BID DOCUMENT

MEGHALAYA NEW AND RENEWABLE ENERGY DEVELOPMENT AGENCY

Near BSF Camp, Nongmensong, Shillong – 793019 (Meghalaya)

E-mail: mnreda.dir@gmail.com

Website: www.mnreda.gov.in

TENDER DOCUMENT

FOR

Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya.

NIT No: MNREDA/1937/HMS2/2024-25/11

Date: 05/06/2026

TABLE OF CONTENTS

	TOPIC	PAGE NO
PART – I	Invitation for Bids (IFB) / Bid Details	4
PART – II	Instructions to Bidders (ITB)	09
PART – III	Evaluation Criteria and Scope of Work	19
PART – IV	General Conditions of Contract (GCC)	25
PART – V	Technical Specification	30
PART – VI	Sample Forms & Formats	38
Format-A	General information about the bidder	39
Format-B	Financial Bids	40
Format-1	Covering Letter	41
Format -2	General particulars of the bidder	43
Format -3	FORMAT FOR PERFORMANCE BANK GUARANTEE (PBG)	44
Format -4	POWER OF ATTORNEY	46
Format -5	FINANCIAL ELIGIBILITY CRITERIA REQUIREMENT	48
Format-6	ANNEXURE-1: WORK EXPERIENCE	49
Format -7	UNDERTAKING FOR CORRUPT & FRAUDULANT PRACTICE	50
FORMAT- 8	UNDERTAKING FOR NOT BEING PENALISED IN A CONTRACT	51
FORMAT- 9	UNDERTAKING FOR FINANCIAL STABILITY	52
FORMAT- 10	UNDERTAKING FOR DOWNLOADED TENDER DOCUMENT	53
FORMAT- 11	Technical Bid	54
FORMAT- 12	Installation & Commissioning Certificate	55
FORMAT -13	Maintenance Sheet	58

DISCLAIMER

1. Though adequate care has been taken while preparing the NIT document, the Bidders shall satisfy themselves that the document is complete in all respects. Intimation of any discrepancy shall be given to this office immediately. If no intimation is received from any Bidder within seven (7) days from the date of notification of NIT/ Issue of the bid documents, it shall be considered that the bid document is complete in all respects and has been received by the Bidder.

2. Meghalaya New and Renewable Energy Development Agency (MNREDA) reserves the right to cancel/ withdraw this invitation for bids without assigning any reason and shall bear no liability whatsoever consequent upon such a decision.

3. MNREDA reserves the right to modify, amend or supplement this document.

4. While this NIT has been prepared in good faith, neither MNREDA nor their employees or advisors make any representation or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statements or omissions herein, or the accuracy, completeness or reliability of information, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this NIT, even if any loss or damage is caused by any act or omission on their part.

Place: Shillong

Date: 05/06/2026

PART - I

INVITATION FOR BIDS (IFB) & BID DETAILS

INVITATION FOR BIDS (IFB)
FOR

Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya.

IFB No: MNREDA/1937/HMS2/2024-25/11

1.0 The Government of Meghalaya sanctioned a project/scheme to Meghalaya New and Renewable Energy Development Agency (MNREDA) for implementation of Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya.

2.0 For the purpose of all procurement activities related to the said works, **Meghalaya New and Renewable Energy Development Agency** (hereinafter referred to as **'MNREDA'**) shall be referred to as 'Employer

3.0 Director, MNREDA, therefore, invites sealed bids from eligible bidders to participate in **Bid Document** for Site Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya.

4.0 A Bidder can submit the tender consisting of all the proposed sites in the tendering process, individually as a Bidder, Joint Venture/Consortium are not permitted.

5.0 In the bidding process, the bidder should submit their "Technical Bid" in a sealed envelope superscripting "Technical Bid" with name of bidder, NIT reference No. , on or before Last date of Bid Submission as mentioned on the Bid Information Sheet. The schedule of the technical bid shall be provided from the office of the undersigned. Bidders have to submit the price bid only in the form of Offline submission in provided Bill of Quantity (BoQ) format in a sealed envelope. Bidder submitting the price bid in together with the other documents envelope shall be treated as non-responsive and lead the rejection of the bidder.

6.0 A forwarding letter along-with annexure and supporting documents as mentioned in the bid document is to be submitted sealed in a separate envelope superscripting document with name of bidder, NIT reference No. and Last Date of Submission.

7.0 Bidders are required to submit both the Technical Bid and Financial Bid in physical form at the MNREDA office address. The Bid shall be accompanied by the Tender Fee and Bid Security/ Earnest Money Deposit (EMD) and must be submitted to the Office of the Director, MNREDA, on or before the prescribed last date of submission.

8.0 **The Director, MNREDA reserves the Right to increase/decrease the quantity of them as well as transfer location from one site to another site as per requirement of the project, but restricted to LoA amount**.

9.0 The detailed scope of work includes:

- Site Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya. including Operation and Maintenance (O & M) of the project for a period of 5 years after commissioning of project.
- It shall be required to visit the respective sites and check the feasibility of space including installation capacity in consultation with respective site in-charge / owner.

BID INFORMATION SHEET

The Bid Information Sheet is provided below:

Particulars	Description
Document Description	Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya.
NIT No. and Date	**MNREDA/1937/HMS2/2024-25/8 Dated 03rd June 2026**
Nos. of Solar High Street Lights	The details will be provided to the L1 Bidder, after completion of the award of work.
Availability of bidding document	From 05/06/2026 to 25/06/2026
Period of Completion Period	190 days from the date of issuance of LOA
Last date & Time for submission of bid document	25/06/2026 upto 1300 Hrs
Address for submission of Techno-Commercial Bid	Director, Meghalaya New and Renewable Energy Development Agency (MNREDA), Near BSF Camp, P.O – Nongmensong, District – East Khasi Hills, Shillong – 793019 (Meghalaya) Email: mnreda.dir@gmail.com
Technical Bid Opening	25/06/2025 at 1300 Hrs
Bid Security/ Earnest Money Deposit	**General Bidders**: INR 11,99,167 (Rupees Eleven Lakhs Ninety-Nine Thousand One-Hundred Sixty-Seven Only) **Meghalaya ST Bidders:** INR 5,99,584 (Rupees Five Lakhs Ninety-Nine Thousand Five Hundred Eighty-Four Only) **MSME :** As per Govt Rules and Regulations
Tender Processing Fee (Non-refundable applicable for the Bidder)	INR 10,000
Joint Venture / Consortium	Not Allowed

Important note:

1. All documents, notices, amendments, corrigenda, and clarifications related to the bidding process shall be made available on the MNREDA website

Director, MNREDA

Memo No.: MNREDA/1937/HMS2/2024-25/11-A **Dated 05th June 2026**

Copy to:-

1. **The Deputy Secretary to the Government of Meghalaya**, Power Department for kind perusal and information.
2. The Joint Secretary, DIPR, Government of Meghalaya for publication in one article of single local newspaper for wider circulation.
3. Office Notice Board.

Director, MNREDA

----- End of (IFB) ----

PART - II
INSTRUCTIONS TO BIDDERS (ITB)

DEFINITION

In this RFS, unless the context otherwise requires, capitalized terms shall have the meaning given to them in the table below:

MNREDA	Means Meghalaya New and Renewable Energy Development Agency
BIS	Mean specifications of Bureau of Indian Standards (BIS).
BID Document/NIT/RFS	Mean the Techno Commercial and Price Bid submitted by the Bidder along with all documents/credentials/attachments annexure etc., in response to this RFS, in accordance with the terms and conditions hereof
Bidder/Bidding Company	Mean Bidding Company submitting the Bid. Any reference to the Bidder includes Bidding Company / including its successors, executors and permitted assigns as the context may require
Bid Deadline	Mean the last date and time for submission of Biding response to this RFS as specified in Bid information Sheet
Chartered Accountant	Mean a person practicing in India or affirm whereof all the partners practicing in India as a Chartered Accountant(s) within the meaning of the Chartered Accountants Act, 1949
Commissioning	Means Successful operation of the Project / Works by the Contractor, for the purpose of carrying out Performance Test(s) as defined in RFS
Company	Mean a body incorporated in India under the Companies Act, 1956 or Companies Act, 2013 including any amendment thereto.
IEC	Mean specifications of International Electro-Technical Commission
kWp	Mean Kilo-Watt Peak under STC
O&M	Means Operation &Comprehensive Maintenance of Solar High Mast Street Lighting System
Project Cost / Project Price	Shall mean the price offered by the Bidder for the Scope of work as per RFS document
Qualified Bidder	Mean the Bidder(s) who, after evaluation of their Techno Commercial Bid stand qualified for opening and evaluation of their Price Bid.
RFS	Mean Request for Selection (RFS)/Bid document/Tender document.
Successful Bidder(s) /Contractor/Project Developers(s)	Mean the Bidder(s) selected by MNREDA pursuant to this RFS, for Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya. as per the terms of the RFS Documents, and to whom Letter of Award has been issued

SECTION I:

A. INTRODUCTION, BID DETAILS AND INSTRUCTIONS TO THE BIDDERS

1.0 INTRODUCTION

1.1. 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.

1.2. The bidder shall be deemed to have examined the bid document, to have obtained his own information in all matters whatsoever that might affect the carrying out of 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, equipment, tools and labor involved, wage structures and as to what all works he has to complete in accordance with the bid documents irrespective of any defects, omissions or errors that may be found in the bid documents

1.3. The hard copies of the technical bid document shall be submitted on the due date as mentioned in the Bid Information Sheet. Bid submitted after the due date of submission shall summarily be rejected

1.4. The Price Bid shall be submitted in a separate sealed envelope, distinctly marked as "Price Bid". Any envelope not appropriately marked as "Price Bid" shall be liable for rejection. Further, submission of the Price Bid along with or within the Technical Bid shall render the bid non-responsive, and the same shall be rejected without any further consideration.

2.0 BID DETAILS

2.1. Based on the Price quoted by the bidder, the tendering authority shall arrange the bids in the ascending order i.e. L1, L2, L3, _ _ _ (L1 being the lowest quoted bidder).

2.2. Bidders are advised to quote rates that are reasonable and in line with prevailing market rates, keeping in view the estimated cost of the work, so as to ensure quality execution and competitiveness of the bidding process.

2.3. SIZE OF THE PROJECTS

The size of each solar high mast streetlight shall be as per the technical specifications mentioned in Part-V – Technical Specifications. Director MNREDA reserves the Right to transfer location from one site to another site as per requirement of the project

The spacing between consecutive Solar High Mast Street Light installations along the project stretch shall be 60 meters (center-to-center distance), unless otherwise directed by MNREDA based on site conditions.

3.0 INSTRUCTIONS TO THE BIDDERS

3.1. Bidder will be declared as a techno-commercially Qualified Bidder based on documentary evidence submitted by the Bidder in the Bid.

3.2. Consortium

Bidding Consortium/Joint Venture shall not be allowed in this bid.

3.3. ELIGIBILITY CRITERIA

3.3.1 GENERAL ELIGIBILITY CRITERIA

(a) The Bidder should be either a body incorporated in India under the Companies Act, 1956 or 2013 including any amendment thereto or Partnership firms/ Sole Proprietorship Firm / Limited Liability Partnership (LLP)/ Limited Liability Company (LLC). **A copy of certificate of incorporation / registration shall be furnished along with the bid in support of above.**

(b) The bidder should have valid GST registration certificate. Copy to be furnished along with the bid.

(c) The bidder must have service centre in the district of Ri-Bhoi before the date of start of bid submission for ensuring the quality installation and O&M services. In absence of service centre details on notarized stamp paper, the respective bid shall be treated as non-responsive and liable for the rejection.

