluation of Bidder's Eligibility will be carried out based on the information furnished by the Bidder as per the prescribed Formats and related documentary evidence in support of meeting the Eligibility Criteria as specified in **Section 4** of this Bid Document.
- 7.4.2** Non-availability of information and related documentary evidence for the satisfaction of Eligibility Criteria may cause the Bid non-responsive.
- 7.4.3** *The bidder must submit all the necessary documents as asked in order to make this bid responsive. The Bid shall be evaluated on the below mentioned criteria/parameters. Only those bids shall be considered for financial bid opening, who secure the sufficient higher points as per the decision of purchase committee of MNREDA.*

<b>S.No.</b>	<b>Description</b>	<b>Points</b>
1	<p><i>If the Bidder has designed, supplied, installed &amp; commissioned and tested a minimum of single system of 50 kWp capacity of Grid-connected Solar Rooftop Power Plants in Govt. aided/Govt. Institution/ Private sector etc. with Work Order awarded in Bidder's Name/Firm and commissioned 4 Month prior to Bid Opening date.</i></p> <p style="text-align: center;"><b>OR</b></p> <p><i>If the Bidder has designed, supplied, installed &amp; commissioned and tested a cumulative achievement of 500 kWp of Solar Power Plants in Govt. aided/Govt. Institution/ Private sector etc. with Work Order awarded in Bidder's Name/Firm and commissioned 4 Month prior to Bid Opening date.</i></p>	15
2	<i>If the Bidder has signed MOU with the party from Meghalaya to carry out the installation, commissioning and CMC and have successfully completed previous CMCs.</i>	5
3	<i>If the Bidder has service network and Local Office in Meghalaya.</i>	5
4	<i>If the Bidder have Minimum 2 Systems running successfully for last 2 years is must, beyond this, each additional system running for more than 2 years shall score 1 Marks and Maximum up to 5 Marks.</i>	5
5	<i>If the Bidder has ISO-9001 certification.</i>	5

**Tender Document for Design, Supply, Installation & Commissioning of Aggregate Capacity of 3.0 MWp under CAPEX Mode Grid Connected Solar Rooftop PV Power Plants including 5 years Operation and Maintenance in Meghalaya**

6	<i>If the Bidder has ISO-14001 certification.</i>	5
7	<i>If the Bidder has OHSAS-18001 certification.</i>	5
8	<i>If the Bidder has Trade License and GST Registration/Certification in the state of Meghalaya.</i>	10
9	<i>If Bidder has Certificates of Merit/Award in recognition of satisfactory installation and functioning of Solar Power Projects from State Government/PSUs/State Nodal Agency (SNAs) or Government of India (GoI).</i>	10
10	<i>If the Bidder is bidding for 500kW to 1MW.</i>	5
11	<i>If Bidder have approved Test Certificates of <b>Modules, Inverters, Junction Box, Cables, Remote Monitoring</b> etc. of the plant from MNRE approved Test Centres/NABL/BIS/IEC accredited testing-calibration laboratories. In case of imported power conditioning units, these should be approved by international test house. <b>(Marks should be allotted on equal basis of each certificates).</b></i>	20
12	<i>If Bidder Have Module, which will carry a performance warranty more than 90% for 10 Years and more than 80% during next 15 Years and shall not be more than 1% degradation in any year.</i>	10

**7.5 Step III - Evaluation of Financial Bid:**

- 7.5.1** Financial Bid of the Eligible Bidder shall be opened online in presence of the representative of such Eligible Bidder, who wish to be present, on date as may be intimated by Nodal Agency to the Bidder through Nodal Agency's website.
- 7.5.2** The evaluation of Financial Bid shall be carried out based on the information furnished in Financial Bid Format. The Financial Bid submitted by the Bidders shall be scrutinized to ensure conformity with the RFP. Any Bid not meeting any of the requirements of this RFP may cause the Bid to be considered "Non-responsive" at the sole decision of the MNREDA.
- 7.5.3** The Discount percentage rate on MNRE Benchmark rates shall be considered up to two (2) decimal places.

**7.6 Step IV – Successful Bidder(s) Selection:**

- 7.6.1** Based on Discount percentage rate on MNRE Benchmark Project Cost quoted by the

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Bidders applicable for CAPEX Mode, MNREDA shall arrange the bids in the ascending order i.e. L1, L2, L3, \_ (L1 being the highest discount percentage rate quoted).

### **7.7 Capacity Allocation:**

- 7.7.1** The L1 Bidder under shall automatically be considered successful Bidders and shall be allocated the capacity quoted by them subject to a maximum of 1,000 kWp in CAPEX Mode.
- 7.7.2** MNREDA, on its own discretion, would then shortlist many Bidders in the ascending order of their financial quotes.
- 7.7.3** All the qualified Bidders except the L1 Bidder will be given seven (7) days from the date of identification of L1 Bidder to give their consent to execute the work at L1 Quote, failing which it will be assumed that they are not interested to match L1 quote. MNREDA as its sole discretion may increase the timeline as indicated above. The qualified Bidders who will agree to match the L1 quote within the specified timeliness shall be considered as 'Shortlisted Developers'.
- 7.7.4** Thereafter, MNREDA shall arrange the list of 'Shortlisted Developers' in ascending order i.e. L1, L2, L3, \_ \_ \_ (L1 being the highest discount percentage rate quoted). The ascending list of 'Shortlisted Developers' shall be in the decreasing order of Discount percentage rate offered i.e. higher discount rate quote will come first.
- 7.7.5** After arranging the list of 'Shortlisted Developers', MNREDA shall start allocating the capacity in the ascending order. The capacity allocation shall be lower of the capacity quoted or 20% of the aggregate capacity determined.
- 7.7.6** The quantity allocation shall continue till the available capacity with MNREDA is exhausted under the CAPEX Mode. The Developers to which complete quantity quoted (or partial subject to minimum bid quantity lot) is allotted shall be termed as 'Successful Developers', whereas those 'Shortlisted Bidders', who will not get any allocation in the first round shall be considered under 'Waitlist Developers'.
- 7.7.7** MNREDA shall undertake review of the progress made by 'Successful Developers' within a period of Fifteen (15) days from the date of issue of Letter of Award. In case, a 'Successful Developer' is unable to submit to MNREDA, duly completed applications of at least one-third of the originally allotted quantity, then one-third of the total allotted quantity of that 'Successful Developer' shall be taken back and offered to 'Waitlisted Developers' in the ascending order.
- 7.7.8** If the capacity remains unallocated MNREDA may re-distribute such capacity among the successful bidders (to whom capacity is already allocated) in orderly manner at its sole discretion.
- 7.7.9** If the successful bidder(s), to whom Allocation Letter has been issued does not fulfil any of the conditions specified in bid document, the MNREDA reserves the right to annul/cancel the Letter of Award of such successful bidder.

7.7.10 MNREDA will review the performance of the selected bidder(s) including L1 bidder(s), to whom Allocation Letter has been issued. If found unsatisfactory, MNREDA at its sole discretion may withdraw the work from such non-performing bidder and allocate the capacity to other performing bidders in orderly manner as per above. MNREDA reserves right to forfeit security deposit & PBG of such non-performing bidder as applicable.

7.7.11 MNREDA, at any time, will review the progress of installations in each category and suitably redistribute the capacities at its sole discretion in the interest of the project. Such redistributed capacities will be allocated in orderly manner as per above.

## **8 TECHNICAL SPECIFICATIONS:**

8.1 The proposed projects shall be commissioned as per the technical specifications given below. Any shortcomings will lead to cancellation of subsidy in full or part as decided by MNREDA its decision will be final and binding on the bidder.

8.2 The Bidder while designing, supplying, installing, commissioning and undertaking O&M activities in respect of the grid connected rooftop solar PV project under this tender shall comply with all applicable technical specifications for rooftop solar PV as required by MNRE, GoI and also all regulations, rules, codes, procedures as specified by Central Electricity Authority (CEA), Central Electricity Regulatory Commission (CERC), Meghalaya State Electricity Regulatory Commission (MSERC), or any other authority in this regard.

8.3 **Definition:** A Grid Tied Solar Rooftop Photo Voltaic (SPV) power plant consists of SPV array, Module Mounting Structure, Power Conditioning Unit (PCU) consisting of Maximum Power Point Tracker (MPPT), Inverter, and Controls & Protections, Interconnect cables and switches. PV Array is mounted on a suitable structure. Grid tied SPV system is without battery and should be designed with necessary features to supplement the grid power during day time. Components and parts used in the SPV power plants including the PV modules, metallic structures, cables, junction box, switches, PCUs etc., should conform to the BIS or IEC or international specifications, wherever such specifications are available and applicable. Solar PV systems shall consist of following equipment/components:

- Solar PV modules consisting of required number of Crystalline PV modules
- Grid interactive Power Conditioning Unit with Remote Monitoring System
- Mounting structures
- Junction Boxes
- Earthing and lightning protections
- IR/UV protected PVC Cables, pipes and accessories

### **8.3.1 Solar Photovoltaic Modules:**

- The PV modules used should be made in India.
- The PV modules used must qualify to the latest edition of IEC PV module qualification test to equivalent BIS standards Crystalline Silicon Solar Cell Modules IEC:61215/IS:14286. In addition, the modules must conform to IEC: 61730 Part-2 requirements for construction & Part-2 requirements for testing, for safety qualification or equivalent.
- For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC: 61701/IS:61701.
- The total solar PV array capacity should not exceed allocated capacity (kWp) and should comprise of solar crystalline modules of minimum 250Wp and above wattage. Module capacity less than minimum 250 watts should not be accepted.
- Protective devices against surges at the PV module shall be provided. Low voltage drop by pass diodes shall be provided.
- PV modules must be tested and approved by one of the IEC authorized test centres.
- The module frames shall be made of corrosion resistant materials, preferably having anodized Aluminium.
- The bidder shall carefully design & accommodate requisite numbers of the modules to achieve the rated power in his bid. MNREDA/Owner shall allow only minor changes at the time of execution.

**8.3.2 Other general requirement for the PV modules and subsystems shall be the following:**

- The rated output power of any supplied module shall have tolerance of +/-3%.
- The peak-power point voltage and the peak-power point current of any supplied module and/or any module string (series connected modules) shall not vary by more than 2 (two) per cent from the respective arithmetic means for all modules and/or for all module strings.
- The module shall be provided with a junction box with either provision of external screw terminal connection or sealed type and with arrangement for provision of by-pass diode. The box shall have hinged, weather proof lid with captive screws and cable gland entry points or may be of sealed type and IP-65 rated.
- I-V curves at STC should be provided by bidder.

**8.3.3 Modules deployed must use an RFID identification tag. The following information must be mentioned in the RFID used on each module (This can be inside or outside the laminate but must be able to withstand harsh environmental conditions).**

- Name of the manufacturer of the PV module
  - Name of the manufacturer of Solar Cells
  - Month & year of the manufacture (separate for solar cells and modules)
  - Country of origin (separately for solar cells and module)
  - I-V curve for the module Wattage,  $I_m$ ,  $V_m$  and FF for the module
  - Unique Serial No. and Model No. of the module
  - Date and year of obtaining IEC PV module qualification certificate
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- Name of the test lab issuing IEC certificate

### **8.3.4 Other relevant information on traceability of solar cells and module as per ISO: 9001 and ISO:14001.**

#### **8.3.4.1 Warranties:**

##### **8.3.4.1.1 Material warranty:**

- I. Material Warranty is defined as: The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than five (5) years from the date of sale to the customer.
- II. Defects and/or failures due to manufacturing.
- III. Defects and/or failures due to quality of materials
- IV. Non- conformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the Owners sole option

**8.3.4.1.2 Performance warranty:** The predicted electrical degradation of power generated not exceeding 20% of the minimum rated power over the 25 years' period and not more than 10% after ten years' period of the full rated original output.

#### **8.3.5 Array Structure:**

**8.3.5.1** Hot dip galvanized MS mounting structures may be used for mounting the modules/ panels/arrays. Each structure should have angle of inclination as per the site condition to take maximum insolation. However, to accommodate more capacity the angle inclination may be reduced until the plant meets the specified performance ratio requirements.

**8.3.5.2** The Mounting structures shall be so designed to withstand the speed for the wind zone of the location where a PV system is proposed to be installed (like Meghalaya-wind speed of 180km/hour). It may be ensured that the design has been certified by a recognized Lab/ Institution in this regard and submit wind loading calculation sheet to MNREDA. Suitable fastening arrangement such as grouting and calming should be provided to secure the installation against the specific wind speed.