(d) In case the bidder is participated as a MSME bidder and shall be eligible for availability of the benefits like exemption from submission of Bid Security/ Earnest Money Deposit (EMD) fee and preference in allotment of work subject to submission of following documentary evidence:-

i) Notarized copy of valid Udyog Adhar Memorandum (UAM)/ UDYAM Registration Certificate for the Goods/Services in support of the bid Documents

3.3.2 TECHNICAL ELIGIBILITY CRITERIA

(a) The bidders should have technical experience in design, supply, installation & commissioning of similar work and should fulfill either of the following criteria:-

Experience of having successfully completed similar works during last 7 years ending last day of the month previous to the one in which applications are invited should be either of the following:

a. Three similar completed works costing not less than the amount equal to INR 1,59,88,896 with cumulative installation of at least 250 nos. of Solar High Mast Street Lights.

OR

b. Two similar completed works costing not less than the amount equal to INR 1,99,86,120 with cumulative installation of at least 250 nos. of Solar High Mast Street Lights.

OR

c. One similar completed work costing not less than the amount equal to INR 3,19,77,792 with installation of at least 250 nos. of Solar High Mast Street Lights.

The Bidder should enclose the project completion report duly signed by the Government authority not later than the date of issuance of this tender document as proof of technical eligibility. In absence of the same, the bid shall be treated as non-responsive.

Note:

(a) The work order & work completion report in support of technical eligibility criteria furnished by any private organization shall not be considered for evaluation.

(b) Government Organization means any entity which is either directly controlled by the Central or State Government or is under the administrative control of Central or State Government or a Central Public Sector Enterprise (CPSE)/ Central Public Sector Undertaking (CPSU)/State PSU etc.

(c) Subcontractor experience shall not be considered for evaluation.

3.3.3 FINANCIAL ELIGIBILITY CRITERIA

(a) The Minimum Average Annual Turnover (MAAT) of the bidder in the last three audited financial years (i.e. i.e. FY 2023-2024, 2024-2025 and 2025-2026) should not be less than **INR 3.19 Crore**. A summarized sheet of average turnover certified by registered CA along with UDIN No should be compulsorily enclosed along with corresponding annual accounts. In absence of the same, bid shall be considered as non-responsive.

(b) The bidder should have valid GST registration certificate.

(c) The bidder shall possess a valid GST Registration and must have regularly filed GST returns for the last six (6) months preceding the date of issuance of the tender. Documentary proof, including the GST Registration Certificate and copies of the relevant GST returns, shall be submitted along with the bid, failing which the bid shall be treated as non-responsive.

(d) In case audited balance sheet of the last financial year is not made available by the bidder, he has to submit an affidavit certifying that 'the balance sheet has actually not been audited so far'. In such a case the financial data for previous '2' audited financial years will be taken into consideration for evaluation. If audited balance sheet of any of these 2 years other than last year is not submitted, the tender will be considered as non-responsive. But if the company is operative for less than 3 years, it still can be considered provided its financial standing meets the tender requirement based on available audited balance sheets.

3.4. BID SUBMISSION BY THE BIDDER

3.4.1 The information and/or documents shall be submitted by the Bidder as per the formats specified in the bid document.

3.4.2 Strict adherence to the formats wherever specified is required. Wherever information has been sought in specified formats, the Bidder shall refrain from referring to brochures /pamphlets. Non- adherence to formats and / or submission of incomplete information may be a ground for declaring the Bid as non-responsive. Each format has to be duly signed and stamped by the authorized signatory of the Bidder.

3.4.3 The Bidder shall furnish documentary evidence in support of meeting Technical and Financial Eligibility Criteria to fulfill the compliance of the bidding document

3.5. AMENDMENTS TO BID DOCUMENT

3.5.1 The Bidder shall submit a duly notarized written Power of Attorney (POA) authorizing the signatory (ies) of the Tender to commit the Bidder of each member of the partnership, consortium along with copy of Board Resolution/authorization in favor of signatory to POA.

3.5.2 Each Bidder (each member in the case of consortium) is required to confirm and declare with his Tender that no agent, middleman or any intermediary has been, or will be, engaged to provide any services, or any other item or work related to the award and performance of this Contract and declare that no agency commission or any payment which may be construed as an agency commission has been, or will be, paid and that the tender price will not include any such amount.

3.6. CLARIFICATIONS

3.6.1 MNREDA will not enter into any correspondence with the Bidders, except to furnish clarifications on RfS Documents, if necessary. The Bidders may seek clarifications or suggest amendments to RfS , also soft copy by e-mail to reach MNREDA at the address, within 7 days from date of NIT as mentioned in Bid Information sheet.

3.6.2 MNREDA is not under any obligation to entertain/ respond to suggestions made or to incorporate modifications sought by the bidder after 7 days from the date of NIT.

3.6.3 A prospective Bidder requiring any clarification of the Bid Documents may contact Director, MNREDA in writing or by E- mailing address mnreda.dir@gmail.com not later than 7 days from the date of NIT.

3.7. AMENDMENTS TO BID DOCUMENT

3.7.1 At any time prior to the deadline for submission of Bids, the Director, MNREDA may, for any reason whatsoever, whether on its own initiative or in response to a clarification sought by a prospective Bidder, modify the Bid Document by issuing clarifications and/or amendments.

3.7.2 Any such clarification(s) or amendment(s) shall be notified through the notice board of MNREDA at least two (2) days prior to the proposed date for submission of Bids. In the event that any amendment is required to be notified within two (2) days of the proposed date of submission, the Bid Submission Deadline may be extended for such period as deemed appropriate.

3.7.3 The Director, MNREDA shall not bear any responsibility or liability arising from the non-receipt of information regarding such clarifications or amendments, whether in a timely manner or otherwise. It shall be the sole responsibility of Bidders to regularly inspect the MNREDA office notice board for any such updates prior to submission of their Bids.

3.7.4 In the event that any amendment is notified after the submission of Bids but prior to the opening of the Techno-Commercial Bids, the due date and time for Bid submission shall be extended. Bidders shall be required to submit fresh Bids and/or supplementary Bids in accordance with the revised schedule notified by MNREDA.

3.8. BIDDING PROCESS

3.8.1 OFFLINE BID FOR SUBMISSION OF HARDCOPIES

The Bid in response to this bid shall be submitted by the Bidder in the manner provided in the bid document. The Bidder shall submit the Bid Document for entire scope of work , partial bid submission shall not be allowed. The Bid shall comprise of the following in the Techno – Commercial Bid:

A. ENVELOPE- I:

The envelope –I shall contain the following documents and shall submit the documents in the following manner:-

i. Covering Letter as per prescribed **Format-1**
ii. **Original Tender Processing Fee** in the form of Demand Draft in favour of Director MNREDA, payable at Shillong
iii. **Original Bid Security/ Earnest Money Deposit (EMD)** in the form of Bank Guarantee/ Demand Draft in favour of "Director MNREDA" payable at Shillong for the amount mentioned as in Bid Information sheet.

B. ENVELOPE- II: TECHNO-COMMERCIAL DOCUMENTS

a) General Information about the bidder as per prescribed **Format-2**
b) General particulars of bidders as per prescribed **Format-3**
c) **Financial Eligibility Criteria Requirement** as per prescribed **Format-5**
d) **Work Experience Details** as per prescribed **Format-6 (Annexure-1)**
e) **Undertaking for Corrupt & Fraudulent Practice** as per prescribed **Format-7**
f) **Undertaking for Financial Stability** as per prescribed **Format-9**, to be submitted on the letterhead of the Bidding Company
g) **Undertaking for Not Being Penalised in a Contract** as per prescribed **Format-8**, to be submitted on the letterhead of the Bidding Company
h) The Minimum Average Annual Turnover (MAAT) of the bidder in the last three audited financial years (i.e. i.e. FY 2023-2024, 2024-2025 and 2025-2026). A summarized sheet of average turnover certified by registered CA along with UDIN No should be compulsorily enclosed along with corresponding annual accounts.
i) Filed GST returns for the last six (6) months preceding the date of issuance of the tender
j) A copy of certificate of incorporation / registration details of the bidder.
k) Copy of GST registration certificate
l) Documentary evidence in support of meeting General and Technical Eligibility Criteria:

Details for meeting Technical Eligibility Criteria as per clause no. 3.3.2 in the prescribed Format – 6 along with documentary evidence (Work order and Work Completion report) for the same, not signed after the date of notification of the NIT.

m) Details of the proposed items as per prescribed format 'FORMAT-13' along with following supporting documents:-

- Enclosed test report/certificate of Solar PV Modules (Panels) from IEC/NABL accredited laboratory / MNRE approved test centers complying with relevant IEC standards such as IEC 61215, IEC 61730 (Part 1 & Part 2) for performance and safety qualification.
- Enclosed test report/certificate of Solar Module Mounting Structure demonstrating compliance with relevant IS standards for structural strength, corrosion resistance (hot-dip galvanization), and wind load design certification from a recognized testing authority.
- Enclosed test report/certificate of High Mast / Octagonal Pole with Base Plate and Foundation Bolts from NABL/approved laboratories complying with relevant IS standards (e.g., IS 2713, IS 2062), including wind load and structural stability certification.
- Enclosed test report/certificate of LED Street Light / Flood Light Luminaire from IEC/NABL accredited laboratory complying with LM-79 (performance), LM-80 (LED life), IEC 60598 (luminaire safety), and IP66 protection standards.
- Enclosed test report/certificate of Battery (Energy Storage System) from IEC/NABL accredited laboratory / MNRE approved test centers complying with relevant IS standards such as IS 16046 / IS 13369 / IS 1651 or equivalent international standards.
- Enclosed test report/certificate of Solar Charge Controller (MPPT based) from IEC/NABL accredited laboratory complying with relevant IEC standards such as IEC 62509, including efficiency, protection features, and environmental testing.
- Enclosed test report/certificate of Integrated Driver / Power Conditioning Unit (where applicable) from IEC/NABL accredited laboratory complying with IEC 61683 (efficiency), IEC 60068 series (environmental testing), and relevant safety standards.
- Enclosed test report/certificate of Cabling and Interconnections complying with relevant IS/IEC standards (e.g., IS 694, IEC 60227/60502), including conductor quality, insulation, and voltage rating certification.
- Enclose test report/certificate of Earthing and Lightning Protection System complying with relevant IS/IEC standards (IS 3043 for earthing, IEC 62305 for lightning protection).
- Enclosed test report/certificate of Mounting Hardware and Fasteners confirming compliance with relevant IS standards for mechanical strength, corrosion resistance, and galvanization thickness.
- Certification for Civil Foundation and Grouting Work shall comply with relevant IS codes (e.g., IS 456 for concrete), supported by site test reports, quality assurance records, and structural design certification.
- Installation, Testing, and Commissioning Reports shall be submitted, including system performance verification, electrical safety checks, and commissioning certificates duly signed by authorized personnel/MNREDA representatives.
- Project Management and Safety Compliance Certification confirming adherence to applicable safety

standards, statutory requirements, and quality assurance procedures during execution of the project.

n) Signed and stamped Copy of RFS Documents including amendments & clarifications by Authorized signatory on each page.

Please note that, the price bid should not be submitted in the techno-commercial bid. If the price bid is submitted as a part of technical bid submission, all the quoted bids will be rejected.

C. ENVELOPE III : PRICE BIDS

The Price Bid shall be submitted in a separate sealed envelope, distinct from the Technical Bid and any other bid envelopes. The said envelope shall be clearly labeled as "Price Bid" and shall be submitted only in offline mode at the office of MNREDA. Submission of the Price Bid through any mode other than offline submission at the MNREDA office shall not be permitted and shall render the Bid liable to rejection.
Bidders are expressly prohibited from including any Price Bid information in the Technical Bid or any other part of the Bid documents. In the event that the Price Bid, in whole or in part, is found included within the Technical Bid or any other envelope, such Bid shall be rejected outright without further consideration.

1. Applicable Tax Rates
   The Bidder acknowledges and agrees that the Goods and Services Tax (GST) applicable to the scope of work comprising Design, Supply, Installation, Testing, and Commissioning (DSTC) and Comprehensive Maintenance Services under this Contract shall be levied in accordance with the prevailing laws, rules, notifications, and circulars issued by the Government of India, as amended from time to time.
2. Material Component
   The GST applicable on the supply of solar materials and equipment forming part of the Contract scope shall be 5% (Five Percent), in accordance with the current Government of India norms.
3. Service Component
   The GST applicable on services related to solar projects, including but not limited to installation, testing, commissioning, and maintenance services, shall be 18% (Eighteen Percent), as per the prevailing statutory provisions.
4. Compliance with Amendments
   The above-mentioned tax rates are based on the existing Government of India regulations as on the date of submission of the bid. In the event of any revision, amendment, modification, or substitution in the applicable tax rates, structure, or classification by any competent authority, the same shall be binding on both Parties and shall be applied accordingly.
5. Statutory Variations
   Any increase or decrease in applicable taxes due to statutory changes after the due date of bid submission shall be adjusted to the Contract Price, subject to the production of documentary evidence and compliance with applicable laws.
6. Bidder's Responsibility
   The Bidder shall be solely responsible for correct classification of goods and services, payment of applicable taxes, filing of returns, and compliance with all statutory requirements under GST laws. Any liability arising due to misclassification, non-compliance, or incorrect tax treatment shall be borne entirely by the Bidder.
7. Inclusive/Exclusive Pricing Declaration
   The Bidder shall clearly indicate in the Financial Bid whether the quoted rates are inclusive or exclusive of GST. In case of ambiguity, it shall be deemed that the quoted price is inclusive of all applicable taxes and duties.

Please note that, the price bid should not be furnished in the technical bid. If the price bid is submitted as a part of technical bid submission, the quoted bid will be rejected.

3.9 TENDER DUE DATE

The Bidder shall submit hard copies of the Technical Bid along with the Original Tender Processing Fee and Bid Security (excluding the Financial/Price Bid) so as to reach the address indicated below on the date and within the time specified in the Bid Information Sheet. Each envelope shall be submitted separately on the same day in accordance with the prescribed bid submission procedure.

The Financial/Price Bid shall be submitted in a separate envelope and shall not, under any circumstances, be included within the Technical Bid or any other envelope. Including the Financial Bid in any envelope other than the designated Price Bid envelope shall result in rejection of the Bid.

The Bidder shall strictly comply with the provisions of Clause 3.8.1 (A), (B), and (C) while preparing and submitting the Bid. No claim regarding late submission or improper submission of documents shall be entertained.

The Director
Meghalaya New and Renewable Energy Development Agency (MNREDA),
Near BSF Camp, P.O. – Nongmensong, District- East Khashi Hills, Shillong – 793019
(Meghalaya), India
E-mail: mnreda.dir@gmail.com

3.10 VALIDITY OF TENDER

3.10.1 The Tender shall be valid for a period of 180 days from the latest Date of Submission of Tenders, with bidder having no right to withdraw, revoke or cancel his offer or unilaterally vary the offer submitted or any terms thereof. In case of the bidder revoking or cancelling his offer or varying any term & conditions in regard thereof or not accepting letter of award, MNREDA shall forfeit the Bid Security/EMD furnished by him. **Confirmation regarding the Bid offer validity shall be clearly mentioned in the covering letter**.

3.10.2 In exceptional circumstances when letter of award (LOA) is not issued, MNREDA may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. A Bidder may refuse the request without forfeiting its Bid Security /EMD. A Bidder granting the request will neither be required nor permitted to modify its Bid in any manner.

3.11 VALIDITY AND COST RELATED TO THE TENDER

The Bidder shall bear all costs associated with the preparation and submission of its Bid, and MNREDA shall, under no circumstances, be responsible or liable for any such costs. The Bidder shall not be entitled to claim any costs, charges, or expenses incurred in connection with the submission of its Bid, irrespective of whether MNREDA elects to modify, withdraw, or cancel the bidding process at any stage.

Further, the Contractor undertakes that the transportation and logistics cost quoted in its Price Bid/BoQ—comprising, inter alia, freight, loading and unloading, handling, last-mile delivery, carriage to site, and transit insurance up to the point of installation/handing over—shall be uniform and applicable across the all the locations . Such cost shall remain the same for all locations, irrespective of distance, terrain, remoteness, road conditions, access constraints, or whether delivery is made in part or in lots.

The Contractor expressly agrees that no modification, escalation, variation, or differential in transportation or logistics costs shall be permitted or entertained by MNREDA under any circumstances during the entire contract period, including any extensions thereof. The Contractor further confirms that its quoted item rates are inclusive of such uniform statewide transportation costs, and no separate claim or line item in respect thereof shall be admissible at any stage.

Any attempt by the Contractor to claim revised or differential transportation or logistics charges shall constitute a material breach of the Contract, entitling MNREDA, without prejudice to any other rights or remedies available under law or contract, to (i) reject such claims; (ii) withhold or set off any payments due; (iii) forfeit the Earnest Money Deposit (EMD), Performance Security, and/or Bank Guarantee; and/or (iv) terminate the Contract or Work Order for default.

3.12 BID SECURITY/ EARNEST MONEY DEPOSIT

The Bidder-wise Bid Security (EMD) shall be as follows:

Sl. No	Category of Bidders	EMD (Rs.)
1	General Bidders	INR 11,99,167 (Rupees Eleven Lakhs Ninety-Nine Thousand One-Hundred Sixty-Seven Only)
2	Meghalaya ST Bidders	INR 5,99,584 (Rupees Five Lakhs Ninety-Nine Thousand Five Hundred Eighty-Four Only)
3	MSME Category	As per Govt Rules and Regulations

Earnest Money Deposit (EMD) as stipulated in above should be submitted as per the Clause 3.8.1 (A) in the form of Term Deposit only pledged in favour of "DIRECTOR, MNREDA". Any tender without EMD the bid offer will be rejected outright.

The EMD shall remain valid for a period of six (6) months ("Expiry Period") from the original date for submission of "Techno-Commercial Bid" and "Price Bid" as per NIT with an additional Claim Period of thirty (30) days from the end date of Expiry period ("Claim Period") .

- The Bid Security of bidders who fail in technical evaluation shall be returned after opening of financial package.
- The Bid Security of the unsuccessful bidders in financial opening shall be released after signing of contract agreement with the successful bidder.
- The Bid security of successful bidder shall be returned after award of work and submission of Performance BG and after the receipt of confirmation of their PBG's from their respective bankers.

The Bid security shall be forfeited without prejudice to the Bidder being liable for any further consequential loss or damage incurred to MNREDA:

- If a Bidder withdraws, revokes, cancels, or unilaterally varies its Bid in any manner during the Bid Validity Period specified in the RFS document.
- If the Successful Bidder fails to unconditionally accept the Letter of Allocation within seven (07) days of the date of its issuance.
- If the Successful Bidder fails to furnish the Performance Bank Guarantee (PBG) within the stipulated time.
- If the Successful Bidder/Contractor fails to complete the work within the allotted time as specified in the Contract or Work Order, including any duly approved extensions thereof.
- If, at any stage during bid evaluation, document verification, or contract execution, any document or information submitted by the Bidder is found to be false, forged, fabricated, or materially misleading.

In all the above cases, the Earnest Money Deposit (EMD) and/or Performance Security, as applicable, shall be liable to be forfeited by MNREDA. Further, in the event of submission of falsified or forged documents, MNREDA shall be entitled, without prejudice to any other rights or remedies available under law, to initiate appropriate legal action against the Bidder concerned, including blacklisting/debarment from future tenders.

3.13 PERFORMANCE SECURITY/PERFORMANCE BANK GUARANTEE (PBG)

3.13.1 Within seven (7) days from the date of issue of Letter of Award (LOA), Successful Bidder shall furnish the Performance Security/PBG of **Rs. 19,98,612**. The PBG shall furnish in the form of Bank Guarantee (BG) in favor of "DIRECTOR, MNREDA "payable at Shillong.

3.13.2 The Performance Security shall be valid for a minimum period of 5 years from the date of issuance of Letter of Award (LOA) and shall be renewed / extended till the completion of 5 years of O&M period. The Performance security shall be released 5 years after the date of commissioning with the compliance of entire obligations in the contract.

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

- If the Successful Bidder cannot not execute the work to the satisfaction of MNREDA, PBG amount, pro-rata to the capacity for which the Successful Bidder is not able to execute the Projects.
- If the Successful Bidder is not able to commission the projects to the satisfaction of MNREDA, PBG amount, pro-rata to the capacity not commissioned by the Successful Bidder.
- If the Successful Bidder/Contractor fails to complete the work within the allotted time as specified in the Contract or Work Order, including any duly approved extensions thereof.
- If, at any stage during bid evaluation, document verification, or contract execution, any document or information submitted by the Bidder is found to be false, forged, fabricated, or materially misleading.

In all the above cases, the Performance Bank Guarantee, as applicable, shall be liable to be forfeited by MNREDA. Further, in the event of submission of falsified or forged documents, MNREDA shall be entitled, without prejudice to any other rights or remedies available under law, to initiate appropriate legal action against the Bidder concerned, including blacklisting/debarment from future tenders.

3.13.4 In case, the bidder qualified as a successful bidder and fails to furnish the "Performance Bank Guarantee (PBG), then MNREDA have the right to blacklist the bidder for a period of 5 years and same shall be intimated to all the concerned Department of Govt. of Meghalaya / India. No clarification shall be sought from the bidders regarding PBG.

3.14. OPENING OF BIDS

3.14.1 Technical bid (Envelope I and Envelope II) of the Bidder shall be opened at the date and time mentioned in at the venue indicated in Bid Information Sheet of this RFS, in the presence of one representative from each of the Bidder who wishes to be present .

3.14.2 The tenders shall be opened by the TEC (Tender Evaluation Committee) on due date and time of tender opening. On opening of the Tender, MNREDA will first check the tender cost and EMD by cross verifying with the hard copy submitted.

3.14.3 If the documents do not meet the requirements of the RFS, a note will be recorded accordingly by the Tender Opening Authority.

3.14.4 The Financial Bids will be opened on a subsequent date after evaluation of technical packages. Financial bids of only those bidders whose submissions are found substantially responsive and technically compliant will be opened. The time of opening of financial bids shall be informed separately to only the Bidders who have qualified during technical evaluation stage and bidders can be present to witness opening of financial bids.

3.15 LEFT INTENSIONALY BLANK

3.16 RIGHT TO WITHDRAW THE BID DOCUMENT AND TO REJECT ANY BID

3.16.1 This RFS 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 of the Bids without assigning any reasons whatsoever and without incurring any liability on any account.

3.16.2 MNREDA reserves the right to interpret the Bid submitted by the Bidder in accordance with the provisions of the RFS and make its own judgment regarding the interpretation of the same. In this regard 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 this RfS, at its sole discretion. MNREDA decision in this regard shall be final and binding on the Bidders.

3.16.3 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 or rejection of bid by MNREDA will be full and final

3.17 ZERO DEVIATION

This is a ZERO Deviation Bidding Process. Bidder is to ensure compliance of all provisions of the Bid Document and submit their Bid accordingly. Tenders with any deviation to the bid conditions shall be liable for rejection

3.18 EXAMINATION OF BID DOCUMENT

3.18.1 The Bidder is required to carefully examine the Technical Specification, terms and Conditions of Contract, and other details relating to supplies as given in the Bid Document.

3.18.2 The Bidder shall be deemed to have examined the bid document including the agreement/contract, to have obtained information on all matters whatsoever that might affect to execute the project activity and to have satisfied himself as to the adequacy of his bid. The bidder shall be deemed to have known the scope, nature and magnitude of the supplies and the requirements of material and labor involved etc. and as to all supplies he has to complete in accordance with the Bid document.

3.18.3 Bidder is advised to submit the bid on the basis of conditions stipulated in the Bid Document. Bidder's standard terms and conditions if any will not be considered.

3.18.4 Bid not submitted as per the instructions to bidders is liable to be rejected. Bid shall confirm in all respects with requirements and conditions referred in this bid document

3.19 TRADING LICENSE

The Contractor acknowledges that such Trading License has to be submitted before the start of work and is required under:

3.19.1 The United Khasi-Jaintia Hills District (Trading by Non-Tribals) Regulation, 1954; and

3.19.2 The Garo Hills District (Trading by Non-Tribals) Regulation, 1957; framed under the Sixth Schedule to the Constitution of India, mandating that all non-tribal vendors must possess a valid Trading License to lawfully conduct trading and execute works within the respective jurisdictions of the ADCs.