**8.3.5.3** The mounting structure steel shall be as per latest IS: 2062 (1992) and galvanization of the mounting structure shall comply of latest IS:4759.

**8.3.5.4** Structural materials shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts. Aluminium structures can also be used which can withstand the wind speed of respective wind zone. Necessary protection towards rusting need to be provided either by coating or anodization.

**8.3.5.5** The fasteners used should be made up of stainless steel. The structures shall be

designed to allow easy replacement of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPVpanels.

**8.3.5.6** Regarding civil structures, the bidder need to take care of the load bearing capacity of the roof and need arrange suitable structures based on the quality of roof.

**8.3.5.7** The total load of the structure (when installed with PV modules) on the terrace should be less than 60kg/m<sup>2</sup>.

**8.3.5.8** The minimum clearance of the structure from the roof level should be 300mm.

### **8.3.6 Junction Boxes:**

**8.3.6.1** The junction boxes are to be provided in the PV array for termination of connecting cables. The Junction Boxes (JBs) shall be made of GRP/FRP/Powder Coated Aluminium/Cast Aluminium Alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JB shall be such that input & output termination can be made through suitable cable glands.

**8.3.6.2** Copper bus bars/terminal blocks housed in the junction box with suitable termination threads conforming to IP65 standard and IEC:62208 Hinged doors with EPDM rubber gasket to prevent water entry. Single/double compression cable glands. Provision of earthing. It should be placed at 5 feet height or above for ease of accessibility.

**8.3.6.3** Each Junction Box shall have High-quality Suitable Capacity Metal Oxide Varistors (MOVs/ SPDs, suitable Reverse Blocking Diodes. The Junction Boxes shall have suitable arrangement monitoring and disconnection for each of the groups.

**8.3.6.4** Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification.

### **8.3.7 DC Distribution Board:**

**8.3.7.1** DC Distribution panel to receive the DC output from the array field.

**8.3.7.2** DC DPBs shall have sheet from enclosure of dust & vermin proof conform to IP 65 protection. The bus bars are made of copper of desired size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the PCU along with necessary surge arrestors.

### **8.3.8 AC Distribution Panel Board:**

**8.3.8.1** AC Distribution Panel Board (DPB) shall control the AC power from PCU/ inverter and should have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar while in grid tied mode.

**8.3.8.2** All switches and the circuit breakers, connectors should conform to IEC 60947, part I, II and III/ IS60947 part I, II and III.



**8.3.8.3** The changeover switches (if required), cabling work should be undertaken by the bidder as part of the project.

**8.3.8.4** All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air-insulated, cubical type suitable for operation on three phase/single phases, 415 or 230 volts, 50 Hz.

**8.3.8.5** The panels shall be designed for minimum expected ambient temperature of 45°C, 80% humidity and dusty weather.

**8.3.8.6** All indoor panels will have protection of IP54 or better. All outdoor panels will have protection of IP65 or better.

**8.3.8.7** Should conform to Indian Electricity Act and rules (till last amendment).

**8.3.8.8** All the 415V AC or 230 Volts devices / equipment like bus support insulators, circuit breakers, SPDs, VTs etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions:

Variation in Supply Voltage	+/- 10%
Variation in Supply Frequency	+/- 3%

**8.3.9 PCU / Array Size Ratio:**

**8.3.9.1** The combined wattage of all inverters should not be less than rated capacity of power plant under Standard Test Conditions.

**8.3.9.2** Maximum power point tracker shall be integrated in the PCU/inverter to maximize energy drawn from the array.

**8.3.10 PCU/Inverter:**

As SPV array produced direct current electricity, it is necessary to convert this direct current into alternating current and adjust the voltage levels to match the grid voltage. 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 (PCU)". In addition, the PCU shall also house MPPT (Maximum Power Point Tracker), an interface between Solar PV array & the Inverter, to the power conditioning unit/inverter should also be DG set interactive, if necessary. Inverter output should be compatible with the grid frequency. Typical technical features of the inverter shall be as follows:

<b>Switching devices</b>	IGBT/MOSFET
<b>Control</b>	Microprocessor/DSP
<b>Nominal AC output voltage &amp; frequency</b>	415V, 3 Phase, 50 Hz (In case, single phase inverters are offered, suitable arrangement for balancing the phases must be made).
<b>Output frequency</b>	50 Hz

<b>Grid frequency synchronization range</b>	+3 Hz or more
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<b>Ambient temperature considered</b>	-20°C to 50°C
<b>Humidity</b>	95% Non-condensing
<b>Protection of enclosure</b>	IP-20 (Minimum) for indoor IP-65 (Minimum) for outdoor
<b>Grid frequency tolerance range</b>	+3 Hz or more
<b>Grid voltage tolerance</b>	-20% to +15%
<b>No-load losses</b>	Less than 1% of rated power
<b>Inverter efficiency (Minimum)</b>	>93% (In case of 10kW or above) >90% (In case of less than 10kW)
<b>THD</b>	<3%
<b>PF</b>	>0.9

- 8.3.10.1** Three phase PCU/ inverter shall be used with each power plant system (10kW and/or above) but in case of less than 10kW single phase inverter can be used.
- 8.3.10.2** PCU/inverter shall be capable of complete automatic operation including wake-up, synchronization & shutdown.
- 8.3.10.3** The output of power factor of PCU inverter is suitable for all voltage ranges or sink of reactive power, inverters should have internal protection arrangement against any sustainable fault in feeder line and against the lightning on feeder.
- 8.3.10.4** Built-in meter and data logger to monitor plant performance through external computer shall be provided.
- 8.3.10.5** Successful Bidders shall be responsible for galvanic isolation of solar roof top power plant (>100kW) with electrical grid or LT panel.
- 8.3.10.6** The power conditioning units / inverters should comply with applicable IEC/ equivalent BIS standard for efficiency measurements and environmental tests as per standard codes IEC 61683/IS 61683 and IEC: 60068-2 (1,2,14,30)/Equivalent BIS Std.
- 8.3.10.7** The junction boxes/enclosures should be IP 65 (for outdoor)/ IP 54 (indoor) and as per IEC: 529 specifications.
- 8.3.10.8** ***The PCU/ inverters should be tested from the MNRE approved test Centres/ NABL/BIS /IEC accredited testing- calibration laboratories. In case of imported power conditioning units, these should be approved by international test houses.***

**8.3.11 Integration of PV Power with Grid:**

The output power from SPV would be fed to the inverters which converts DC produced by SPV array to AC and feeds it into the main electricity grid after synchronization. In case of grid failure, or low or high voltage, solar

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PV system shall be out of synchronization and shall be disconnected from the grid. Once the DG set comes into service PV system shall again be synchronized with DG supply and load requirement would be met to the extent of availability of power. 4 pole isolation of inverter output with respect to the grid/ DG power connection need to be provided.

**8.3.12** On request of beneficiary, bidder may provide Grid connected SPV system with battery backup but safety requirements like provision of “islanding” in case of grid failure and isolation of battery power supply when grid is disconnected should have to be incorporated and single line diagram of actual installation indicating all components shall be conspicuously displayed in SPV plant. Bidder shall take prior approval of such design/ drawing from MNREDA/ MePDCL before installation & commissioning of the system. All additional costs for providing battery backup and associated safety features shall be separately borne by the beneficiary and in any case, it shall not be part of the quoted project cost.

**8.3.13 Data Acquisition System / Plant Monitoring:**

**8.3.13.1** Inverter should be communicable on Modbus protocol for each of the solar PV plant. Online Monitoring is compulsory for all systems more than 10 kWp capacity.

**8.3.13.2** Data Logging Provision for plant control and monitoring, time and date stamped system data logs for analysis with the high quality, suitable Metering and Instrumentation for display of systems parameters and status indication to be provided for any Solar Project with capacity more than 10kWp.

**8.3.13.3** **Solar Irradiance:** An integrating Pyranometer/ Solar cell based irradiation sensor (along with calibration certificate) provided, with the sensor mounted in the plane of the array. Readout integrated with data logging system for any Solar Project with capacity more than 50kWp.

**8.3.13.4** **Temperature:** Temperature probes for recording the Solar panel temperature and/or ambient temperature to be provided complete with readouts integrated with the data logging system for any Solar Project with capacity more than 50kWp.

**8.3.13.5** The following parameters should be accessible via the operating interface display in real time separately (for any Solar Project with capacity more than 50 kWp) or should be displayed in PCU for other solar power plant:

- AC Voltage
- AC Output
- Current Output Power
- Power Factor
- DC Input Voltage
- DC Input Current
- Time Active
- Time Disabled
- Time Idle
- Power Produced

- Protective function limits (Viz. AC Over voltage, AC Under voltage, Over frequency, Under frequency ground fault, PV starting voltage, PV stopping voltage).

**8.3.13.6** Digital Energy Meters to log the actual value of AC/ DC voltage, Current & Energy generated by the PV system provided. Energy meter along with CT/PT should be in accordance with applicable CEA and /or MSERC Regulations.

**8.3.13.7** Computerized DC String/Array monitoring and AC output monitoring shall be provided as part of the inverter and/or string/array combiner box or separately for any Solar Project with capacity more than 50kWp.

**8.3.13.8** String and array DC Voltage, Current and Power, Inverter AC output voltage and current(All3phasesandlines),ACpower(Active,ReactiveandApparent),Power Factor and AC energy (All 3 phases and cumulative) and frequency shall be monitored for any Solar Project with capacity more than 50kWp.

**8.3.13.9** Computerized AC energy monitoring shall be in addition to the digital AC energy meter for any Solar Project with capacity more than 50kWp.

**8.3.13.10** The data shall be recorded in a common worksheet chronologically date wise. The data file shall be MS Excel compatible. The data shall be represented in both tabular and graphical form for any Solar Project with capacity more than 50kWp.

**8.3.13.11** All instantaneous data shall be shown on the computer screen for any Solar Project with capacity more than 50kWp.

**8.3.13.12** Software shall be provided for USB download and analysis of DC and AC parametric data for individual plant for any Solar Project with capacity more than 50kWp.

**8.3.13.13** Provision for Internet monitoring and download of data shall be also incorporated for any Solar Project with capacity more than 10kWp.

**8.3.13.14** Remote Server and Software for centralized Internet monitoring system shall be also provided for download and analysis of cumulative data of all the plants and the data of the solar radiation and temperature monitoring system for any Solar Project with capacity more than 50kWp.

**8.3.13.15** Ambient / Solar PV module back surface temperature shall be also monitored on continuous basis for any Solar Project with capacity more than 50kWp.

**8.3.13.16** Simultaneous monitoring of DC and AC electrical voltage, current, power, energy and other data of the plant for correlation with solar and environment data shall be provided for any Solar Project with capacity more than 50kWp.

**8.3.13.17** Remote Monitoring and data acquisition through Remote Monitoring System software at the /MNREDA location with latest software/hardware configuration and service connectivity for online / real time data monitoring/control complete to be supplied and operation and maintenance/control to be ensured by the supplier for any Solar Project with capacity more than 10 kWp. The Developer shall keep the provision for interfacing these data on MNREDA server and portal in future by providing login id and password to MNREDA.

**8.3.13.18** Net / SIM based Data logging system shall be provided. The data storage facility should be provided in the Inverter. The net charges will have to be borne by the developer till the completion of compulsory O&M period (5 years for CAPEX Mode).

**8.3.14 Transformer “if required” and Metering:**

**8.3.14.1** Dry/oil type transformer of relevant kVA, 11kV/415V, 50Hz Step-up along with all protections, switch gears, Vacuum circuit breakers, cables etc. along with required civil work.

**8.3.14.2** The bidirectional electronic energy meter (of appropriate class in compliance to MSERC’s applicable Regulations) shall be installed for the measurement of import/Export of energy as per Net Metering Guidelines of MSERC.

**8.3.14.3** The bidder must take approval/NOC from the MePDCL and/or Electrical Inspector for the connectivity, technical feasibility, and synchronization of SPV plant with distribution network and submit the same to MNREDA before commissioning of SPV plant as per applicable MSERC Regulations and Interconnection Framework notified by MePDCL/Government of Meghalaya.