3.19.3 The Contractor expressly recognizes that non-compliance would place MNREDA in a legal bind; strict adherence is therefore fundamental.

- **For works to be executed within the jurisdiction of the Khasi Hills Autonomous District Council (KHADC), bidders shall submit a valid Trading License issued exclusively by the Khasi Hills Autonomous District Council.**
- **For works to be executed within the jurisdiction of the Jaintia Hills Autonomous District Council (JHADC), bidders shall submit a valid Trading License issued exclusively by the Jaintia Hills Autonomous District Council.**
- **For works to be executed within the jurisdiction of the Garo Hills Autonomous District Council (GHADC), bidders shall submit a valid Trading License issued exclusively by the Garo Hills Autonomous District Council.**

3.20 TERMINATION OF WORK

3.20.1 Termination for Delay in Completion of Work

In the event that the Contractor fails to complete the work within the stipulated completion period, including any duly approved extensions, MNREDA shall have the right to terminate the Contract/Work Order forthwith, without any further notice. Upon such termination:

- The Contractor shall be liable to be **debarred/blacklisted for a period of five (5) years** from participating in any tenders of MNREDA and other Government agencies, as deemed appropriate.
- The **Earnest Money Deposit (EMD)** and **Performance Bank Guarantee (PBG)/Performance Security** shall be **forfeited in full**.
- MNREDA reserves the right to **initiate appropriate legal proceedings** against the Contractor for losses, damages, or delays caused.

3.20.2 Termination for Non-Submission of Mandatory License

In case the Contractor fails to submit the valid Trading License as required under Clause 3.19 of the RFS document within the prescribed timeline, MNREDA shall have the right to terminate the Contract immediately. Such termination shall have the same consequences as stated above, including forfeiture of EMD and Performance Security and blacklisting.

3.20.3 Termination for Submission of False or Forged Documents

If, at any stage during bid evaluation, document verification, or execution of the Contract, any document/information submitted by the Bidder/Contractor is found to be false, forged, fabricated, or misleading, the following actions shall be taken:

- The Bid/Contract shall be **terminated forthwith**.
- The Bidder/Contractor shall be **immediately blacklisted/debarred**.
- The **EMD and Performance Security/PBG shall be forfeited**.
- MNREDA shall initiate **legal action**, including civil and/or criminal proceedings, as deemed appropriate.

3.20.4 Intimation to Government Authorities

In all cases of termination and blacklisting as specified above, MNREDA shall issue a formal order and may, at its discretion, intimate all concerned Departments of the Government of Meghalaya, Government of India, and other relevant authorities regarding such blacklisting and termination for necessary action.

3.20.5 General Provision

All the above actions shall be without prejudice to any other rights, remedies, or powers available to MNREDA under applicable law or under the provisions of the Contract.

PART - III

EVALUATION CRITERIA & SCOPE OF WORK

EVALUATION, AWARD CRITERIA, COMPLETION OF PROJECT & SCOPE OF WORK

4.0 BID EVALUATION

4.1 The evaluation process comprises the following steps:

Step I	Responsiveness check of Techno Commercial Bid
Step II	Evaluation of Bidder's fulfillment of Eligibility Criteria
Step III	Evaluation of Price Bid
Step IV	Successful Bidders(s) selection

4.2 Step-I: RESPONSIVNESS CHECK OF TECHNO-COMMERCIAL BIDS

The Techno Commercial Bid submitted by Bidders shall be scrutinized to establish responsiveness to the requirements laid down in the RFS subject to Clause 3.3.1, Clause 3.3.2, and Clause 3.3.3. Any of the following may cause the bid to be considered "Non-responsive", at the sole discretion of MNREDA:

1. 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, applicable undertakings, format for disclosure, Bid Security, tender processing fee etc.
2. Bid not signed by authorized signatory and /or stamped in the manner indicated in this RFS.
3. Material inconsistencies in the information /documents submitted by the Bidder, affecting the Eligibility Criteria
4. Information not submitted in the formats specified in this RFS
5. Bid being conditional in nature
6. Bid not received by the Bid submission Deadline.
7. Bidder makes any misrepresentation
8. Trading License not submitted (if applicable).
9. Documents not submitted under any of the eligibility criteria/conditions and clause not fulfilled by the bidder.

Each Bid shall be checked for compliance with the submission requirements set forth in this RFS before the evaluation of Bidder's fulfillment of Eligibility Criteria is taken up. In case of any non-conformity, the tender shall be disqualified and rejected

4.3 STEP-II: EVALUATION OF BIDDERS' FULLFILMENT OF ELIGIBILITY CRITERIA

EVALUATION OF ELIGIBILITY:

a) 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. Non-availability of information and related documentary evidence for the satisfaction of Eligibility Criteria may cause the Bid to be nonresponsive.

b) Tenders not considered substantially responsive and not full filling the requirements of the tender document as evaluated as per item clause 4.1 shall be rejected by MNREDA and shall not be allowed subsequently to be made responsive by correction or withdrawal of the nonconforming deviation or reservation

c) If any tender is rejected, pursuant to paragraph (b) above, the Financial Part of such bidder shall not be opened

d) The decision of MNREDA as to which of the tenders are not substantially responsive shall be final

4.4 STEP-III: EVALUATION OF PRICE BID

a) All techno - commercially responsive bidders will be eligible for opening of their financial proposals. MNREDA shall notify all technically qualified Bidders to attend the opening of the financial proposal. The financial proposal will then be opened , as per the decision of the Technical Evaluation Committee of MNREDA.
b) The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record.
c) Evaluation of financial offer will be based on rates quoted in prescribed format of Price Bid. Any alteration in Price Bid will not be given any cognizance. The rates are inclusive of all applicable taxes, duties, installation & Commissioning, CMC for 5 years, transportation & insurance etc.

4.5 STEP-IV: SUCESSFUL BIDDER(S) SELECTION

a) Based on the price quoted by the bidders, MNREDA shall arrange the bids Package –wise in the ascending order of ranking i.e. L1, L2, L3, _ _ _ (L1 being the lowest quoted bidder).

b) In case of tie in quoted price among two or more bidders:

- Then the ranking of the bidder shall be done based on their preference will be given to that bidder who has higher MAAT value
- In case of tie even in the MAAT value among two or more bidders, then timing of bid submission will be considered for evaluation of ranking and preference will be given to that bidder who has quoted his price earlier than others

5.0 NOTIFICATION TO SUCCESSFUL BIDDERS

Prior to the expiry of the period of tender validity prescribed by M N R E D A , M N R E D A will notify the successful Bidder by registered letter, that his tender has been accepted (hereinafter and in the Conditions of Contract called 'the Letter of Award'). The "Letter of Award" will be issued under signature of DIRECTOR, MNREDA. The "Letter of Award" will be sent in duplicate to the successful Bidder, who will return one copy to MNREDA duly acknowledged and signed by the authorized signatory, within one week of receipt of the same by him. No correspondence will be entertained by MNREDA in the unsuccessful Bidders.

6.0 LIQUIDATED DAMAGES (LD) FOR DELAY IN PROJECT IMPLEMENTATION

6.1 MNREDA will issue the Letter of Award (LOA) for the Project (s). The Contractor shall complete the design, engineering, supply, storage, civil work, erection, testing & commissioning of project within 6 months from the date of issue of LOA. In case of failure to commission the full awarded project within the specified time, MNREDA shall be entitled to:-

- ❖ Recover an amount at the rate of 1% (one percent) of the Contract Price per week or part thereof of delay, subject to maximum of 10% (ten percent) of the contract price as liquidated damage to MNREDA. However, the payment of liquidated damages shall not in any way relieve the Contractor from any of its obligations to complete the works or from any other obligations and liabilities of the Contractor under the Contract
- ❖ Purchase the undelivered material/ equipment from elsewhere or to complete the balance work giving notice to the contractor and to recover any extra expenditure incurred thereby for having to purchase these materials or complete the work at a higher price, at the risk and responsibility of the Contractor
- ❖ Cancel the contract wholly or in part and to purchase materials/ equipment at the full risk and cost of the Contractor and forfeit the security deposit

6.2 The Contractor may apply for an extension of the Time for Completion if the Work is or will be delayed either before or after the Time for Completion by any of the following causes:

- ❖ Force Majeure
- ❖ The Contractor's work held up for not being given possession of or access to the Site for a considerable period.
- ❖ Concern authority to suspend the Works and the Contractor not being in default as to reasons of suspension.

7.0 TIME OF COMPLETION

MNREDA will issue the LOA for the Project(s). The Contractor shall complete the design, engineering, supply, storage, civil work, erection, testing & commissioning of awarded project(s) within 6 months from the date of issue of LOA. In case of delay beyond scheduled commissioning period, the contractor shall be liable for Liquidated Damages (LD) as per Clause 6.1.

8.0 INSPECTION AND AUDIT BY MNREDA

The Contractor shall permit MNREDA or their authorized agency to inspect the contractor's site, accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by MNREDA, if so required by MNREDA any time.

9.0 SCOPE OF WORK

9.1 DESIGN, SUPPLY, ERECTION AND COMMISSIONING:

Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya.

Scope of work covers Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya.as per the technical specification given in this bid.

The layout design of the Solar High Mast Street Lights shall ensure uniform spacing of **60 meters (center-to-center)** between consecutive installations along the highway stretch, subject to minor adjustments based on site feasibility and approval by MNREDA.

- Detailed planning of time bound smooth execution of Project;

- The Contractor shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

- Contractor shall be responsible for delivering all the equipment at the district head quarter under his own arrangement within the stipulated time frame.

- The goods supplied under the contract shall be fully insured against loss or damage incidental to manufacture of acquisition, transportation, storage at site and delivery to site during the construction period by the contractor at his own cost.

- Comprehensive O&M of the Project for five year to assure faultless operation, and inventory maintenance

- After sales service through service center/s.
- Coverage of risk liability of all personnel associated with implementation and realization of the Project.
- The Contractor shall train the user about the day to day care and maintenance of the system.
- The Contractor shall maintain sufficient inventory of the spare parts to ensure that the Project is functional during the period of warranty period.
- Comprehensive O &M of the Project at every location, from the date of the Commissioning of Project has to be carried out by the Contractor. Comprehensive O &M of the Project shall be for the five (5) years from the date of Commissioning.
- Performance or supervision of the on-site assembly and/or start-up of the supplied Goods.
- Furnishing of tools required for assembly and/or maintenance of the supplied Goods.
- Furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Goods.
- Performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and

The Contractor / Successful Bidder(s) shall be obligated to perform the following Scope of Work, but not limited to, in relation to the completion/installation of the Solar High Mast Street Light.