**8.3.14.4** Reverse power relay shall be provided by bidder (if necessary), as per the MePDCL’s requirement.

**8.3.15 Power Consumption:** Regarding the generated power consumption, priority need to give for internal consumption first and thereafter any excess power can be exported to grid. Finalization of tariff is not under the purview of MNREDA or MNRE. Decisions of appropriate authority like MePDCL and MSERC may be followed.

**8.3.16 Protections:** The system should be provided with all necessary protections like earthing, Lightning, and grid islanding as follows:

**8.3.16.1 Lightning Protection:** The SPV power plants shall be provided with lightning & overvoltage 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 overvoltage can be lightning, atmospheric 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 standard. 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.

**8.3.16.2 Surge Protection:** Internal surge protection shall consist of three MOV type surge arrestors connected from +ve and -ve terminals to earth (via Y arrangement).

**8.3.16.3 Earthing Protection:**

- i. Each array structure of the PV yard should be grounded/earthed properly as per IS:3043-1987. In addition to this, lightning arrester/masts should also be earthed inside the array field. Earth Resistance shall be tested in presence of the representative of MNREDA as and when required after earthing by calibrated earth tester. PCU, ACDB and DCDB should also be earthed properly.
  - ii. Earth resistances shall not be more than 5 ohms. It shall be ensured that all the earthing
-

points are bonded together to make them at the same potential.

- iii. In the event of a power failure on the electric grid, it is required that any independent power-producing inverters attached to the grid turn off in a short period of time. This prevents the DC-to-AC inverters from continuing to feed power into small sections of the grid, known as "islands." Powered islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. The Rooftop PV system shall be equipped with islanding protection. In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided.
- iv. A manual disconnect pole isolation switch beside automatic disconnection to grid would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel.

**8.3.17 Cables: Cables of appropriate size to be used in the system shall have the following characteristics:**

- Shall meet IEC 60227/IS 694, IEC 60502/IS 1554 standards
- Temp. Range: -10°C to +80°C.
- Voltage rating 660/1000V
- Excellent resistance to heat, cold, water, oil, abrasion, UV radiation
- Flexible
- Sizes of cables between array interconnections, array to junction boxes, junction boxes to inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire solar system to the minimum. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use.
- Cable Routing/Marking: All cable/wires are to be routed in a GI cable tray and suitably tagged and marked in proper manner by good quality ferule or by other means so that the cable is easily identified. The cable should be so selected that it should be compatible up to the life of the solar PV panels i.e. 25 years.
- The ratings given are approximate. Bidder to indicate size and length as per system design requirement. All the cables required for the plant provided by the bidder. Any change in cable sizes if desired by the bidder/approved after citing appropriate reasons. All cable schedules/layout drawings approved prior to installation.
- Multi Strand, annealed high conductivity copper conductor, PVC type 'A' pressure extruded insulation or XLPE insulation. Overall PVC/XLPE insulation for UV protection. Armored cable for underground laying. All cable trays including covers to be provided. All cables shall conform to latest edition of IEC/equivalent BIS standards as specified below: BoS item / component Standard Description, Standard Number, Cables

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General Test and Measuring Methods, PVC/XLPE insulated cables for working Voltage upto and including 1100V, UV resistant for outdoor installation IS/IEC 69947.

- The size of each type of DC cable selected shall be based on minimum voltage drop however; the maximum drop shall be limited to 1%.
- The size of each type of AC cable selected shall be based on minimum voltage drop however; the maximum drop shall be limited to 2%.

**8.3.18 Connectivity:** The maximum capacity for interconnection with the grid at a specific voltage level shall be as specified in the Distribution Code/Supply Code of the State and amended from time to time. The grid connected rooftop solar photovoltaic power generation plants up to a maximum capacity of 500 kWp per project/system to generate electricity/power would be eligible under the Programme. The minimum capacity of 1 kWp would be eligible under this programme.

**8.3.19 Tools & Tackles and Spares:**

**8.3.19.1** After completion of installation & commissioning of the power plant, necessary tools & tackles are to be provided free of cost by the bidder for maintenance purpose. List of tools and tackles to be supplied by the bidder for approval of specifications and make from MNREDA.

**8.3.19.2** A list of requisite spares in case of PCU/inverter comprising of a set of control logic cards, IGBT driver card etc. Junction Boxes. Fuses, MOVs/arrestors, MCCB etc. along with spares of PV modules be indicated, which shall be supplied along with the equipment. A minimum set of spares shall be maintained in the plant itself for the entire period of warranty and Operation & Maintenance, which upon its use shall be replenished.

**8.3.20 Danger Boards and Signages:** Danger boards should be provided as and where necessary as per IE Act. /IE rules as amended up to date. Three signages shall be provided one each at control room, solar array area and main entry from administrative block. Text of the signage may be finalized in consultation with MNREDA.

**8.3.21 Drawings and Manuals:**

**8.3.21.1** Two sets of Engineering, electrical drawings and Installation and O&M manuals are to be supplied. Bidders shall provide complete technical data sheets for each equipment giving details of the specifications along with make/makes in their bid along with basic design of the power plant and power evacuation, synchronization along with protection equipment.

**8.3.21.2** Approved ISI and reputed makes for equipment be used.

**8.3.21.3** For complete electro-mechanical works, bidders shall supply completed design, details and drawings for

approval to MNREDA before progressing with the installation work.

**8.3.22 Planning & Designing:**

**8.3.22.1** The Bidder should carry out Shadow Analysis at the site and accordingly design strings & arrays layout considering optimal usage of space, material and labour. The bidders should submit the array layout drawings along with Shadow Analysis Report to MNREDA for approval.

**8.3.22.2** MNREDA reserves the right to modify the landscaping design, Layout and specification of sub-systems and components at any stage as per local site conditions/requirements.

**8.3.22.3** The Bidders shall submit preliminary drawing for approval & based on any modification or recommendation, if any. The bidder shall submit three sets and soft copy in CD of final drawing for formal approval to proceed with construction work.

**8.3.23 Drawings to be furnished by Bidder after Award of Contract:**

**8.3.23.1** The Contractor shall furnish the following drawings Award/Intent and obtain approval

**8.3.23.2** General arrangement and dimensioned layout

**8.3.23.3** Schematic drawings showing the requirement of SV panel, Power conditioning Unit(s) / inverter, Junction Boxes, AC and DC Distribution Boards, meters etc.

**8.3.23.4** Structural drawing along with foundation details for the structure.

**8.3.23.5** Itemized bill of material for complete SPV plant covering all the components and associated accessories.

**8.3.23.6** Layout of solar Power Array

**8.3.23.7** Shadow analysis of the roof

**8.3.24 Solar PV system on the rooftop for meeting the annual energy requirement:** Capacity of the Solar PV system on the rooftop of a building shall be based on contract demand/ connected load of the end user and shall be within the limits as per prevailing guidelines of MSERC/MePDCL.

**8.3.25 Safety Measures:** The bidder shall take entire responsibility for electrical safety of the installation(s) including connectivity with the grid and follow all the safety rules & regulations applicable as per Electricity Act, 2003 and CEA guidelines etc.

**8.3.26 Display Board:** The bidder must display a board at the project site mentioning the following:

**8.3.26.1** Plant Name, Capacity, Location, Date of commissioning, estimated Power generation.

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**8.3.26.2** Financial Assistance details from MNREDA/MNRE/Any other financial institution apart from loan. This information shall not be limited to project site but also be displayed at site offices/head quarter offices of the successful bidder.

**8.3.26.3** The size and type of board and display shall be approved by MNREDA before site inspection.

**8.3.27 Quality Certification, Standards and Testing for Grid-connected Rooftop Solar PV Systems/Power Plants:** Quality certification and standards for grid-connected rooftop solar PV systems are essential for the successful mass-scale implementation of this technology. It is also imperative to put in place an efficient and rigorous monitoring mechanism, adherence to these standards. Hence, all components of grid connected rooftop solar PV system/ plant must conform to the relevant standards and certifications given below:

IEC Standards	Descriptions
<b>Solar Modules/Panels</b>	
IEC 61215/ IS 14286	Design Qualification and Type Approval for Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
IEC 61701	Salt Mist Corrosion Testing of Photovoltaic (PV) Modules
IEC 61853- Part 1/ IS 16170: Part 1	Photovoltaic (PV) module performance testing and energy rating –: Irradiance and temperature performance measurements, and power rating
IEC 62716	Photovoltaic (PV) Modules – Ammonia (NH <sub>3</sub> ) Corrosion Testing (As per the site condition like dairies, toilets)
IEC 61730-1,2	Photovoltaic (PV) Module Safety Qualification – Part 1: Requirements for Construction, Part 2: Requirements for Testing
IEC 62804	Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation. IEC TS 62804-1: Part 1: Crystalline silicon (mandatory for applications where the system voltage is > 600 VDC and advisory for installations where the system voltage is < 600 VDC)
IEC 62759-1	Photovoltaic (PV) modules – Transportation testing, Part 1: Transportation and shipping of module package units
<b>Solar PV Inverters</b>	

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IEC 62109-1, IEC 62109-2	Safety of power converters for use in photovoltaic power systems – Part 1: General requirements, and Safety of power converters for use in photovoltaic power systems Part 2: Requirements for inverters. Safety compliance (Protection degree IP 65 for outdoor mounting, IP 54 for indoor mounting)
IEC/IS 61683 (as applicable)	Photovoltaic Systems – Power conditioners: Procedure for Measuring Efficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions)
BS EN 50530 (as applicable)	Overall efficiency of grid-connected photovoltaic inverters: This European Standard provides a procedure for the measurement of the accuracy of the maximum power point tracking (MPPT) of inverters, which are used in grid-connected photovoltaic systems. In that case the inverter energizes a low voltage grid of stable AC voltage and constant frequency. Both the static and dynamic MPPT efficiency is considered.
IEC 62116/ UL 1741/ IEEE 1547 (as applicable)	Utility-interconnected Photovoltaic Inverters - Test Procedure of Islanding Prevention Measures
IEC 60255-27	Measuring relays and protection equipment – Part 27: Product safety requirements
IEC 60068-2 (1, 2, 14, 27, 30 & 64)	Environmental Testing of PV System – Power Conditioners and Inverters a) IEC 60068-2-1: Environmental testing - Part 2-1: Tests - Test A: Cold b) IEC 60068-2-2: Environmental testing - Part 2-2: Tests - Test B: Dry heat c) IEC 60068-2-14: Environmental testing - Part 2-14: Tests - Test N: Change of temperature d) IEC 60068-2-27: Environmental testing - Part 2- 27: Tests - Test Ea and guidance: Shock e) IEC 60068-2-30: Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle) f) IEC 60068-2-64: Environmental testing - Part 2-64: Tests - Test Fh: Vibration, broadband random and guidance
IEC 61000 – 2,3,5 (as applicable)	Electromagnetic Interference (EMI) and Electromagnetic Compatibility (EMC) testing of PV Inverters
<b>Fuses</b>	
IS/IEC 60947 (Part 1, 2 & 3), EN 50521	General safety requirements for connectors, switches, circuit breakers (AC/DC): a) Low-voltage Switchgear and Control-gear, Part 1: General rules b) Low-Voltage Switchgear and Control- gear, Part 2: Circuit Breakers c) Low-voltage switchgear and Control-gear, Part 3: Switches, disconnectors, switch-

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	disconnectors and fuse-combination units d) EN 50521:
	Connectors for photovoltaic systems – Safety requirements and tests
IEC 60269-6	Low-voltage fuses - Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems
<b>Surge Arrestors</b>	
IEC 62305-4	Lightning Protection Standard
IEC 60364-5-53/ IS 15086-5 (SPD)	Electrical installations of buildings - Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control
IEC 61643-11:2011	Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods
<b>Cables</b>	
IEC 60227/IS 694, IEC 60502/IS 1554 (Part 1 & 2)/ IEC69947	General test and measuring method for PVC (Polyvinyl chloride) insulated cables (for working voltages up to and including 1100 V, and UV resistant for outdoor installation)
BS EN 50618	Electric cables for photovoltaic systems (BT(DE/NOT)258), mainly for DC Cables
<b>Earthing /Lightning</b>	
IEC 62561 Series (Chemical earthing)	IEC 62561-1 Lightning protection system components (LPSC) - Part 1: Requirements for connection components IEC 62561-2 Lightning protection system components (LPSC) - Part 2: Requirements for conductors and earth electrodes IEC 62561-7 Lightning protection system components (LPSC) - Part 7: Requirements for earthing enhancing compounds
<b>Junction Boxes</b>	
IEC 60529	Junction boxes and solar panel terminal boxes shall be of the thermo-plastic type with IP 65 protection for outdoor use, and IP 54 protection for indoor use
<b>Energy Meter</b>	

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IS 16444 or as specified by the DISCOMs	A.C. Static direct connected watt-hour Smart Meter Class 1 and 2 — Specification (with Import & Export/Net energy measurements)
<b>Solar PV Roof Mounting Structure</b>	
IS 2062/IS 4759	Material for the structure mounting

**Note-** Equivalent standards may be used for different system components of the plants.

In case of clarification following person/agencies may be contacted.

- Ministry of New and Renewable Energy (Govt. of India)
- National Institute of Solar Energy(NISE)
- The Energy & Resources Institute(TERI)
- TUV Rheinland

**9 COMMERCIAL TERMS, CONDITIONS & OTHER PROVISIONS:**

**9.1 CAPEX Mode:** Financial Bid should be quoted in 'Discount percentage rate (up to two decimal places) on the MNRE Benchmark Rates as mentioned in the subsequent clause, as per format of **Annexure-XII**. The Financial Bid should be made after taking into consideration all costs involved in the project i.e. identification of buildings, obtaining No Objection Certificate (NOC) from MePDCL for grid connectivity, completed design, supply, installation, testing, commissioning, operation & maintenance upto 5 years after commissioning including all taxes and duties of Central & State Governments, insurance, etc.

**9.2 MNRE Benchmark (FY 2019-20) Cost under CFA Scheme for the purpose of this Tender is as under:**

Sub-Category	Capacity of Project (kW)	Benchmark cost (Rs/ Wp)
A	1-10 kWp	59.00
B	>10-100 kWp	53.00
C	>100-500 kWp	50.00

**9.3** Price quoted by the bidder shall remain firm & fixed and shall be binding on the Successful Bidder till completion of Comprehensive Maintenance period irrespective of actual cost of execution of the project. No escalation will be granted on any reason whatsoever. The bidder shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever.

**9.4** The offer must be kept valid for a period of 365 days from the last date of bid submission. No escalation clause would be accepted. The validity can be further extended with mutual consent.

**9.5** Bids with non-conformity to above will be considered as non-responsive.

**9.6 Cost of Bidding:** The bidder shall bear all the costs associated with the preparation and submission of his offer, and the Agency will in no case be responsible or liable for those costs, under any conditions. The Bidder shall not be entitled to claim any costs, charges and expenses of and incidental to or incurred by him through or in connection with submission of bid even though MNREDA may elect to modify/withdraw the invitation of Bid.

**9.7 Earnest Money Deposit (EMD)/ Bid Security:**

**9.7.1** The Bidder shall furnish Earnest Money Deposit as per below table in the form of Demand Draft/FDR/Bank Guarantee from a scheduled bank drawn in favour of **The Director, MNREDA payable at Shillong**.

Categories	EMD Amount/Bid Security
<b>CAPEX Mode (New Entrepreneurs)</b>	<b>Rs. 590/- per kWp</b> (Rupees Five Hundred Ninety Only) <b>(1% of total benchmark cost)</b>
<b>CAPEX Mode (Regular Vendors/General Category)</b>	<b>Rs. 1180/- per kWp</b> (Rupees One Thousand One Hundred Eighty only) <b>(2% of total Benchmark Cost)</b>

- 9.7.2** In case of inadequacy or non-submission of Bid Security amount, the tender shall be deemed to be disqualified and summarily rejected in the technical evaluation.
- 9.7.3** The initial validity of Bid Security shall be for a period of 365 Days from the last date of bid submission. The validity of Bid Security shall have to be suitably extended, if necessary on request by MNREDA, without which the tender/work order shall be rejected.
- 9.7.4** Request for adjustment of Earnest Money Deposit against any previous dues with MNREDA will not be considered.
- 9.7.5** Bid Security will be refunded to the unsuccessful bidders after finalization of the tender without any interest, within 30 days from the date of issuance of Letter of Award on bidder's request.
- 9.7.6** Bid Security of successful bidder will be returned after acceptance of Empanelment with MNREDA and submission of required Performance Bank Guarantee (PBG) of the requisite amount and in the format prescribed by MNREDA and after the receipt of confirmation of their PBG' from their respective banker, against the Letter of Award within 15 days from the date of such notification.
- 9.7.7** Exemption for payment of Bid Security amount will be given to Micro, Small & Medium Enterprises (MSMEs) registered with National Small Industries Corporation Ltd. (NSIC) or any other body specified by Ministry of MSME. However, relevant valid document / Certificate from NSIC or any other body specified by Ministry of MSME need to be submitted without which bidders are not entitled for any kind of exemption.
- 9.7.8** The EMD/Bid Security shall be denominated in Indian Rupees and shall:
- 9.7.8.1** at the Bidder's option, be in the form of either a demand draft, or a bank guarantee or FDR from any nationalized bank
- 9.7.8.2** be confirmed for payment by the branch of the bank giving the bank guarantee at **Shillong**
- 9.7.8.3** be submitted in its original form; copies will not be accepted; and remain valid for a minimum period of 12 months + 3 months claim period from the date of Technical bid opening, or beyond any period of extension subsequently requested by MNREDA.
- 9.7.9** ~~Empanelled Vendors shall sign and stamp the Letter of Allocation and return the signed &~~

stamped duplicate copy of the same to MNREDA within 30 days from the date of its issue

**9.7.10 EMD/Bid Security shall be forfeited without prejudice to the Bidder being liable for any further consequential loss or damage incurred to MNREDA under following circumstances:**

**9.7.10.1** Hundred percent (100%) of Bid Security amount, if a Bidder withdraws/revokes or cancels or unilaterally varies their bid in any manner during the period of bid validity specified in the tender document.

**9.7.10.2** Hundred percent (100%) of Bid Security amount, if the Successful Bidder fails to unconditionally accept the empanelment with MNREDA within 15 days from the date of such notification.

**9.7.10.3** Hundred percent (100%) of Bid Security amount, if the Successful Bidder fails to unconditionally accept the Allocation Letter within 15 days from the date of its issue.

**9.7.10.3** Hundred percent (100%) of Bid Security amount, if the Successful Bidder fails to furnish security deposit against empanelment period as specified in the tender document.

**9.8 Construction Performance Bank Guarantee (CPBG):**

**9.8.1** Within 15 days from the date of issue of Letter of Award (LoA) to the successful bidder, successful bidder must deposit Performance Bank Guarantee (CPBG) fees @ **10% of the project cost of sanction project capacity** to MNREDA as per **Annexure-VII** with validity till completion of 5 years' Maintenance period plus 3 months' claim period.

**9.8.2** Further, any delay in submission of CPBG beyond 90 days, MNREDA at its sole discretion may cancel the allocated capacity and forfeit 100% of Bid Security. However, total project completion period shall remain same.

**9.8.3** The CPBG shall be released after 5 years from the date of commissioning on compliance of entire obligations in the contract.

**9.8.4** In case the successful bidder is not able to furnish the CPBG for 5 years of validity. Then CPBG with initial validity period of 2 years may also be accepted by MNREDA provided the successful bidder shall renew/extend the CPBG, 30 days before the expiry of the same. If the successful bidder does not extend the CPBG, the same shall be forfeited by MNREDA.

**9.8.5 The CPBG shall be forfeited as follows without prejudice to the Bidder being liable for any further consequential loss or damage incurred to MNREDA:**

**9.8.5.1** If the Successful Bidder is not able to identify and commission the sanctioned projects to the satisfaction of MNREDA within sanctioned period, the proportionate CPBG amount submitted towards the capacity not commissioned by the Successful Bidder shall

be forfeited.

**9.8.5.2** Hundred Percent (100%) of PBG amount for the sanctioned capacity will be forfeited, if the Empanelled Vendor fails to commission the projects to the satisfaction of MNREDA, for the already identified locations, which are notified by MNREDA as part of the RfP or otherwise, and for which Allocation Letter/Sanction Letter has been issued.

**9.8.5.3** If the installed PV system does not perform during O&M period as per specifications given in this tender, respective PBG amounts submitted towards such capacity commissioned by the Successful Bidder shall be forfeited.

**9.8.5.4** In all the above cases corresponding non-commissioned capacity shall stand cancelled.

**9.8.6** Further, the said bidder may be black-listed for a period of one (01) year or more from participating in any of the bids invited by MNREDA. Also, MNREDA would be free to intimate such black-listing to various state/central utilities/ Ministry of Power/ Ministry of New & Renewable Energy/ State Governments/ other agencies not to consider the said agency for any assignment including of the same on websites.

**9.9 Delivery:** The materials must be delivered timely to the project site so as to complete the work within sanctioned period. MNREDA will not issue Form-C during procurement of solar equipment/ Items/Components.

**9.10 Quantity:** The quantity/ capacity mentioned in the tender might either increase up to 50% or decrease up to 20% subject to MNREDA's decision on analysis proposed by successful bidder.

**9.11 Subsidy Quantum:** *MNREDA will provide 70% CFA calculated at MNRE Benchmark rate x (100% - Discount percentage rate quoted by L1) for CAPEX Mode subject to release of same from MNRE. The tentative quantum of subsidy shall be computed as follows:*

Category	Eligible CFA		
	Up to 10kWp	>10kWp-100kWp	>100 – 500kWp
CAPEX Mode	70% x Rs. 59.00/Wp, x (100% - L1 percentage rate determined through bidding process)	70% x Rs. 53.00/Wp, x (100% - L1 percentage rate determined through bidding process)	70% x Rs. 50.00/Wp, x (100% - L1 percentage rate determined through bidding process)

**9.12 Subsidy Disbursement Schedule:** *The Tentative schedule of disbursement of subsidy shall be as follows subject to availability of fund from MNRE: -*

Sr. No.	Milestone	Percentage Subsidy to be released
1	Upfront subsidy against Bank Guarantee of amount equal to advance subsidy	20%



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	Successful commissioning of project by the bidder and acceptance by MNREDA	55%
2	Completion of first year of successful Maintenance by the bidder	5%
3	Completion of second year of successful Maintenance by the bidder	5%
4	Completion of third year of successful Maintenance by the bidder	5%
5	Completion of fourth year of successful Maintenance by the bidder	5%
6	Completion of fifth year of successful Maintenance by the bidder	5%

**9.12.1** Above mode of subsidy disbursement is subject to approval by MNRE, MNREDA and other competent authority.

**9.12.2** No subsidy shall be applicable for the projects completed after sanctioned period. Further, MNREDA also reserves right to extend sanction period on case to case basis at its sole discretion as per requirement of the project.

**9.12.3** Remaining cost of the project will be borne by the beneficiary i.e. Project Cost minus Subsidy.

**9.12.4** The successful bidder must ensure that this subsidy is only for new projects i.e. for projects where dispatch of material and related work has been started only after sanctioning of projects by MNREDA. Any roof on which projects have been installed before the issue of Allocation Letter/ Sanction Letter shall be construed as fraudulent activity in which case the bidder may be debarred from participating in MNREDA's future tender for a period as decided by the competent authority. However, such locations may be used for installation of additional capacity with the prior approval of MNREDA.

**9.13 Condition of Subsidy Release:** Subsidy shall be released subject to meeting following conditions:

**9.13.1** In order to avail advance subsidy, the bidder shall be required to furnish CPBG of amount equal to 100% of value of the advance subsidy from a nationalized/Scheduled bank in the form of FDR in favour of **The Director, MNREDA** OR BG as per format.

**9.13.2** Rooftop SPV power plant should be completed as per the Scope of this tender within sanction period.

**9.13.3** Rooftop SPV power plant should get CEI inspection certificate, if applicable.

**9.14 Intimation to concerned office of MePDCL:** All the bidders shall intimate the concerned office of MePDCL regarding commissioning of grid connected roof top solar PV projects as per the given format in **Annexure-XV** and submit the copy of same to MNREDA for release of Subsidy.

**9.15 Beneficiary's Consent:** Subsidy shall be released to Successful Bidder after written consent of Beneficiary only. However, if the consent is being delayed from the Beneficiary on the grounds which are not a part of this tender document, then subsidy can be released without Beneficiary's consent with the undertaking of Successful Bidder on stamp Paper for indemnification of MNREDA.