A. Design, develop, procure, construct and commission Solar Hight Mast Street Lights, which includes, but is not limited to the following:

- Solar PV Modules (Panels)
- Solar Module Mounting Structure
- High Mast / Octagonal Pole with Base Plate and Foundation Bolts
- LED Street Light / Flood Light Luminaire
- Battery (Energy Storage System)
- Battery Box / Enclosure
- Solar Charge Controller (MPPT based)
- Integrated Driver / Power Conditioning Unit (where applicable)
- Cabling and Interconnections
- Electrical Junction Boxes and Connectors
- Earthing and Lightning Protection System
- Mounting Hardware and Fasteners
- Civil Foundation and Grouting Work
- Transportation, Loading, Unloading, and Handling
- Installation, Testing, and Commissioning

- Project Management and Safety Compliance

B. INSTALLATION AND COMMISSIONING OF SOLAR HIGH MAST STREET LIGHTS, WHICH INCLUDES:

- Design and construction of suitable civil foundations for erection of high mast poles, including excavation, PCC/RCC work, anchor bolts, grouting, and proper alignment, ensuring structural stability under site-specific conditions.
- Design, fabrication, and installation of module mounting structures on the mast/pole, ensuring proper tilt angle, orientation, and secure fixing of Solar PV Modules without compromising structural integrity.
- Proper provision for drainage around the foundation area to prevent water accumulation and ensure long-term durability of the structure.
- Laying and routing of cables (DC/AC/control) through suitable conduits/pipes, ensuring protection from mechanical damage, environmental exposure, and vandalism, without obstructing public movement.
- Installation of battery box/enclosure at suitable height/location on the pole with proper weatherproofing, ventilation, and accessibility for maintenance.
- Erection and installation of LED luminaires at designated heights with appropriate brackets/arms ensuring uniform illumination and coverage.
- High mast poles shall be installed maintaining an approximate 60 meters center-to-center spacing, ensuring uniform illumination and road coverage, unless site-specific constraints require deviation with prior approval from MNREDA.
- Installation and integration of Solar Charge Controller (MPPT), battery system, and associated electrical components, including proper terminations and connections.
- Provision of adequate earthing and lightning protection system for the complete installation, including mast, PV modules, and electrical systems.
- Prior to commencement of work, the Successful Bidder shall obtain approval of all drawings, designs, and layout plans from MNREDA and other relevant competent authorities, wherever required.
- All designs, materials, and installation practices shall conform to applicable IS/IEC standards and MNRE guidelines.
- Special consideration shall be given in the design and installation of high mast poles and structures to withstand heavy rainfall, high wind loads, and seismic conditions prevalent in the State of Meghalaya.
- Prior to commencement of work, the Successful Bidder shall obtain approval of all drawings, designs, and layout plans, including the proposed spacing of 60 meters between high mast installations, from MNREDA and other relevant competent authorities, wherever required.
- The Contractor shall prepare detailed layout drawings accordingly. Any deviation due to site constraints such as junctions, curves, obstructions, or land availability shall be subject to prior approval of MNREDA.
- Complete installation, testing, and commissioning of the system, including performance verification and demonstration of satisfactory operation.
- The Contractor shall ensure compliance with all safety regulations and best engineering practices during installation and commissioning.

C. SCOPE OF WORK – OPERATION AND MAINTENANCE:

The operation & maintenance of the Solar High Mast Street Light would include wear, tear, overhauling, machine breakdown, insurance, replacement of defective LEDs, battery, Charge Controller, Pole, pares, consumables & other parts for a period of five years. This shall also include operation and maintenance of the evacuation infrastructure, as well.

The Selected Bidder shall be responsible for following activities:

- Regular operation and maintenance of the Solar high mast streetlight.
- Monitoring of Solar High Mast Street Light performance and supply of all technical, production/operation data and information through a monthly report.
- Prepare and submit detailed reports on the operation and maintenance requirements, if any, to the respective Department on every six-monthly basis. A copy of this report shall also be submitted to Director, MNREDA.
- The contractor shall be responsible for carrying out routine and preventive maintenance and replacement of each component / equipment of the solar high mast Streetlight and he shall provide all labor, material, consumables etc. for routine and preventive maintenance at his own cost.
- Carry out maintenance activities as a result of sudden failure/breakdown of any particular component or equipment. It shall be responsible to carry out breakdown maintenance of each and every component of the solar High Mast Street Light and shall provide the required manpower, materials, consumables, components or equipment etc. for breakdown maintenance at his own cost irrespective of the reasons of the breakdown/failure.
- Prepare and maintain records on daily basis towards maintenance of the Solar High Mast Street Light, electricity generation, etc.
- The contractor should not misuse the area and/or assign responsibility for the safety of machinery .

- The contractor shall be responsible for undertaking the operation and maintenance of the Solar High Mast Street Light for a term of five (5) years from the date of entering into handover agreement of the Solar High Mast Street Light to respective Primary Beneficiaries.
- The term for operation and maintenance of the Solar High Mast Street Light may be extended for another five (5) years on mutually agreed terms and conditions and charges as quoted by the contractor.

The contractor should supply and install a signage of a size to be provided to the vendor during the time of installation and MS angle at a suitable location at the site of each project location as per direction of the official of MNREDA. MNREDA may ask the vendor to draft the content of the Signage in either English or in the local language. The signboard should be written as follows:

Name of Project Location: _____
Installed & Commissioned by: _____
Date of Installation: _____
Name of the Implementing Agency: Meghalaya New and Renewable Energy Development Agency (MNREDA), Near BSF Camp, Nongmensong, Shillong – 793010 (Meghalaya)
Address of the service center: _____
Name of Contact Person (Service Center): _____
Service Center Contact Number: _____

PART - IV

GENERAL CONDITIONS OF CONTRACT (GCC)

9.2 INSURANCE

- The Contractor 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 Contractor shall also take appropriate insurance during O&M period.

- The Contractor shall also take insurance for Third Party Liability covering loss of human life, engineers and workmen and also covering the risks of damage to the third party/material/equipment/properties during execution of the Contract including O&M period covering structural damages & fire hazard. Before commencement of the work, the Contractor 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 Contractor.

9.3 WARRANTEES AND GUARANTEES

- The Contractor 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 Contractor shall provide warrantee covering the rectification of any and 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 Contractor has to transfer all the Guarantees/ Warrantees of the different components to the Owner of the project. The responsibility of operation of Warrantee and Guarantee clauses and Claims/ Settlement of issues arising out of said clauses shall be joint responsibility of the Contractor and the owner of the project and MNREDA will not be responsible in any way for any claims whatsoever on account of the above.

9.4 WARRANTEES AND GUARANTEES

- The design, engineering, supply, installation, testing and performance of the equipment shall be in accordance with latest appropriate IEC/Indian Standards as detailed in the Section- III (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 III
- Any supplies which have not been specifically mentioned in this Contract, but which are necessary for the design, engineering, supply & performance or completeness of the project shall be provided by the Contractor without any extra cost and within the time schedule for efficient and smooth operation and maintenance of the Solar High Mast Street Light.

9.5 PROGRESS REPORT

- The Contractor shall submit the progress report fortnightly (15 days) to MNREDA in Prescribed Performa. MNREDA will have the right to depute his/their representatives to ascertain the progress of contract at the premises of works of the Contractor

9.6 SUBMISSION OF PROJECT COMPLETION REPORT (PCR)

The Contractor shall submit the Project Completion Report (both in editable soft copy and signed hard copy) after commissioning of the project as per the Scope of RFS to MNREDA as per the Format prescribed by MNREDA. Non-submission of the report shall be considered as "Breach of Contract" and shall attract punitive actions as per the relevant provisions of the Contract including non-release of payment. However, the decision of DIRECTOR, MNREDA shall be final in this regard.

9.7 APPLICABLE LAW

The Contract shall be interpreted in accordance with the laws of the Union of India. The station of MNREDA Headquarter SHILLONG shall have exclusive jurisdiction in all matters arising under this contract.

9.8 SETTLEMENT OF DISPUTE

9.8.1 If any dispute of any kind whatsoever arises between MNREDA and Contractor in connection with or arising out of the contract including without prejudice to the generality of the foregoing, any question regarding the existence, validity or termination, the parties shall seek to resolve any such dispute or difference by mutual consent.

9.8.2 If the parties fail to resolve, such a dispute or difference by mutual consent, within 45 days of its arising, then the dispute shall be referred by party by giving notice to the other party in writing of its intention to refer to arbitration as hereafter provided regarding matter under dispute. No arbitration proceedings will commence unless such notice is given. Any dispute in respect of which a notice of intention to commence arbitration has been given in accordance with Sub Clause 10.9.1, shall be finally settled by arbitration.

9.8.3 Any dispute submitted by a party to arbitration shall be heard by an arbitration panel composed of three arbitrators, in accordance with the provisions set forth below:

- MNREDA and the Contractor shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the two arbitrators do not succeed in appointing a third arbitrator within Thirty (30) days after the later of the two arbitrators has been appointed, the third arbitrator shall, at the request of either party, be appointed by the Appointing Authority for third arbitrator.
- If one party fails to appoint its arbitrator within thirty (30) days after the other party has named its arbitrator, the party which has named an arbitrator may request the Appointing Authority to appoint the second arbitrator.
- Arbitration proceedings shall be conducted with The Arbitration and Conciliation Act, 1996. The venue or arbitration shall be Shillong.
- The decision of a majority of the arbitrators (or of the third arbitrator chairing the arbitration panel, if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction as decree of the court. The parties thereby waive any objections to or claims of immunity from such enforcement.
- The arbitrator(s) shall give reasoned award
- Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the agreement unless they otherwise agree
- Cost of arbitration shall be equally shared between the Successful bidder or Contractor and MNREDA

9.9 LANGUAGE

All documents, drawings, instructions, design data, calculations, operation maintenance and safety manuals, reports, labels and any other date shall be in English Language. The contract agreement and all correspondence between MNREDA and the bidder shall be in English language

9.10 OTHER CONDITIONS

- The Contractor shall not transfer, assign or sublet the work under this contract or any substantial part thereof to any other party without the prior consent of MNREDA in writing.
- The Contractor or its subcontractors shall not display the photographs of the work and not take advantage through publicity of the work without written permission of MNREDA
- The Contractor or its subcontractors shall not make any other use of any of the documents or information of this contract, except for the purposes of performing the contract
- MNREDA will not be bound by any Power of Attorney granted/ issued by the Contractor or its subcontractors or by any change in the composition of the firm made during or subsequent to the execution of the contract. However, recognition to such Power of Attorney and change (if any) may be given by MNREDA after obtaining proper legal advice, the cost of which will be chargeable to the Contractor concerned.
- Applicant requiring any Techno-Commercial clarification of the bid documents may contact in writing or by Fax or by mail. Verbal clarifications and information given by MNREDA or its employees or its Representatives shall not be in any way entertained.

9.11 CONSIGNEE

The material shall be dispatched to the bidder's own store established in the mentioned district of Meghalaya/ Local associate at Meghalaya. The material will be verified by Director MNREDA or any other MNREDA official designated for inspection at the bidder's store & will be handed over to the bidder again for installation & commissioning at site.

9.12 PAYMENT TERMS

The total contract value shall be calculated as follows:

The total contract value = [Supply Cost + Cost of Installation & Commissioning + Cost CMC for 5 years]

The invoice of the contractor shall be verified by Director, MNREDA and payment shall be made by Director, MNREDA. Bills should be submitted route through respective nodal officer concerned

The payment terms shall be as follows:-

a) The contractor shall be eligible for payment of 90% against Supply, Erection and Commissioning of the system excluding CMC on submission of documents indicated herein under:-
   - ❖ Contractor's detailed invoice & Warrantee Card of each items
   - ❖ Copy of unconditional acceptance of the Letter of Award (LOA) and signing of contract agreement
   - ❖ Copy of Detailed Project Execution Plan/PERT chart and its approval by MNREDA
   - ❖ Material Dispatch Clearance Certificate (MDCC) / Dispatch Instructions (DI) for dispatch of materials from the manufacturer's works. MDCC/DI shall be issued by authorized officer of MNREDA
   - ❖ MICC (Material Inspection & Clearance Certificate) issued by the authorized official of MNREDA
   - ❖ Installation & Commission and handing over certificate
   - ❖ Copy of Work Completion Report duly signed by the beneficiary, official of MNREDA and the Contractor
   - ❖ Coloured photograph of Solar High Mast Street Light and sign board duly certified by Inspecting Authority Director, MNREDA

NB: 1. Only 1 (one) nos. of bill shall be allowed after completion of 100% awarded work

b) The Balance 10% against Supply, Erection and Commissioning costs of the systems along with 5 years CMC cost will be paid to the contractor after 5 years of successful completion of the work against submission of Solar High Mast Street Light Maintenance Logbook regarding satisfactory performance report of the system from the authorized signatory of the end user and official of MNREDA.

Note: All payment shall be made subject to the receipt of fund from Govt. of Meghalaya

NB: 1. Only 1 (one) nos. of bill shall be allowed after completion of 100% awarded work

9.13 TAXES AND DUTIES:

The price shall be **inclusive** of all applicable taxes and duties. The bidder shall be entirely responsible for all taxes, duties, license fees, etc. All taxes payable as per Government norms will be payable by the contractor. **If any new tax/duty is levied during the contract period the same will be borne by the Contractor exclusively**. TDS will be deducted from the payment of the contractor as per the prevalent laws and rules of Government of India and Government of Meghalaya in this regard.