**9.15.1** Subsidy will be released on submission of declaration to the effect that beneficiary has not availed any subsidy or grant from Ministry of New and Renewable Energy (MNRE) or from any State and Central agency for the concerned project.

**9.16 Cancellation of Subsidy:** MNREDA will not release the subsidy for any shortcomings in commissioning as per technical specifications mentioned or for Performance Ratio (PR) below the specified limit (75%) after commissioning.

**9.17 Tax Exemptions:** Bidder shall claim any kind of tax exemption on its own.

**9.18 Liquidated Damages:** For the delay in identification of buildings, obtaining approval from concerned MePDCL's office for grid connectivity, complete design, supply, installation, testing and commissioning of grid connected rooftop solar PV power plants, the liquidity damage @1% of the contract value per week or part thereof subject to the maximum of 10% of the contract value shall be deducted from the bill of the contractor.

**9.19 Specifications:** The detailed technical specifications of the SPV system should be as specified under JNNSM issued by MNRE Govt. of India vide letter No- 30/11/2012- 13/NSM dated: 26.06.2014 for Grid connected Rooftop and subsequent addendums issued. The material must conform to the specifications and standards mentioned in Technical Specifications specified in **Section-8**.

**9.20 Performance Acceptance Tests (PAT):** After installation and charging, System shall be accepted after successful completion of Performance Acceptance Tests (PAT) as under:

**Performance Ratio (PR):**

$$PR = \frac{\text{Measured output in kW}}{\text{Installed Plant Capacity (kW)}} \times \frac{1000 \text{ W/m}^2}{\text{Measured Irradiation intensity in W/m}^2}$$

**Note: Plant Performance Ratio should be at least 75%.**

**9.21 Split of Works:** In view of targeted capacity and limited time available for completion of the task, MNREDA reserves the right to increase / decrease / split of the work to agencies based on buildings / capacity at the sole discretion of the MNREDA. Suitable amendment /

communication shall be issued in the event of variations in quantities.

**9.22 ForceMajeure:** Force majeure shall mean any cause, existing or future, which is beyond the reasonable control of Bidder or MNREDA including, but not limited to, acts of God, storm, fire, floods, explosion, epidemics, quarantine, earthquake, strike, riot, lockout, embargo, interference by civil or military authorities, acts, regulations or orders of any governmental authority in their sovereign capacity, acts of war (declared or undeclared) including any acts of terrorism, and all other such acts of similar or analogous nature (where all such acts to be collectively referred to as "Force Majeure"). MNREDA and Bidder shall not be liable for the failure to perform any obligation in terms of this Proposal if and to such extent such failure is caused by a Force Majeure, provided that none of such acts of Force Majeure will relieve the Customer from meeting its payment obligations.

**9.23 Successors & Assigns:** In case MNREDA or successful bidder may undergo any merger or amalgamation, or a scheme of arrangement or similar re-organization & this contract is assigned to any entity (ies) partly or wholly, the contract shall be binding mutatis mutandis upon the successor entities & shall continue to remain valid with respect to obligation of the successor entities.

**9.24 Dispute:**

**9.24.1** Disputes under the agreement shall be settled by mutual discussion.

**9.24.2** If the parties fail to resolve, such a dispute or difference by mutual consent, within forty-five (45) Days of its arising, then the dispute shall be referred by either party by giving notice to the other party in writing of its intention to refer to arbitration conducted under the provisions of the "The Arbitration and Conciliation Act, 1996" and its amendments from time to time. The decision arising shall be final and binding upon the parties. The venue of the arbitration shall be relevant courts in Shillong, Meghalaya.

**9.24.3** The fee & other charges of Arbitrator shall be shared equally between the parties.

**9.24.4** The Arbitrator will give the speaking & reasoned award. The party will not be entitled to any pendent late interest during arbitration proceedings.

**9.25 Size of Projects:** The size of each project shall be in the range from 1kWp to 500kWp, subject to the limitation of connected load/contract demand and DT loading limitation specified in the MSERC (Grid Interactive Solar PV Systems) Regulations, 2015 and subsequent amendments thereto, if any.

**9.26 Sanctioning of Projects:**

**9.26.1** Identification of projects (Rooftops) at the time of bidding is mandatory. The bidders, however, in their own interest are advised to make a preliminary survey of availability of rooftops for which they intend to bid.

9.26.2 Selected bidders, to whom work has been allocated, will be free to identify the projects in the range of that category.

9.26.3 **On identification of rooftops, the bidders shall submit project sanction documents to MNRED A as below:**

- i. Feasibility report of identified building/project
- ii. Joint Agreement signed with beneficiary
- iii. Approval from concerned MePDCL's office for grid connectivity

9.26.4 Further, Successful bidders to whom Allocation Letter has been issued will be allowed to collate projects for approval and issuance of Sanction Letter by MNREDA/ MePDCL. In such case, single Sanction Letter will be issued for the total aggregate capacity submitted by the bidder for approval.

9.26.5 MNREDA will issue Sanction Letter to the bidder after scrutiny and acceptance of project sanction documents submitted by the bidder indicating subsidy amount which will be disbursed in line with the conditions laid down in this tender. The bidder shall complete design, engineering, supply, storage, civil work, installation, testing & commissioning of the grid connected rooftop solar PV projects as per schedule mentioned in **Section 5 and Para 5.5.2.**

9.26.6 MNREDA, at any time, will review the progress of installations in each category and suitably re-distribute the capacities at its sole discretion in the interest of the project.

**9.27 Commissioning Certificate:**

9.27.1 On completion of installation of SPV power project, the bidder shall apply for commissioning certificate with MNREDA. A **Joint Commissioning Certificate** shall be signed as per format of **Annexure-XIV** normally within 2 weeks from the date of receiving application after due verification at site.

9.27.2 After signing of joint commissioning certificate, the bidder is eligible to avail the subsidy as per conditions of this tender.

**10 GENERAL CONDITIONS OF BID:**

**10.1 General:**

10.1.1 The Bidder shall ensure that deputed personnel are trained and experienced for jobs as defined in scope of work for ensuring the high quality and correctness of jobs and to be carried out in a highly professional, safe, and sound managerial manner.

10.1.2 MNREDA reserves the right to accept or reject any or all Bid requests without assigning any reason.

10.1.3 MNREDA reserves the right to waive off any shortfalls; accept the whole, accept part of or reject any or all responses to this tender.

10.1.4 MNREDA reserves the right to modify, expand, restrict, scrap, re-float the tender without assigning any reason for the same.

- 10.1.5** The responder shall bear all costs associated with the preparation and submission of its Bid and MNREDA will in no case be responsible or liable for these costs, regardless of the conduct or the outcome of the tender process.
- 10.1.6** MNREDA reserves the right to withdraw the work & get it completed at the risk & cost of the agency, if performance of the agency is unsatisfactory, to whom work has been awarded. Further, the said agency may be black-listed for a period of one (01) year or more for participating in any of the bids invited by MNREDA. Also, MNREDA would be free to intimate such black-listing to various state/central utilities/Ministry of Power/State Governments/ Other agencies not to consider the said agency for any assignment including of the same on websites.
- 10.1.7** MNREDA reserves the right to conduct reverse auction.
- 10.1.8** Bidder must specify Make, Model, Specification, unit and quantity of all Bill of Material (BOM) items and components in Technical Bid format as per MNRE standards.
- 10.1.9** ***Bidder must submit test certificates as specified under JNNSM issued by MNRE, Govt. of India vide letter no. 30/11/2012-13/NSM dated, the Sillong 26.06.2014 for Grid Connected Rooftop & Small Solar Power Plants and subsequent addendums. The valid test reports of all components of Bill of Material (BOM) issued by the accredited test centres of MNRE, Govt. of India are to be submitted at the time of signing of LoA.***
- 10.1.10** Bidder must give declaration to the effect that the complete plant including all the Balance of System (BOS) areas per standard equivalent to those specified under JNNSM by MNRE.
- 10.1.11** In case of supply of any defective material or substandard material, the materials will be rejected & it will be the responsibility of the vendor for taking back & replacing the rejected materials at their own cost.
- 10.1.12** The supplied materials should be strictly as per specifications mentioned in this tender, otherwise the material would be liable for rejection.
- 10.1.13** The Bid with validity of less than 365 days from the last date of bid submission shall not be considered. The validity can be further extended with mutual consent.
- 10.1.14** No price escalation is applicable because any statutory payments increase or fresh imposition of taxes or duties leviable in respect of the major components in the said acceptance of the tender.
- 10.1.15** Bid Security received late due to any reason including postal delay will not be considered.
- 10.1.16** Bidder's quoted rates should be firm and fixed. No price variation and escalation will be allowed.
- 10.1.17** Bids must be submitted in English language only.

- 10.1.18** Incomplete, telegraphic or conditional tenders are not accepted.
- 10.1.19** Canvassing in any manner is strictly prohibited. The same will lead to rejection of the submitted bid.
- 10.1.20** The last date of receipt of bids from agencies is **20<sup>th</sup> November 2019 at 16:00 Hrs.** Original, Sealed ***Bid Security will only be accepted during office hours on working days through deposit in the tender box kept for the purpose at MNREDA, Shillong. Bid Security received after due date & time will not be accepted.***
- 10.1.21** *If due to any reason, the due date is declared as a holiday, the tender will be opened on next working day at the same time.*
- 10.1.22** The technical bid shall be opened on **21<sup>st</sup> November 2019 at 12:00 Hrs** in MNREDA HQ Office, Shillong in the presence of such Bidders /their representatives, who desire to be present at the time of opening.
- 10.1.23** *Any or all Bids may be rejected or accepted partially or fully without assigning any reason thereof by The Director, MNREDA.*
- 10.1.24** *Bidders are requested to watch out MNREDA website for change of events/additional information from time to time.*
- 10.1.25** *Bidders are not allowed to advertise/publicise SPV systems installed through this tender without prior approval from MNREDA.*
- 10.2 Clarifications and Pre-Bid Meeting:**
- 10.2.1** MNREDA will not enter any correspondence with the Bidders, except to furnish clarifications on Tender Documents, if necessary. The Bidders may seek clarifications or suggest amendments to Tender documents online, also soft copy by e-mail to reach MNREDA at the address, date and time mentioned in Bid information sheet.
- 10.2.2** The Bidder(s) or their authorized representative(s) is /are invited to attend pre-bid meeting(s), which will take place on date(s) as specified in Bid information sheet, or any such other date as notified by MNREDA.
- 10.2.3** The purpose of the pre-bid meeting will be to clarify any issues regarding the Bid documents including, issues raised in writing and submitted by the Bidders.
- 10.2.4** MNREDA is not under any obligation to entertain/ respond to suggestions made or to incorporate modifications sought for.
- 10.3 Amendments to Bid Documents by MNREDA:**
- 10.3.1** At any time prior to the deadline for submission of Bids, MNREDA may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bid document by issuing clarification(s) and/or amendment(s).

- 10.3.2** The clarification(s) / amendment(s) (if any) shall be notified on MNREDA website ([www.mnreda.gov.in](http://www.mnreda.gov.in)) and on e-procurement website of Meghalaya ([www.meghalayatenders.gov.in](http://www.meghalayatenders.gov.in)) at least Two (2) days before the proposed last date of submission of the Bid. If any amendment is required to be notified within Two (2) days of the proposed date of submission of the Bid, the Bid Deadline may be extended for a suitable period.
- 10.3.3** MNREDA will not bear any responsibility or liability arising out of non-receipt of the information regarding Amendments in time or otherwise. Bidders must check the website for any such amendment before submitting their Bid.
- 10.3.4** In case any amendment is notified after submission of the Bid (prior to the opening of Bid due date/time) shall be extended and it will be for the Bidders to submit fresh Bids/supplementary bids as the date notified by the MNREDA for the purpose.
- 10.3.5** All the notices related to this Bid which are required to be publicised shall be uploaded on MNREDA website ([www.mnreda.gov.in](http://www.mnreda.gov.in)) and on State e-procurement website ([www.meghalayatenders.gov.in](http://www.meghalayatenders.gov.in)).
- 10.4 Right to withdraw the Tender Document and to reject any Bid:**
- 10.4.1** This Tender Document may be withdrawn or cancelled by MNREDA at any time without assigning any reasons thereof. MNREDA further reserves the right, at its complete discretion, to reject any or all the Bids without assigning any reasons whatsoever and without incurring any liability on any account.
- 10.4.2** MNREDA reserves the right to interpret the Bid submitted by the Bidder in accordance with the provisions of the Tender Document and make its own judgment regarding the interpretation of the same. In this regard, the MNREDA shall have no liability towards any Bidder and no Bidder shall have any recourse to MNREDA with respect to the selection process. MNREDA shall evaluate the Bids using the evaluation process specified in Tender Document, at its sole discretion. MNREDA decision in this regard shall be final and binding on the Bidders.
- 10.5** MNREDA reserves its right to vary, modify, revise, amend or change any of the terms and conditions of the Bid before submission. The decision regarding acceptance of bid by MNREDA will be full and final.

**11 Conditions for Consortium Bidders:**

- 11.1** Member of any Consortium shall not be permitted to participate either in individual capacity or as a member of any other Consortium/Joint Venture Firm in this tender.
- 11.2** Submission or participation in more than one bid will cause disqualification of all the proposals submitted by the bidder. Number of members in a Consortium shall not be more than THREE (03).

- 11.3** All formalities in respect of submission of tenders shall be done only in the name of 'Lead Member' and not in the name of Consortium/Joint Venture Firm. However, name & other details of both the members of Consortium/ Joint Venture Firm should be clearly mentioned in the Bid/Response.
- 11.4** A copy of Memorandum of Understanding (MOU) executed between the members of Consortium/JV shall be submitted along with the tender. The complete details of the members of the Consortium/ Joint Venture Firm, their share and responsibility in the Consortium/JV etc. particularly with reference to financial, technical and other obligations shall be furnished in the MOU.
- 11.5** Once the bid is submitted, the MOU shall not be modified/ altered/ terminated the entire period of contract i.e. Installation & commissioning of solar PV plant and O&M of the same for 5 years. In case, the Bidder fails to observe/ comply with this stipulation, MNREDA reserves right to forfeit Bid Security/ Performance Bank Guarantee (PBG) as applicable.
- 11.6** A duly notarized agreement of Consortium/Joint Venture Firm shall be executed between the 'Lead Member' and Consortium/JV Partner as per prescribed format given in **Annexure-X**. This Agreement should be submitted in original with the bid. Authorized Member of Consortium/Joint Venture Firm: 'Lead Member' shall be authorized on behalf of Consortium/Joint Venture Firm to deal with the tender/MNREDA, sign the agreement or enter into contract in respect of the said tender, to receive payment and such activities in respect of the said tender/ contract. All notices/ correspondences with respect to the contract would be sent only to this 'Lead Member' of Consortium/Joint Venture Firm.
- 11.7** Required Bid Security shall be submitted either by the 'Lead Member' or by the 'Joint Venture/Consortium Firm' itself. Bid Security submitted by Consortium Partner shall not be considered.
- 11.8** Duration of MOU and Consortium/JV Agreement shall be valid during the entire period of contract i.e. Installation & commissioning of solar PV plant and O&M of the same for 5 years. and any extension thereafter /currency of the contract including the period of extension, if any change in constitution of Consortium/Joint Venture during the course of Bid processing shall not be allowed.
- 11.9** A single security deposit against empanelment period shall be submitted by the Consortium/ Joint Venture Firm as per tender conditions, on receiving intimation for empanelment with MNREDA. All the Guarantees like Earnest Money Deposit, Security Deposit, Performance Guarantee etc. shall be accepted either only in the name of 'Lead Member' or in the name of 'Joint Venture/Consortium Firm' and no splitting of guarantees among the members of Consortium/JV shall be permitted.
- 11.10** Members of the Consortium/Joint Venture Firm shall be jointly and severally liable to the MNREDA for execution of the project/ Work/ Assignment etc. The Consortium/JV members



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shall also be liable jointly and severally for the loss, damages caused to the MNREDA during execution of any awarded contract or due to non-execution of the contract or part thereof.

**11.11 Governing Laws for Consortium/ Joint Venture Firm:** The Consortium/JV Agreement shall in all respect be governed by and interpreted in accordance with Indian Laws.

**Covering Letter:**

FROM:

(Full name and address of the Applicant bidder with contact phone no.)

M/s.....  
.....  
.....  
.....

To:

**The Director**

Meghalaya New and Renewable  
Energy Development Agency  
(MNREDA)  
Near BSF Camp, Mawpat  
Shillong-793019

**Subject: - Offer in response to Tender Notice No. MNREDA/1728/2017 (Pt-II)/67 dated, the Shillong 29.10.2019.**

Sir,

1) We, the undersigned.... [*insert name of the 'Bidder'*] having read, examined and understood in detail the RFP Document for Implementation of Grid connected Roof Top Solar PV System Scheme hereby submit our Bid comprising of Price Bid and Techno Commercial Bid. We confirm that neither we nor any of our Parent Company / Affiliate/Ultimate Parent Company has submitted Bid other than this Bid directly or indirectly in response to the aforesaid RFP.

We hereby submit our offer in full compliance with terms & conditions of the attached tender. The tender is being submitted online separately for Technical Bid (Part-1) & Financial Bid (Part-2) (Mention CAPEX Mode depending upon the participation).

**2) Bid Capacity**

We have bid for the capacity of \_\_\_\_\_ kW as per Tender document terms and conditions

**3) Earnest Money Deposit (EMD)/Bid Security**

We have enclosed a Bid Security of Rs..... (Insert Amount), in the form of demand draft no..... (Insert number of the demand draft) dated ..... [Insert date of demand draft /] from ..... (Insert name of bank providing demand draft) in terms of Clause ..... of this Tender Document.

**4) Offered Capacity**

The offered quantum of power by us is \_\_\_\_\_ kWp in CAPEX Mode.

**5) Acceptance**

We hereby unconditionally and irrevocably agree and accept that the decision made by Meghalaya New and Renewable Energy Development Agency in respect of any matter regarding or arising out of the RFP shall be binding on us. We hereby expressly waive any and all claims in respect of Bid process.

**6) Contact Person**

Details of the contact person are furnished as under:

Name: ..... Designation: .....

Company: ..... Address: .....

Phone Nos: ..... Fax Nos.: ..... E-mail address : .....

7) We hereby submit our offer in full compliance with terms & conditions of the attached tender. The tender is being submitted online separately for Technical Bid (Part-1) & Financial Bid (Part - 2). (Mention CAPEX Mode depending upon the participation).

It is confirmed that our Bid is consistent with all the requirements of submission as stated in the Tender Document and subsequent communications from Meghalaya New and Renewable Energy Development Agency (MNREDA). The information submitted in our Bid is complete, strictly as per the requirements stipulated in the Tender Document and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our Bid. We confirm that all the terms and conditions of our Bid are valid for acceptance for a period of 60 Days from the Bid deadline. We confirm that we have not taken any deviation so as to be deemed non-responsive.

Name, Designation and Signature of Authorized Person in whose name Power of Attorney/Board Resolution/Declaration

**(Signature of Applicant bidder)  
With Seal**

Annexure II

**GENERAL PARTICULARS OF BIDDER**

Sl. No.	Particulars	Details
1	Name of Tenderer/Bidder	
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 Bidder (Single / Consortium) (Pvt. Ltd / Public Ltd. / Public Sector etc.) Attach copy of Certificate of Incorporation / Certificate of Commencement of Business (if applicable) / Memorandum of Association / Articles of Association	
7	Details of the Ownership structure (Details of persons owning 10% or more of the Total Paid up equity of the Bidding Company in the Format as below	
8	Whether company is MSME as on the bidding date?	
9	Amount and particulars of the earnest money deposited.	
10	Annual Turnover for last three years and Net worth of last year (Attach audited annual accounts in this regard)	Year : Turnover Net Worth 2018-19 2017-18 2016-17 2015-16 (if available)
11	Name and address of the Indian/foreign collaboration if any.	
12	PAN, GST Registration No. – CGST and SGST (Evidences are to be attached)	
13	Has the tenderer/bidder ever been debarred by any institution for undertaking any work?	
12	Any other information attached by the tenderer (Details and Annexure / page no. where its enclosed)	

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

**(Signature of Bidder with Seal)**

Note: In case of non-submission of Meghalaya SGST Registration No., selected bidder will be allowed one-month time for getting SGST Registration No. from the date of issue of final work order.

**LETTER FOR SUBMISSION OF BID**  
*(To be submitted on Company's letterhead duly signed)*

To,  
**Director**  
**Meghalaya New and Renewable Energy Development Agency (MNREDA)**  
Near BSF Camp  
PO – Mawpat,  
Shillong-793019  
Meghalaya

**Sub.: Selection of Project Developer for Grid Connected Rooftop Solar PV Project under MNRE's CFA Scheme-reg**

Dear Sir,

We wish to submit bid against MNREDA's NIT No: **MNREDA/1728/2017(Pt-II)/67** dated, **the Shillong 29.10.2019** for "Design, Supply, Installation, Testing & Commissioning of Aggregate Capacity of 3.0 MWp under CAPEX Mode Grid Connected Solar Rooftop Photovoltaic Power Plants in Meghalaya as under:

Sl. No.	Category	Project Capacity	Tick (✓)
1	CAPEX Mode		
	<b>Total</b>		

Further, I hereby certify that:

1. I have read the provisions of all clauses and confirm that notwithstanding anything stated elsewhere to the contrary, the stipulation of all clauses of Bid are acceptable to me and I have not taken any deviation to any clause.
2. I further confirm that any deviation to any clause of Tender found anywhere in my Bid, shall stand unconditionally withdrawn, without any cost implication whatsoever to the MNREDA.
3. Our bid shall remain valid for period of 120 Days or till completion of project (whichever is earlier) from the last date of bid submission.

Date:  
Place

Signature:  
Full Name:  
Designation:  
Address:

**Note: In absence of above declaration/certification, the Bid is liable to be rejected and shall not be considered for evaluation.**

**BIDDER'S GENERAL DETAILS**

*(To be submitted on Company's letterhead duly signed, in case of Consortium/JV, details of both Lead Member & Consortium Partner to be furnished)*

**NIT No: MNREDA/1728/2017 (Pt-II)/67 dated, the Shillong 29.10.2019**

**Installation of Grid connected Rooftop Solar PV Power Plants in Meghalaya under CAPEX Model for MNREDA**

**GENERAL DETAILS**

Sl. No.	Particulars	Description
1.	Name of the Company:	
2.	Year of Incorporation:	
3.	Name of Authorized person:	
4.	Office Address:	
5.	Name, designation and contact of the Authorised person:	
6.	Telephone no.	
7.	Mobile no.	
8.	Email:	
9.	Type of Firm (please tick):	Private Ltd./ Public Ltd./ LLP/ Joint Venture Company
10.	Permanent Account Number (PAN):	
11.	Goods and Service Tax Reg. Certificate No.	
12.	Details of Bid Security	
13.	DD No.	
14.	Address of the Bank	

Signature.....

FullName.....

Designation.....

Address.....

**LETTER OF TRANSMITTAL**

To,  
Director  
Meghalaya New and Renewable Energy Development Agency (MNREDA)  
Near BSF Camp  
P.O.- Mawpat  
Shillong-793019  
Meghalaya

Dear Sir,

I/We, the undersigned, have examined the details given in your Tender No. MNREDA/1728/2017 (Pt-II)/67 dated, the Shillong 29/10/2019 for installation of Grid connected Rooftop Solar PV Power Plants in Meghalaya under CAPEX Mode for Meghalaya New and Renewable Energy Development Agency (MNREDA).

We accept all the terms & conditions of the bid document without any deviation and submit the Bid.

Also, M/s \_\_\_\_\_ or its group companies are not executing or providing any type of consultancy services either directly or as a sub-contractor for the particular work for which Bid is submitted.

It is confirmed that M/s. \_\_\_\_\_ is not banned or blacklisted by any Govt./Pvt. Institutions in India.