9.14 TRANSPORTATION :

The Bidder is required under the contract to deliver the goods to the site. (The storage/ handling etc shall be sole responsibility of the contractor till the commissioning/ handover of the system).

9.15 TERMINATION FOR INSOLVENCY:

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

9.16 TERMINATION FOR CONNIVANCE:

MNREDA, may by written notice sent to the Contractor, terminate the contract, in whole or in part at any time for its connivance. The notice of termination shall specify that termination is for the bidder's connivance in the interest of MNREDA.

PART - V

TECHNICAL SPECIFICATION

TECHNICAL SPECIFICATION

The proposed project shall be commissioned as per the technical specifications given below. Any shortcomings will lead to cancelation of Letter of Award & Competent Authority's decision will be final and binding on the bidder.

10.1 SYSTEM DESCRIPTION

The system shall be a stand-alone Solar Street Lighting / Decorative Pole System comprising PV modules, LED luminaires, battery bank, MPPT charge controller, pole, mounting structure, and associated electrical components. The system shall:

- Operate automatically from dusk to dawn
- Provide minimum 2–3 days autonomy (~36 hours) during low solar conditions.
- Be supplied as a complete integrated unit, ensuring compatibility between all components.

The system layout along the project stretch shall maintain a typical spacing of 60 meters between successive high mast poles, designed to achieve uniform illumination levels.

Sl. No	Component	Specification
1	Pole Height	8-9 m (9 m typical)
2	Luminaire	40W LED (2 Nos.)
3	Solar Module	165 Wp (2 Nos.)
4	Battery	12.8V, 42 Ah LiFePO4 (preferred) / GEL / VRLA
5	Controller	MPPT, 20–30A
6	Backup	2–3 days

10.2 SOLAR PV MODULE

The solar PV modules shall be responsible for converting solar energy into electrical energy required for operating the lighting load and charging the battery.

Technical Requirements:

- Modules shall conform to:
  - IEC 61215 / IS 14286
  - IEC 61730 (Safety)
- Capacity:
  - 165 Wp per module
- Efficiency:
  - Minimum 19-21%
- Construction:
  - IP65 rated junction box
  - Weather-resistant and UV-protected
- Mounting:
  - Top-mounted on pole for maximum irradiation

The PV modules used must qualify to the latest edition of IEC PV module qualification test or equivalent BIS standards Crystalline Silicon Solar Cell Modules IEC 61215/IS14286. In addition, the modules must conform to IEC 61730 Part-1- requirements for construction & Part 2 – requirements for testing, for safety qualification or equivalent IS

a. For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC 61701/IS 61701

b. The total solar PV array capacity should not be less than allocated capacity (kWp) and should comprise of solar crystalline modules of minimum 250 Wp and above wattage. Module capacity less than minimum 250 watts shall not be accepted.

c. PV modules must be tested and approved by one of the **MNRE approved test centres / NABL /IEC accredited testing- calibration laboratories**. The test report should be submitted at the time of submission of bid.

d. The module frame shall be made of corrosion resistant materials, preferably having anodized aluminium.

e. The bidder shall carefully design & accommodate requisite numbers of the modules to achieve the rated power in his bid.

Modules deployed must use a RF (Radio frequency) 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).

a) Name of the manufacturer of the PV module
b) Name of the manufacturer of Solar Cells.
c) Month & year of the manufacture (separate for solar cells and modules)
d) Country of origin (separately for solar cells and module)
e) I-V curve for the module Wattage, Imax, Vmax and FF (Fill Factor) for the module
f) Unique Serial No and Model No of the module
g) Date and year of obtaining IEC PV module qualification certificate.
h) Name of the test lab issuing IEC certificate.
i) Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001

10.3 WARRANTIES

a) Materials 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 twenty-five (25) years from the date of sale to the original customer ("Customer")

ii. Defects and/or failures due to manufacturing,

iii. Defects and/or failures due to quality of materials,

iv. Nonconformity 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

b) Performance Warranty

The predicted electrical degradation of power generated not exceeding 20% of the minimum rated power over the 25-year period and not more than 10% after first ten years period of the full rated original output**10.4 LED LUMINAIRE**

The LED luminaire shall provide efficient illumination while minimizing energy consumption and battery drain.

Features:

- Rated Power: 30W–50W
- LED Make: MNRE Approved Standard
- System efficacy: >110–120 lm/W
- Life span: >50,000 hours
- Smart operation:
  - 50% dimming after 6 hours to conserve battery
- Protection:
  - IP66 dust & water protection

a. LED Luminaries must be tested and approved by one of the **MNRE approved test centres / NABL /IEC accredited testing- calibration laboratories**. The test report should be submitted at the time of submission of bid.

b. The LED shall be made of corrosion resistant materials.

c. The bidder shall carefully design & accommodate requisite numbers of the LED to achieve the rated power in his bid.

10.5 BATTERY

The battery shall store energy generated during the day and supply power at night.

Features:

- Type: LiFePO4 (preferred) / GEL / VRLA
- Capacity: 12.8V, 42 Ah
- Depth of discharge: ≥75% usable capacity
- Backup:
  - Minimum 36 hours autonomy
- Installed inside:

- Weatherproof, powder-coated battery box (~4 m height)

a. Battery must be tested and approved by one of the **MNRE approved test centres / NABL /IEC accredited testing- calibration laboratories**. The test report should be submitted at the time of submission of bid.

b. The Battery Box shall be made of corrosion resistant materials.

c. The batteries should conform to IS 1651 / IS 13369/ International standards. Capacity of the battery shall not be less than as specified above at C-10 rate. The battery should be installed on a Battery Box of acid resistance materials to bear the required battery load.

10.6 SOLAR CHARGE CONTROLLER

The charge controller shall manage battery charging and discharging, ensuring optimal system performance.

Features:

- Type: MPPT (Maximum Power Point Tracking)
- Rating: 24V, 20–30A
- Efficiency: ≥90%
- Functional features:
  - Dusk-to-dawn operation
  - Low idle consumption (<20 mA)
- Protections:
  - Overcharge, deep discharge
  - Short circuit, reverse polarity
  - Overcurrent, overvoltage

10.7 POLE AND MOUNTING STRUCTURE

The pole shall provide structural support to all system components and withstand environmental loads.

Features:

- Type: Octagonal / polygonal pole
- Height: 8–9 meters
- Material:
  - High tensile steel (IS 2062 / S355 grade)
- Structural design:
  - Tapered structure improves wind resistance
  - Longitudinal welding for strength
- Galvanization:
  - Hot dip galvanized as per BS EN ISO 1461 / IS standards
- Foundation:
  - RCC foundation with anchor bolts

10.8 PROTECTIONS

The Solar High Mast Street Light should be provided with all necessary protection like earthing, Lightning as follows:

LIGHTNING PROTECTION

The Solar High Mast Street Light 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 components. The source of over voltage can be lightning, atmosphere disturbances etc. The entire space occupying the Solar High Mast Street Light shall be suitably protected against Lightning by deploying required number of Lightning Arrestors. Lightning protection should be provided as per IEC 62305 standards. Protection against induced high voltages shall be provided by the use of metal oxide arrestors (MOVs) and suitable earthing such that induced transients find an alternate route to earth.

EARTHING PROTECTION

Each array structure of the Solar High Mast Street Light should be grounded/ earthed properly as per IS:3043 -1987. In addition, the lighting arrester/masts should also be provided . Provision should be kept for shorting and grounding of the Solar High Mast Street Light at the time of maintenance work. All metal casing/shielding of the Solar High Mast Street Light should be thoroughly grounded in accordance with Indian Electricity Act/IE Rules.

Earth Resistance shall be tested in presence of the representative of MNREDA as and when required after earthing by calibrated earth tester.

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

10.9 CABLES

Cables of appropriate size to be used in the Project shall have the following characteristics:

- Shall meet IEC 60227/IS 694, IEC 60502/IS1554 standards
- Temp. Range: –10oC to +80oC.
- Voltage rating 660/1000V
- Excellent resistance to heat, cold, water, oil, abrasion, UV radiation
- Flexible
- Sizes of cables between different components shall be selected to keep the voltage drop (power loss) of 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 with proper manner by good quality ferule or by other means so that the cable easily identified
- The Cable should be so selected that it should be compatible up to the life of the solar PV panels i.e. twenty-five (25) Operational Years.
- Multi Strand, Annealed high conductivity copper/aluminium 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 conform to latest edition of IEC/ equivalent BIS Standards as specified below: BOS item / component Standard Description Standard Number Cables General Test and Measuring Methods, PVC/XLPE insulated cables for working Voltage up to and including 1100 V ,UV resistant for outdoor installation IS /IEC 69947.
- The size of each type of cable selected shall be based on minimum voltage drop.

10.10 SYSTEM OPERATION

The system shall function fully automatically without manual intervention.

Operation Logic:

- ON at sunset
- Runs at full load initially
- Automatically dims to 50% after 6 hours
- Charging:
  - MPPT-based efficient charging
  - Optional hybrid charging (if applicable)

10.11 TOOLS & TACKLES AND SPARES

a) After completion of installation & commissioning of the solar high mast street light, necessary tools & tackles shall be maintained by the successful bidder for maintenance purposes.

b) A list of requisite spares in case of battery, LEDs, Poles etc. along with spare set of PV modules be indicated, which shall be maintained. A minimum set of spares shall be maintained in the service center for solar high mast street light for the entire period of warranty and Operation &Maintenance which upon its use shall be replenished

10.12 DANGER BOARDS AND SIGNAGES

Danger boards should be provided as and where necessary as per IE Act. /IE Rules as amended up to date. The signage shall be attached to the Solar High Mast Street Light. Text of the signage's may be finalized in consultation with MNREDA.

10.13 FIRE EXTINGUISHERS

The vendor shall maintain adequate fire safety provisions, including fire extinguishers and sand buckets, at their service center located within the district for maintenance and service support of the solar high mast street lighting system. All fire extinguishers shall conform to TAC regulations and BIS standards.

10.14 SAFETY MEASURES

The bidder shall take entire responsibility for electrical safety of the installation(s) and follow all the safety rules & regulations applicable as per Electricity Act, 2003 and CEA guidelines etc

PART - VI

SAMPLE FORMS & FORMATS

SAMPLE FORMS & FORMATS

Format-A

GENERAL INFORMATION ABOUT THE BIDDER

A. BIDDER INFORMATION SHEET	
Bidder's Legal Name	
Bidder's legal address in India, telephone numbers, fax numbers, email address for communication	
Legal status of the Bidder	i) Private Limited Company ii) Public Limited Company iii) Sole Proprietorship Firm iv) Partnership firms v) Limited Liability Partnership (LLP) vi) Limited Liability Company (LLC) (**Please tick (√) one**)
Name and Contact Details (Email and Phone Number) of Authorised Signatory	
GST Number of the Firm	
MSME No and Validity of Certificate (if applicable)	

FOLLOWING NEEDS TO BE SUBMITTED BY THE BIDDER: (by each member in case of Consortium):

- Certificate of Incorporation for Public/Private limited company or registration certificate for Sole Proprietorship/Partnership firms/ Limited Liability Partnership (LLP)/ Limited Liability Company (LLC).
- Authorization in favour of authorized signatory of bidder to sign the tender, and also in favour of authorized representative of each member in case of Consortium.

Note: Bidder's authorized representative shall be deemed to have authority of the Bidder to receive and deliver any correspondence and attend meetings with MNREDA related to the tender

SIGNATURE OF AUTHORIZED SIGNATORY
ON BEHALF OF BIDDER

Format-B

FINANCIAL BID

(To be submitted through separate financial envelope for financial bid)
RFS No_____ Date: _____

Name of Work: Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya.