Authorized Signature [In full and initials]:

Name and Title of Signatory:

Name of Firm:

Address:



**FINANCIAL ELIGIBILITY CRITERIA AS PER SECTION-2**

*(In case of Consortium/ JV, Annual Turnover and Net Worth of all the members to be furnished along with Certificate Statutory Auditor's / Practising Chartered Accountant)*

To,  
**Director**  
**Meghalaya New and Renewable Energy Development Agency (MNREDA)**  
Near BSF Camp  
P.O.- Mawpat  
Shillong-793019  
Meghalaya

Dear Sir,

We wish to submit bid against your Tender No: *MNREDA/1728/2017 (Pt-II)/67 dated, the Shillong 29/10/2019* for "Installation of Grid connected Rooftop Solar PV Power Plants in Meghalaya under CAPEX Mode for Meghalaya New and Renewable Energy Development Agency(MNREDA)". The financial details of the company/ consortium as per the **eligibility criteria -mentioned in Section-4** is provided below:

<b>Name of Bidding Company</b>	<b>Financial Year</b>	<b>Annual turnover (as per audited balance sheets)</b>	<b>Average Annual Turnover*</b>	<b>Net Worth as per Latest Audited Accounts</b>

**\* Average Annual Turnover is for the last three financial years as per the audited balance sheets**

(Signature & seal of Authorized Signatory) Name:

Designation:

Date:

Place:

(Signature & seal of Chartered Accountant)

Name:

Date:

Place:

Membership No.

**PERFORMANCE BANK GUARANTEE (PBG) FORMAT**

To, Director

**Meghalaya New and Renewable Energy Development Agency (MNREDA)**

Near BSF Camp

P.O.- Mawpat

Shillong-793019

Meghalaya

(With due stamp duty if applicable)

OUR LETTER OF GUARANTEE NO.: \_\_\_\_\_

In consideration of Meghalaya New and Renewable Energy Development Agency (MNREDA) having its office at \_\_\_\_\_

\_\_\_\_\_ (hereinafter referred to as "MNREDA" 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 \_\_\_\_\_

(hereinafter 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 Performance Guarantee for the faithful performance during the entire contract, of the value of ₹ \_\_\_\_\_.

We, \_\_\_\_\_ ("The Bank") which shall include OUR successors, administrators and executors herewith establish an irrevocable Letter of Guarantee No. \_\_\_\_\_ 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 \_\_\_\_\_ (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 abovenamed-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 whatsoever 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.**

**POWER OF ATTORNEY**

***(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution)***

Power of Attorney to be provided by the Bidding Company in favour of its representative as evidence of authorized signatory's authority.

Know all men by these presents, We \_\_\_\_\_ (name and address of the registered office of the Bidding Company as applicable) do hereby constitute, appoint and authorize Mr./Ms. \_\_\_\_\_ (name & residential address) who is presently employed with us and holding the position of \_\_\_\_\_ as our true and lawful attorney, to do in our name and on our behalf, all such acts, deeds and things necessary about or incidental to submission of our Bid for Installation of Grid connected Rooftop Solar PV Power Plants in Meghalaya under CAPEX Model for Meghalaya New and Renewable Energy Development Agency (MNREDA) in response to the NIT No. \_\_\_\_\_ dated \_\_\_\_\_ issued by Meghalaya New and Renewable Energy Development Agency (MNREDA), Shillong including signing and submission of the Bid and all other documents related to the Bid, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document which MNREDA may require us to submit. The aforesaid Attorney is further authorized for making representation to Meghalaya New and Renewable Energy Development Agency, Shillong and representing us in all matters before MNREDA, Shillong and generally dealing with MNREDA, Shillong in all matters in connection with Bid till the completion of the bidding process as per the terms of the above-mentioned NIT.

We hereby agree to ratify all acts, deeds and things done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall be binding on us and shall always be deemed to have been done by us.

All the terms used herein but not defined shall have the meaning ascribed to such terms under the NIT.

Signed by the within named

\_\_\_\_\_(Insert the name of the executant company)  
through the hand of Mr. \_\_\_\_\_ duly authorized by the Board to issue such Power of Attorney Dated this \_\_\_\_\_ day of \_\_\_\_\_ Accepted \_\_\_\_\_

Signature of Attorney

(Name, designation and address of the Attorney)

Attested

(Signature of the executant)

(Name, designation and address of the executant)

Signature and stamp of Notary of the place of execution

Commonsealof..... has been affixed in my/our presence pursuant to Board of Director's

Resolution dated.....

WITNESS

1. ....

(Signature)  
Name  
Designation

2. ....

(Signature)  
Name.....  
Designation

**Notes:**

The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and the same should be under common seal of the executant affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.

The person authorized under this Power of Attorney, in the case of the Bidding Company/Lead Member being a public company, or a private company which is a subsidiary of a public company, in terms of the Companies Act, 1956, with a paid-up share capital of more than Rupees Five crores, should be the Managing Director / whole time director/manager appointed under section 269 of the Companies Act, 1956. In all other cases the person authorized should be a director duly authorized by a board resolution duly passed by the Company.

Also, wherever required, the executant(s) should submit for verification the extract of the chartered documents and documents such as a Board resolution / power of attorney, in favour of the person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).

**UNDERTAKING TOWARDS NOT BEING BLACK-LISTED**  
***(For Individual Company)***

I, \_\_\_\_\_ Authorized Signatory of M/s \_\_\_\_\_ hereby give undertaking that we, as a company are not black-listed by any Central/ State Government/ Semi-Government Organization/ Public Sector Undertaking/ Private Institution in India.

Further, if information furnished above stands false at any stage, we shall be completely liable for actions taken by MNREDA as per terms & conditions of the tender including disqualification and exclusion from future contracts/assignments.

(Signature of Authorized Signatory)

Name\*:

Designation\*:

Seal:

\*Please provide the name and designation of each signatory.

---

**UNDERTAKING TOWARDS NOT BEING BLACK-LISTED**  
***(For Consortium/Joint Venture Firm)***

We, a Consortium/ Joint Venture Firm of M/s \_\_\_\_\_ and M/s \_\_\_\_\_ hereby give undertaking that neither this Consortium/ Joint Venture Firm nor each of the member companies of this Consortium/ Joint Venture Firm are black-listed by any Central/ State Government/ Semi-Government Organization/ Public Sector Undertaking/ Private Institution in India.

Further, if information furnished above stands false at any stage, we shall be completely liable for actions taken by MNREDA as per terms & conditions of the tender including disqualification and exclusion from future contracts/assignments.

(Authorized Signatory of Lead Member)

Name\*:

Designation\*:

Seal & Sign:

(Authorized Signatory of Consortium/JV Partner)

Name

Designation\*:

Seal & Sign:

\*Please provide the name and designation of each signatory.

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**CONSORTIUM AGREEMENT**

***(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution)***

This Consortium Agreement ("Agreement") executed on this \_\_\_\_\_ day of \_\_\_\_\_ 2019 between M/s [insert name of Lead Member] \_\_\_\_\_ a Firm / Company incorporated under the laws of \_\_\_\_\_ and having its Registered Office at \_\_\_\_\_ (hereinafter called the "Lead Member", which expressions shall include its successors, executors and permitted assigns)

And

M/s \_\_\_\_\_ a Firm/Company incorporated under the laws of \_\_\_\_\_ and having its Registered Office at \_\_\_\_\_ (hereinafter called the "Technical Member", which expression shall include its successors, executors and permitted assigns), which expressions shall include its successors, executors and permitted assigns)

WHEREAS, each Member individually shall be referred to as the "Member" and both the Members shall be collectively referred to as the "Members" in this Agreement.

WHEREAS the Meghalaya \_\_\_\_\_ New \_\_\_\_\_ and Renewable Energy Development Agency (hereinafter called MNREDA) has invited bids for NIT No. \_\_\_\_\_ dated \_\_\_\_\_ for installation of Grid connected Rooftop Solar PV Power Plants in Meghalaya under CAPEX Mode.

WHEREAS the tender document stipulates that the Lead Member may enter into a Technical Consortium Agreement with another Company/Corporate entity to fulfil the Technical Eligibility Criteria as stipulated in the tender document. The Members of the Bidding Consortium will have to submit a legally enforceable Consortium Agreement in a format enclosed with the tender document.

***NOW THEREFORE, THIS AGREEMENT WITNESSES AS UNDER:***

In consideration of the above premises and agreements all the Members in this Consortium do hereby mutually agree as follows:

1. We, the Members of the Consortium and Members to the Agreement do hereby unequivocally agree that (M/s \_\_\_\_\_), shall act as the Lead Member as defined in the RFP for self and agent for and on behalf of Technical Member \_\_\_\_\_.



2. The Lead Member is hereby authorized by the Technical Member of the Consortium to bind the Consortium and receive instructions for and on their behalf.'
3. The Lead Member shall be liable and responsible for ensuring the individual and collective commitment of each of the Members of the Consortium in discharging all of their respective obligations. Each Member further undertakes to be individually liable for the performance of its part of the obligations without in any way limiting the scope of collective liability envisaged in this Agreement.
4. Subject to the terms of this Agreement, the Technical member shall be responsible for providing technical knowledge for "installation of Grid connected Rooftop Solar PV Power Plants in Meghalaya under CAPEX Mode" to the lead member.
5. In case of any breach of any commitment by any of the Consortium Members, the Lead Member shall be liable for the consequences thereof.
6. This Agreement shall be construed and interpreted in accordance with the Laws of India and courts at Delhi alone shall have the exclusive jurisdiction in all matters relating thereto and arising thereunder.
7. It is hereby further agreed that in case of being shortlisted, the Members do hereby agree that they shall abide by the terms & conditions of the tender document.
8. It is further expressly agreed that this Agreement shall be irrevocable and shall form an integral part of the bid submitted to MNREDA and shall remain valid till completion of the job assigned to the Contractor.
9. The Lead Member is authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Members respectively from time to time in the response to tender.
10. It is hereby expressly understood between the Members that no Member at any given point of time, may assign or delegate its rights, duties or obligations under this agreement without the explicit permission of MNREDA.

**11. This Agreement:**

- a. Has been duly executed and delivered on behalf of each Member hereto and constitutes the legal, valid, binding and enforceable obligation of each such Member;
- b. Sets forth the entire understanding of the Members hereto with respect to the subject matter hereof; and
- c. May not be amended or modified except in writing signed by each of the Members and with prior written consent of MNREDA.

**IN WITNESS WHEREOF**, the Members have, through their authorized representatives, executed these present on the Day, Month and Year first mentioned above.

For M/s \_\_\_\_\_ [Lead Member]

---

(Signature, Name & Designation of the person authorized vide Board Resolution Dated \_\_\_\_\_)

Witnesses:

1. Signature:

Name:

Address:

2. Signature:

Name:

Address:

For M/s \_\_\_\_\_ [Technical Member]

---

(Signature, Name & Designation of the person authorized vide Board Resolution Dated \_\_\_\_\_)

Witnesses:

1. Signature:

Name:

Address:

2. Signature:

Name:

Address:

**TECHNICAL BID**  
***(To be submitted through Online)***

**Tender No: MNREDA/1728/2017 (Pt-II)/67 dated, the Shillong29/10/2019**

Installation of Grid connected Rooftop Solar PV Power Plants in Meghalaya under CAPEX Mode for Meghalaya New and Renewable Energy Development Agency (MNREDA).

We confirm the following are the technical specification of Items that will be used for Installation & Commissioning of the grid connected Rooftop Solar PV power project.

<b>Sr. No.</b>	<b>Item</b>	<b>Make</b>	<b>Model</b>	<b>Specifications</b>
1	PV Module			
2	Module Mounting Structure			
3	Inverter			
4	Array Junction Box			
5	ACDB			
6	Cables			
7	Earthing Kit			
8	Lightning Arrestor			
9	Data Acquisition System			
10	Other Items			

(AUTHORIZED SIGNATORY)

NAME:

SEAL:

**FINANCIAL BID**

(To be submitted through Online)

**Tender No: MNREDA/1728/2017 (Pt-II)/67 dated, the Shillong 29.10.2019**

Installation of Grid connected Rooftop Solar PV Power Plants in Meghalaya under CAPEX Mode for Meghalaya New and Renewable Energy Development Agency (MNREDA).

**For Projects under CAPEX Mode: -**

Sr. No.	Description	Sub-Category	Benchmark Cost (Rs. /Wp)	Discount Percentage Rate offered on the Benchmark Cost (till 2 decimal places, i.e. 'xx.xx%')
1	Identification of MePDCL's eligible consumers, buildings /rooftops, obtaining Approval from concerned MePDCL's office for grid connectivity, complete design, supply, engineering, civil work, installation, testing & commissioning of the grid connected rooftop solar PV projects including operation and maintenance (O&M) of the project for a period of 5 years after commissioning of the Projects.	1 kWp – 10 kWp	59.00	
2		>10 kWp – 100 kWp	53.00	
3		>100 kWp – 500 kWp	50.00	

**Note:** The Bidder need to quote a single Discount Percentage Rate, which shall be applicable for all three sub-categories or Benchmark Cost (in Rs. / Wp) mentioned in second last column above.