Particulars	**Quantity**	**Unit Rate (Rs.)**	**GST(%)**	**GST Amount (Rs.)**	**Total Price Without Tax (Rs.)**	**Total Price with Tax (Rs.)**
Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya.						
Total Price						
Total Price (in Words)						

Note to Bidders:

1. The above quoted price shall be inclusive of Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya with 5 years of CMC cost.
2. The above quoted price shall be exclusive of GST and Taxes.

 Seal & Signature of the Bidder

Format-1

COVERING LETTER

(The covering letter should be on the Letter Head of the Bidding Company)

RFS No: _____ **dated**_____

From:

_____ (Insert name and address of Bidding Company)
_____
_____
Tel.:-……
Fax:-……..
E-mail address:-.....

To,

The Director
Meghalaya New and Renewable Energy Development Agency (MNREDA)
Near BSF Camp, P.O. – Nongmensong, District – East Khashi Hills
Shillong – 793019 (Meghalaya)
Email: mnreda.dir@gmail.com

Subject:- **Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya with nit no …….. Dated …… ”**

Dear Sir,

We, the undersigned _____ [**insert name of the Bidder**] having read, examined and understood in detail the NIT for Standardization of Rates for work of Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya Including Comprehensive Operation & Maintenance for five (5) Operational Year, hereby submit our Bid comprising of Financial Bid and Techno Commercial Bid.

Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya.

We give our unconditional acceptance to the Bid Documents attached thereto, issued by MNREDA, as amended. As a token of our acceptance to the Bid Documents, the same have been initialed by us and enclosed to the Bid. We shall ensure that we execute such Bid Documents as per the provisions of the NIT and provisions of such Bid Documents shall be binding on us.

1. Participate:-

We have participate as a ……. [**Individual]** against the NIT No …… and have accordingly submitted our bids as per provisions of this NIT

2. Participate:-

We have participate as a ……. [**Non MSE / MSE]** against the **NIT No** …… and have accordingly submitted our bids for the same as per provisions of this RfS

3. Tender Processing Fee

We have submitted the tender processing fee of Rs …… against the package no …….. as per provision of bid document

4. We have submitted our Price Bid strictly as per provision of this bid document, without any deviations, conditions and without mentioning any assumptions or notes for the Price Bid in format prescribed in this bid document.

5. Acceptance

We hereby unconditionally and irrevocably agree and accept that the decision made by MNREDA in respect of any matter regarding or arising out of the NIT shall be binding on us. We hereby expressly waive any and all claims in respect of Bid process. We confirm that there are no litigations or disputes against us, which materially affect our ability to fulfill our obligations with regard to execution of projects of capacity offered by us

6. Familiarity with Relevant Indian Laws & Regulations

We confirm that we have studied the provisions of the relevant Indian laws and regulations as required to enable us to submit this Bid and execute the bid Documents, in the event of our selection as Successful Bidder. We further undertake and agree that all such factors as mentioned in bid document have been fully examined and considered while submitting the Bid

7. Contact Person

Details of the contact person are furnished as under

Name	
Designation	
Company	
Address	
Phone No	
Fax No	
E-mail Address	

8. We are enclosing/attaching herewith the **Envelope-I, and Envelope-II (Techno-Commercial documents)** containing duly signed formats, each one duly sealed separately, in one original as desired by you in the RFS for your consideration. It is confirmed that our Bid is consistent with all the requirements of submission as stated in the bid document and subsequent communications from MNREDA. The information submitted in our Bid is complete, strictly as per the requirements stipulated in the bid 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 we have not taken any deviation so as to be deemed non-responsive

Dated the _____day of_____, 20…

Thanking you

Yours faithfully,

Signature:
Name:
Company Seal
Date:

Format-2

GENERAL INFORMATION ABOUT THE BIDDER

Name of the Bidder	
Registered Office Address	
Telephone, Telex, Fax No	
E-mail	
Web site	
Authorized Contact Person(s) with name, designation Address and Mobile Phone No., E-mail address/ Fax No. to whom all references shall be made	
Year of Incorporation	
Have the bidder/Company ever been Debarred By any Govt. Dept. / Undertaking for undertaking any work	
Reference of any document information attached by the Bidder other than specified in the RFS.	
Bidding company is listed in India	Yes/No

Seal & Signature of the Bidder

GST No	
Certificate of Incorporation of Bidder/ Affiliate (as applicable) enclosed	Yes/No
Partnership deed or LLPF/ Sole Proprietor registration (as applicable) enclosed	Yes/No

Signature:
Name:
Company Seal
Date:

Format-3

FORMAT FOR PERFORMANCE BANK GUARANTEE (PBG)

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

In consideration of the _____ [Insert name of the Bidder] (hereinafter referred to as selected 'Turnkey Contractor') submitting the response to RFS inter alia for selection of the Project for " Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya", in response to the RFS No……dated……
issued by Meghalaya New and Renewable Energy Development Agency (hereinafter referred to as MNREDA) and MNREDA considering such response to the RFS of……[insert the name of the selected Turnkey Contractor] (which expression shall unless repugnant to the context or meaning thereof include its executers, administrators, successors and assignees) and selecting the Solar High Mast Street Light Project and issuing Letter of Award No ---------- to ……. (Insert Name of selected Turnkey Contractor) as per terms of RFS and the same having been accepted by the selected Turnkey Contractor. As per the terms of the RFS, the _____ [insert name & address of bank] hereby agrees unequivocally, irrevocably and unconditionally pay to MNREDA without demur at Shillong forthwith on demand in writing from MNREDA or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees _____[Total Value] only, on behalf of M/s _____ [Insert name of the selected Turnkey Contractor]

This guarantee shall be valid and binding on this Bank up to and including…….. and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement

Our liability under this Guarantee is restricted to Rs. _____ (Rs. _____ only). i) Nos ----- dated ----, Value ------ ; ii) Nos-----dated -----, Value ----------).

Our Guarantee shall remain in force until…….. MNREDA shall be entitled to invoke this Guarantee till …….
The Guarantor Bank hereby agrees and acknowledges that MNREDA shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by MNREDA, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to MNREDA.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by _____ [Insert name of the selected Turnkey Contractor] and/or any other person. The Guarantor Bank shall not require MNREDA to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against MNREDA in respect of any payment made hereunder This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at Shillong shall have exclusive jurisdiction

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly MNREDA shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the selected Turnkey Contractor, to make any claim against or any demand on the selected Turnkey Contractor or to give any notice to the selected Turnkey Contractor or to enforce any security held by MNREDA or to exercise, levy or enforce any distress, diligence or other process against the selected Turnkey Contractor

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs. _____ (Rs. _____ only) and it shall remain in force until …….. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if MNREDA serves upon us a written claim or demand

Signature ……
Name:- ……
Power of Attorney No.:- …….
For
[Insert Name of the Bank] ……
Banker's Stamp and Full Address
Dated this ____ day of ____, 20……
Witness:
1. …….
Signature
Name and Address

2. ……..
Signature
Name and Address
Notes:

1. The Stamp Paper should be in the name of the Executing Bank and of appropriate Performance Bank Guarantee (PBG) shall be executed by any of the Scheduled Bank

Format-4

POWER OF ATTORNEY

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution)
(a) 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 in connection with or incidental to submission of our Bid for "Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya" in response to the RFS 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 representations to MNREDA, Shillong and providing information / responses to MNREDA, Shillong representing us in all matters before MNREDA and generally dealing with MNREDA, Shillong in all matters in connection without Bid till the completion of the bidding process as per the terms of the above mentioned RfS.

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 RfS.

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 executants)
(Name, designation and address of the executants)
……
Signature and stamp of Notary of the place of execution

Common seal of …… has been affixed in my/our presence pursuant to Board of Director's Resolution dated……

WITNESS

1. ……..

(Signature)
Name……
……
……

Designation ……

2. ……

(Signature)
Name……
……
……

Designation ……

Format -5

FINANCIAL ELIGIBILITY CRITERIA REQUIREMENT
(To be submitted on the letterhead of Chartered Account with UDIN No.)

Ref: RFS No_____ Date:_____

To,

The Director
Meghalaya New and Renewable Energy Development Agency (MNREDA)
Near BSF Camp, P.O. – Nongmensong, District – East Khashi Hills
Shillong – 793019 (Meghalaya)
Email: mnreda.dir@gmail.com

Subject:- **Request for Selection (RFS) for Design, Supply, Installation, Testing, Commissioning, and Erection of Solar High Mast Street Lights along a Highway Stretch in Nongpoh, Ri-Bhoi District, Meghalaya with nit no ……Dated …… "**

Dear Sir,

We submit our Bids; for which we submit details of our Financial Eligibility Criteria Requirements.

We certify that the Financially Evaluated Entity (ies) had an Annual Turnover as specified in this RFS

Financial Year	Annual Turnover (Rs. Lakh)	MAAT Value (Rs. Lakh)
2021-2022		
2022-2023		
2023-2024		

Yours Faithfully

(Signature and stamp (on each page) of Authorized Signatory of Bidding Company)
Name:-…….
Date:-……
Place:-……..
Signature and stamp (on each page) of Registered Chartered Accountant

Format-6

ANNEXURE-1
Work Experience

Applicant's legal name …… Date……

Work Experience		
Contract Number		
LOA No		
Award date & Completion date		
Employer's Name		
Employer's Address: Telephone / Fax number: E Mail		
Role in Contract (Individual/JV/JVA member)	Individual	JV Member/Consortium
Award Value (INR)		
Completion Cost (INR)	As stated in Clients Certificate	As stated in Clients Certificate

If JV member/Consortium, specify percentage participation in contract & amount (Please refer Note-1)	% participation	In equivalent INR
Quantum of similar work (i.e., Solar High Mast Street Light)	**…… kW (Duly substantiated with Client Certificate)**	……. kW In case of JV/Consortium, actual works executed by the Applicant **(duly substantiated with Client Certificate)**

NOTE:

1. Only the value of contract as executed by the applicant/member in his own name should be indicated. Where a work is undertaken by a group, JV/JVA only that portion of the contract which is undertaken by the concerned applicant/member should be indicated and the remaining done by the other members of the group be excluded. This is to be substantiated with documentary evidence.

2. Separate sheet for each work along with Work order and work completion report issued by Clients, to be submitted

(Signature and stamp (on each page) of Authorized Signatory of Bidding Company)

Format-7

UNDERTAKING FOR CORRUPT & FRAUDULANT PRACTICE
(*To be on non-judicial stamp paper of appropriate value*)

It is confirmed and declared that we, or any of our associate, have not been engaged in any fraudulent and corrupt practice and that no agent, middleman or any intermediary has been, or will be, engaged to provide any services, or any other items of work related to the award and performance of this contract and no agency commission or any payment which may be construed as an agency commission has been, or will be, paid and that the tender price will not any such amount.

STAMP & SIGNATURE OF AUTHORIZED SIGNATORY

Note:

1. In case of Consortium, the undertaking shall be submitted by each member of Consortium.
2. The undertaking shall be signed by authorized signatory of the bidder or constituent member in case of Consortium.

FORMAT- 8

(UNDERTAKING FOR NOT BEING PENALISED IN A CONTRACT)
(To be on non-judicial stamp paper of appropriate value)

We do hereby undertake that we have not paid liquidated damages of 10% (or more) of the contract value in a contract due to delay or penalty of 10% (or more) of the contract value due to any other reason during last five years

STAMP & SIGNATURE OF AUTHORISED SIGNATORY

FORMAT- 9

(UNDERTAKING FOR FINANCIAL STABILITY)
(To be on non-judicial stamp paper of appropriate value)

We do hereby undertake that we have not suffered bankruptcy/insolvency during the last 5 years.

STAMP & SIGNATURE OF AUTHORISED SIGNATORY

FORMAT- 10

UNDERTAKING FOR PURCHASE OF TENDER DOCUMENT

We here by confirm that, we have purchased the set of tender documents /addendum/clarifications along with the set of enclosures provided by MNREDA. We confirm that we have gone through the bid documents, addendums and clarifications for this work placed upto the date of opening of bids.

We confirm our unconditional acceptance for the same and have considered for these in the submission of our financial bid.