**Note:**

1. Maximum allowable project cost/Benchmark cost under CAPEX Mode is given in table.
2. The bids with financial offer more than these limits will be rejected.
3. Price quoted by the bidder shall remain firm & fixed and shall be binding on the Successful Bidder till completion of O&M period irrespective of actual cost of execution of the project. No escalation will be granted on any reason whatsoever. The bidder shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever.
4. The offer must be kept valid for a period of 365 Days from the last date of bid submission. No escalation clause would be accepted. The validity can be further extended with mutual consent.
5. Bids with non-conformity to above will be considered as non-responsive.

**JOINT AGREEMENT**

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution, to be signed in 3 copies, one for Supplier, one for user and one for MNREDA)

This agreement is made on \_\_\_\_\_ between M/s \_\_\_\_\_ (Supplier) having its corporate office at \_\_\_\_\_ and \_\_\_\_\_ (End User) located at \_\_\_\_\_ for installation of grid connected Solar PV power plant as per Allocation Letter No. \_\_\_\_\_ of MNREDA dated \_\_\_\_\_.

***It has been agreed upon by and between the said parties as under:***

1. End User is willing to install grid connected Solar PV power plant on its roof and has authorized Supplier to submit application to MNREDA/MePDCL on his/her behalf.
2. End user has well understood the scheme and agrees to pay, balance cost of the project after deducting subsidy being provided by MNREDA, to the Supplier as per mutually agreed terms.
3. On receiving project sanction from MNREDA, Supplier shall be responsible for complete design, engineering, supply, storage, civil work, installation, testing & commissioning of the grid connected rooftop solar PV power plant including comprehensive maintenance of the plant for a period of 5 years from the date of commissioning.
4. End User will not transfer, sell, and dispose the power plant for a period of 5 years from the date of commissioning without prior approval of MNREDA/MePDCL.
5. MNREDA/MePDCL shall not be responsible for any dispute between the parties (Supplier and End User).
6. Supplier shall be responsible for preventive maintenance of the system as per schedule. End User will also follow all the instructions given by the Supplier for proper functioning of the system and its upkeep including fortnightly cleaning and wiping of solar panels using freshwater and shall inform the Supplier immediately for its non-functioning. Supplier shall provide necessary services for breakdown maintenance of the system for a period of 5 from the date of commissioning.
7. This agreement, commencing from the date of signing, shall remain valid for 5 years from the date of commissioning of the system.

Signature of the Representative of Supplier

Name.....

Designation.....

Signature of the Representative of End User

Name.....

Designation.....

**JOINT COMMISSIONING CERTIFICATE**

Date:

This is to certify that M/s \_\_\_\_\_ have installed and commissioned \_\_\_\_\_ kWp Grid connected Rooftop Solar Photo Voltaic Power plant at (Address of date Site) \_\_\_\_\_ and completed the same as on \_\_\_\_\_ successfully. Now, the power plant is running satisfactorily.

Sl. No.	Particulars	Description
1.	Place of installation	
2.	Address	
3.	City/District/State	
4.	GPS Location	
5.	Name of the contact person	
6.	Phone No. (Landline & Mobile No.)	
7.	Fax No.	
8.	Email id	
9.	Type of Solar PV Plant	
10.	Details of the Power Plant	
	a. Solar PV modules	
	<ul style="list-style-type: none"> <li>• Type of PV Modules (Crystalline)</li> <li>• Make</li> <li>• Model</li> <li>• Quantity</li> <li>• Serial Numbers</li> <li>• Year of Manufacturing</li> <li>• Test Report from MNRE authorized test centre</li> <li>• OEM's Test Data sheet along with I-V curve of installed Modules (Serial numberwise)</li> <li>• RF ID Tag Serial Numbers</li> </ul>	
	b. Inverter	
	<ul style="list-style-type: none"> <li>• Type of Inverter (String Inverter / Central Inverter)</li> <li>• Make</li> <li>• Model</li> <li>• Quantity</li> <li>• Serial Numbers</li> <li>• Year of Manufacturing</li> <li>• Test Report from MNRE authorized test centre</li> <li>• OEM's Test Data sheet along with I-V curve of installed Modules (Serial numberwise)</li> <li>• RF ID Tag Serial Numbers</li> </ul>	
	c. Cables	
	<ul style="list-style-type: none"> <li>• Make</li> </ul>	



**Tender Document for Design, Supply, Installation & Commissioning of Aggregate Capacity of 3.0 MWp Grid Connected Solar Rooftop PV Power Plants in Meghalaya under CFA Scheme of MNRE, GOI**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Description</b>
	<ul style="list-style-type: none"> <li>• OEM's Test Data of laid downcables</li> <li>• Length of cables laiddown (Pls specify separately sq. mmsize)</li> </ul>	
	d. Array Junction	
	<ul style="list-style-type: none"> <li>• Box</li> <li>• Make</li> <li>• Model:</li> <li>• Quantity:</li> <li>• Serial Numbers of installed Array JunctionBoxes</li> <li>• Year ofManufacturing:</li> <li>• OEM's Test Data sheet of installedAJBs:</li> </ul>	
	e. Energy Meter	
	<ul style="list-style-type: none"> <li>• Make</li> <li>• Model</li> <li>• Quantity</li> <li>• SerialNumber</li> <li>• Year ofmanufacturing</li> <li>• OEM's test reports of installed EnergyMeters</li> <li>• Are all Energy Meters Tamper Proof made (Yes / No)</li> </ul>	
11.	Chief Electrical Inspector's Inspection reports: All Test Reports of Electrical Inspector, if applicable	
12.	Installation Manuals, User Manuals, Operational Manuals, Maintenance Manuals, Catalogs, Safety Keys etc. hand over <ul style="list-style-type: none"> <li>• PV Modules</li> <li>• Inverters</li> <li>• Module MountingStructures</li> <li>• AJBs</li> <li>• ACDBs</li> <li>• Cables</li> <li>• Earthing Kits</li> <li>• Lightning</li> <li>• Meters</li> </ul>	
13.	Connector Strip Diagrams, Inverter wiseString Diagrams, their cascading	
14.	Cables Layout Diagrams (AC & DC separately)	
15.	Warranty/ Guarantee Documents of the composite system <ul style="list-style-type: none"> <li>• PV Modules</li> <li>• Inverters</li> <li>• Module MountingStructures</li> <li>• AJBs</li> <li>• ACDBs</li> <li>• Cables</li> </ul>	

**Tender Document for Design, Supply, Installation & Commissioning of Aggregate Capacity of 3.0 MWp Grid Connected Solar Rooftop PV Power Plants in Meghalaya under CFA Scheme of MNRE, GOI**

Sl. No.	Particulars	Description
	<ul style="list-style-type: none"> <li>• Earthing Kits</li> <li>• Lightning</li> <li>• Meters</li> </ul>	
16.	Service Centre Details <ul style="list-style-type: none"> <li>• Name</li> <li>• Address</li> <li>• Contact person</li> <li>• PhoneNo.</li> <li>• MobileNo.</li> <li>• FaxNo.</li> <li>• EmailId</li> </ul>	
17.	Installed Power Plant Performance details (attach daily Power Generation reports, Performancereports, Performance Acceptability Test PAT reports, PerformanceRatioPRreports,PlantLoadFactorPLF reports etc.)	
18.	Signed copy of EPC Contract or PPA Document and O&M Contract	

Signature with Seal  
(Authorized Signatory)

M/s ----- (Supplier)

Signature with Seal  
(Authorized Signatory)  
MNREDA

Rooftop Solar PV powerplantof\_kWp capacity has been commissioned successfullyat\_\_\_\_\_ (Address ofsite) on\_\_\_\_\_.

(AuthorizedSignatory)  
End User

(Authorized Signatory)  
MePDCL

**Note: Please attach following coloured photographs in Postcard Size (both soft and hard copy) with Unique Identification Number of the Project as issued by MNREDA:**

1. Rooftop Solar PV System clearly showing SolarPanels;
2. Invertor /PCU;
3. Owner / Beneficiary along with Representative of Developer on foreground of PV System;

**INTIMATION TO CONCERNED OFFICE OF MePDCL FOR IMPLEMENTATION OF GRID CONNECTED ROOFTOP SOLAR PV POWER PLANT**

Date: \_\_\_\_\_

To,

\_\_\_\_\_  
\_\_\_\_\_

(Designated Officer of MePDCL)

Sl. No.	Particulars	Description
1.	MNREDA/MePDCL Sanction Letter No. & Date	
2.	Name of Supplier	
3.	Name of Consumer	
4.	Site Details	
5.	Address of Project Site <ul style="list-style-type: none"><li>• HouseNo.</li><li>• Street Name</li><li>• VillageName:</li><li>• DistrictName:</li><li>• State</li><li>• Pin Code:</li></ul>	
6.	Phone No.	
7.	Mobile No.	
8.	Email Id	
9.	Electricity Consumer No.	
10.	Category (Residential, Commercial, Industrial, Educational, Government, Others) (Please Specify)	
11.	Installed Plant Capacity (in kWp)	
12.	Connected Load (kVA)	
13.	Voltage Level at Interconnection (230V, 415V, 11kV or Above 11Kv) (Please specify)	
14.	Nearest Transformer Details (Location and Capacity)	
15.	Details of Inverter (Make and Capacity)	
16.	Anti-Islanding Protection (1 Phase / 3 Phase)	
17.	Galvanic Isolation (inside inverter/ Outside inverter)	
18.	Both AC and DC components of SPV Power Plant earthed	
19.	CEIG Inspection Required (Yes/ No)	
20.	If yes, inspection date (Attach copy of CEIG Certificate)	
21.	Date of Grid Synchronization	
22.	Net Metering and grid connectivity (Attach	

**Tender Document for Design, Supply, Installation & Commissioning of Aggregate Capacity of 3.0 MWp Grid Connected Solar Rooftop PV Power Plants in Meghalaya under CFA Scheme of MNRE, GOI**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Description</b>
	acknowledgement from MePDCL, if received) <ul style="list-style-type: none"><li>• Applied on</li><li>• Fee Deposited on</li></ul>	

It is certified that the information furnished above is true to the best of my knowledge.

Consumer

Authorized Signatory of Supplier

**Copy to:** Project Officer / The Director, MNREDA

**QUARTERLY SOLAR PV POWER PLANT STATUS REPORT**

***(To be furnished in triplicate by the Supplier in presence of End User on quarterly basis by assessing site conditions)***

**Date:** .....

**A. PARTICULARS:**

1. Place of installation \_\_\_\_\_
2. Address \_\_\_\_\_
3. City/District/State \_\_\_\_\_
4. Date of visit \_\_\_\_\_
5. Name & contact no. of the visiting staff (Contractor & End User).....

**B. OBSERVATIONS:(To be filled-in by staff visiting the installation)**

1. Visual damage of all Components / Equipment / Items in PV Power Plant:  
  
Have you seen any? Pl. mention if any
2. Damage of the module:  
Sl. No. & Make of the damaged module
3. Cleaning status of PV Modules
4. Looseness of PV Modules (Pl. mention, if any)
5. Tightness of Nuts, bolts, of Module Mounting Structures
6. Any cables found lying on the ground, or inside conductors of cables found exposed or in open
7. Tightening of the all electrical connections
8. Open Circuit voltages at AJB / MJB boxes (Matching with earlier commissioned time vales)
9. Grounding / Earthing of all systems.....
10. Staff Training (General, Technical, Safety) Records and cross questioning the trained staff
11. Verification of Daily Power Generation, PLF, PR, CUF

- 12. Verification of Preventive Maintenance Records .....
- 13. Verification of Breakdown Maintenance Records.....  
(Were all breakdowns resolved within 72 hours of reporting by the End User? If not, mention such instances with details)
- 14. Checking of Spares and Consumables availability
- 15. Any Safety Issue / Concern of PV Power Plant:
- 16. Suggestions given to the End User
- 17. Status of the entire PV Power Plant system
- 18. Remarks of the End User

Signature of the Representative of Supplier

Name

Designation

Signature of the Representative of End User

Name

Designation