Signature of authorized signatory

FORMAT- 11

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

Ref RFS No _____ Date: _____/……/2025

Particulars	System Design Details	Proposed by the Bidder
	Make / Name of Manufacturer:	
	Type of Solar Cell (Mono crystalline / Poly crystalline)	
	Capacity of each module (W)	
	Module efficiency (%)	
	Voc	
	Vmp	
	Isc	
	Imp:	
	FF efficiency:	

SPV MODULES	**Enclose test** report/certificate of Solar PV Module from IEC/NABL accredited laboratory as per relevant IEC standard (IEC 61215 edition II / IS 14286 and IEC 61730 Part 1- requirements for construction &Part 2 – requirements for testing, for safety qualification)	Enclose test report (Yes/No)
	Module mounting suitability for mast installation: Yes/No Module wind load resistance (kmph):	
Battery	Make / Name of Manufacturer:	
	Type:	
	Battery Capacity: (V & Ah) @C/10	
	Total nos. of batteries	
	Enclose test reports/ certificate of **proposed battery** from accredited laboratory as per relevant IEC standard or latest BIS standard (**The batteries should conform to IS 1651 / IS 13369/ International standards**)	Enclose test report Yes/No
	Battery enclosure type (Pole mounted / Ground box):	
	Battery enclosure IP Rating:	
	Battery operating temperature range:	
Battery Enclosure / Battery Box	Make / Name of Manufacturer:	
	Material:	
	Mounting Type (Pole mounted / Ground installed):	
	IP Rating:	
Mounting Structure /Pole/Mast	Make / Name of Manufacturer:	
	Material:	
	Type (Tubular / Polygonal / Swaged):	
	Wind load resistance (kmph):	
	Foundation Type:	
	Hot dip galvanization thickness:	
Charge Controller	Make:	
	Type	
	Dusk to Dawn operation (Yes/No):	
	Dimming control feature (Yes/No):	
	Input Voltage:	
	Enclosure Protection (IP rating):	
Cables	Make / Name of Manufacturer:	
	Type:	
	UV resistant: Yes/No	
	Weather proof / outdoor grade: Yes/No	
	Cable routing (Internal pole / External conduit):	
LED Luminaire	Make / Name of Manufacturer:	
	Wattage (W):	
	Luminous efficacy (lm/W):	
	Color temperature (CCT):	
	Number of luminaires:	
	Beam angle:	
	IP Rating :	
LIGHTING CONTROL SYSTEM	Type (Timer / Sensor / Dusk to Dawn):	
	Auto ON/OFF: Yes/No	
	Dimming feature: Yes/No	

Signature of authorized signatory

Seal:

FORMAT- 12

INSTALLATION & COMMISSION and HANDING OVER CERTIFICATE

Certified that ____ (Nos.) Solar Hight Mast Street Lighting System has been installed, commissioned and tested successfully as per the specification at (location details - full address of site) _____ _____and has been handed over to _____ (Beneficiary Organization as per Work Order) on the date the _____with the following assets.

Sl. No	Component	Details
	Work Order No:	
1	**Name of Project Site with Complete Address.**	
1.1	Longitude/ Latitude	……..E ……..N
1.2	Shadow Free Area	…… Sqft.
1.3	Mast Height	…… m
1.4	Foundation Type	…….
2	**Total PV Capacity Installed**	…….. (Wp/kWp)
3	**Specification of the Solar Modules**	

3.1	Type of Module (Mono/poly crystalline)	
3.2	Make of Modules & year of manufacturing	
3.3	Wattage of each module	…… Wp
3.4	Module Efficiency (Enclose I-V curve of any of the module used in the system)	Attach/Not Attach
3.5	No of Modules installed	……
3.6	No of series &Parallel combinations	Series : …… Nos. & Parallel : ……... Nos.
3.7	Tilt Angle / Mounting Angle on Mast Arm	…….. Degree
3.8	IEC certificate Date of issue Agency Validity Enclose a IEC certificate	: : : : :
3.9	Whether imported or indigenous	Indigenous.
3.10	Whether RFID tag is pasted or not?	
3.11	If so, tag is inside or outside. If not, the reason?	
3.12	Type of RFID	
3.13	Solar Module Installed at	(On Mast Structure)
4	**CHARGE CONTROLLER**	
4.1	Make:	
4.2	Type (MPPT/PWM):	
4.3	Rating:	
4.4	Dusk to Dawn operation (Yes/No)	
4.5	Dimming feature (Yes/No)	
4..6	Input Voltage:	
4.7	Enclose test certificate	
5	**Batteries**	
5.1	Make of batteries & year of manufacturing	……
5.2	Type : Tubular Lead Acid /VRLA/GEL	…….
5.3	Battery Cell Rating	Volt: …… AH: ……..
5.4	Nos.	…… Nos.
5.5	No of series and parallel combinations	Series: …… Nos. Parallel: …… Nos.
5.6	Enclose test certificate as per NIT requirement	…….
5.7	Battery Installation Location (Pole-mounted box / Ground box)	
5.8	Battery Enclosure Type & IP Rating	
6	Depth of Discharge Proposed	……..
6.1	Autonomy (hours)	…….. hours
6.2	Battery Bank Installed at	
7	**Structures**	
7.1	Mast Height (m)	
7.2	Material (GI/HDG Steel)	
7.3	Wind Load Resistance (kmph)	
7.4	Type of Foundation	
7.5	Indigenous or imported	
8	**Cables Make and size**	
8.1	Enclose Certificate: Rating :-	
8.2	voltage of cable	
8.3	UV resistant cables used (Yes/No)	
8.4	Weatherproof cable routing (Yes/No)	
9	**LED LIGHTING SYSTEM**	
9.1	Make of LED Luminaire	
9.2	Wattage of each LED fixture	
9.3	Number of LED Fixtures	
9.4	Mounting height (m)	
9.5	Beam angle / lighting coverage	
9.6	IP Rating of luminaire	
10	**Earthling and protections**	

10.1	Lightening Arrester (Type)	
10.2	Pole Earthing provided (Yes/No)	
10.3	Surge protection provided (Yes/No)	
11	**Date of Commissioning of the system**	……..
12	Technical Person Trained to maintain system Name with Mobile no.	Name: …… Nos. : ……..

Solar High Mast Street Light Installed by:

M/s._____

(Signature of Authorized Signatory)
Full Name & Designation
Seal

Handed Over by:

(Authorized Signatory)
Name: Full Name & Designation
Seal

Taken Over by User:
(Officer in Charge of Anganwadi Center/Primary School)
For M/s._____

Signature
Full Name & Designation
Seal & Date

Verified by

1. **MNREDA Official**

   Signature
   Name:
   Seal

(Counter signed by Director, MNREDA)

Signature
Name
Seal

Copies:
1. Copy to the beneficiary /user
2. Copy to MNREDA
3. Copy to the Turnkey contractor.
4. Copy to _____for information.

FORMAT- 13

FORMAT
SYSTEM MAINTENANCE LOG BOOK

Sl. No	Particulars	Details
1	**Work Order /LOA No:**	
2	Inspector name	
3	Inspection date	_____/_____/_____
4	**Name & Address of the Contractor:**	
5	**Name of Project Site with Complete Address.**	Name of Project Site: Address: Town / City / Village: District: Pin: Email: Phone No:
6	Longitude/ Latitude	……..E ……..N
7	Shadow Free Area	…… Sqft.
A	**SOLAR MODULES**	
1.1	Type of Module (Mono/poly crystalline)	

1.2	Wattage of each module	……. Wp
1.3	Make of Solar Module:	
1.4	No of series &Parallel combinations	Series : ……. Nos. & Parallel : ……..... Nos.
1.5	Tilt Angle on Mast Arm	…….. Degree
1.6	Total nos. of module installed	……. Nos.
1.7	**CHECKLIST OF SOLAR MODULE:**	
	Cracked glass of PV panel?	Yes ☐ No ☐
	White or brown spot, bubble of air, moisture behind the glass?	Yes ☐ No ☐
	Junction boxes at backside loose or without cover?	Yes ☐ No ☐
	Check for physical damage to any PV module?	Yes ☐ No ☐
	Check for loose cable terminations between PV modules?	Yes ☐ No ☐
	Shading on solar panels removed?	Yes ☐ No ☐
	Are PV modules properly grounded with lugs on each module?	Yes ☐ No ☐
	Mounting of PV module on mast arm is secure?	Yes ☐ No ☐
	Any vibration observed in module due to wind?	Yes ☐ No ☐
	ARRAY INSTALLATION AND WIRING	
	Proper insulation on module wiring	Yes ☐ No ☐
	Proper connectors on array wiring extensions	Yes ☐ No ☐
	Proper grounding of array & array mount	Yes ☐ No ☐
	Proper insulation on module wiring	Yes ☐ No ☐
	Array mount properly secured and sealed	Yes ☐ No ☐
	Wrong cable dimension used?	Yes ☐ No ☐
	Cable routing inside mast/pole is properly protected?	
	Weatherproof sealing at cable entry points?	
B	**STRUCTURAL & MAST/POLE CONDITION**	
	Is equipment mounted securely, and level?	Yes ☐ No ☐
	Any sign of damage to modules or wiring?	Yes ☐ No ☐
	Are conduit supports rated for the installation and properly installed?	Yes ☐ No ☐
	Check that all wiring from combiner box onward is in dedicated conduit using weather tight fitings and labeled accordingly?	Yes ☐ No ☐
	Mast vertical alignment proper?	Yes ☐ No ☐
	Any corrosion or rust on mast?	Yes ☐ No ☐
	Foundation bolts tight and secure?	Yes ☐ No ☐
	Any structural damage due to wind?	Yes ☐ No ☐
C	**DC CONNECTIONS**	
	DC-rated circuit breakers or fuses with adequate voltage rating	Yes ☐ No ☐
	Listed equipment	Yes ☐ No ☐
	Internal pole wiring condition satisfactory?	Yes ☐ No ☐
	Cable entry glands properly sealed?	Yes ☐ No ☐
D	**BATTERY**	
	Terminals protected from shorting	Yes ☐ No ☐
	Maintenance-free vented for cooling	Yes ☐ No ☐
	Check for battery ambient temperature?	Yes ☐ No ☐ If yes, the temperature degree is = °C
	Make of battery	
	Type of battery :	
	Nominal capacity (volts per cell) :	
	Battery capacity/cell (Ah) :	……V
	Battery voltage (individual battery) :	……. V
	Battery voltage (per bank battery) :	……. V
	Battery current (per bank battery) :	…….. A
	Are there hot battery cells (touch by hand each cell)?:	Yes ☐ No ☐
	Proper insulation around battery-to-battery cables?	Yes ☐ No ☐
	Incorrect battery connections?	Yes ☐ No ☐
	Main cables exposed to physical damage?	Yes ☐ No ☐
	Check battery enclosure/box condition	Yes ☐ No ☐
	Battery box is waterproof and dustproof?	Yes ☐ No ☐
	Battery box locking system functional?	Yes ☐ No ☐
	Any moisture inside battery enclosure?	Yes ☐ No ☐
E	**LED LIGHTING SYSTEM**	
	LED luminaires functioning properly?	Yes ☐ No ☐
	Any flickering observed in LED lights?	Yes ☐ No ☐

	Uniform illumination achieved?	Yes ☐	No ☐
	LED driver functioning properly?	Yes ☐	No ☐
	Any LED failure observed?	Yes ☐	No ☐
F	**CONTROL SYSTEM**		
	Auto dusk to dawn operation working?	Yes ☐	No ☐
	Timer/control unit functioning properly?	Yes ☐	No ☐
	Dimming feature working (if applicable)?	Yes ☐	No ☐
	Any sensor malfunction observed?	Yes ☐	No ☐
	Comment		

Remarks, if any:

Prepared by:
Mr. _____
For M/s._____

Checked by User:

(Authorized Signatory)
Name: Full Name & Designation
Seal
Date:

Signature (Officer in-charge of Anganwadi Center)

Seal & Date

Verified by
(AD Solar-II, MNREDA)

Signature
Name:
Seal & Date

(Counter signed by Director, MNREDA)

Signature
Name of MNREDA Official
Seal & Date