

E-TENDER DOCUMENT

FOR

**Supply, Erection and Commissioning
Of**

**LED based Solar High Mast Lights (RMS) at Various Locations/Padav's
in Distt-Chamoli Uttarakhand with 05 years Warrantee &
Comprehensive Annual Maintenance**

E-TENDER NO. – 02/UREDA/CH/SHML(NRJY)/26-27



**Uttarakhand Renewable Energy Development Agency (UREDA)
Near Old Petrol Pump, Mandal Road, Gopeshwar Distt-Chamoli Ph. 8279310560
E-mail: ureda_chamoli@rediffmail.com**

UTTARAKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY
Near Old Petrol Pump, Mandal Road, Gopeshwar Distt-Chamoli Ph. 8279310560
E-mail: ureda_chamoli@rediffmail.com

TABLE OF CONTENTS

Sl. No.	Topic	Page No.
1	E-procurement Notice/Detail Tender Notice	3-4
2	Sri Nanda rajjat Yatra Detail and Map	5-6
3	Covering Letter	7
4	Particulars of Tender	8
5	General Particulars of Tenderer	9
6	Declaration by Tenderer	10
7	Section 1 - Introduction	11-12
8	Section 2 - The Tender document	13-14
9	Section 3 - Preparation of Tender	15-17
10	Section 4 - Submission of Tender	18
11	Section 5 - Tender opening and evaluation	19
12	Section 6 - Award of Contract	20-21
13	General conditions of contract	22-30
14	General Technical Specifications/Technical Bids	31-44
16	Scope of work	45-47
15	Details of Experience - Annexure I	48
16	Format for System Installation Report- Annexure II	49
17	Format for Annual Maintenance (Annual)- Annexure III	50
18	Format for Warrantee/Guarantee card- Annexure IV	51
19	Financial Bid (on BOQ)	52

Uttarakhand Renewable Energy Development Agency (URED A)
Near Old Petrol Pump, Mandal Road, Gopeshwar Distt-Chamoli Ph. 8279310560
E-mail: ureda_chamoli@rediffmail.com

"E" Procurement Notice

Tender No 02/URED A/CH/SHML(NRJY)/26-27

Bids invited for contract for **"Supply, erection and Commissioning of LED based Solar High Mast Lights(RMS) at Various Locations/Padav's in Distt-Chamoli Uttarakhand with 05 years Warrantee & Comprehensive Annual Maintenance"** from prospective bidders through e-tendering. The tender documents can be downloaded from <https://uktenders.gov.in> portal in stipulated time mentioned in the tender document. Details of subsequent addendum/corrigendum/cancellation etc. shall be notified on <https://uktenders.gov.in> only.

Undersigned reserves the right to reject any or all the offers without assigning any reason.

**PROJECT OFFICER,
URED A CHAMOLI**

Uttarakhand Renewable Energy Development Agency (UREDA)
Near Old Petrol Pump, Mandal Road, Gopeshwar Distt-Chamoli Ph. 8279310560
E-mail: ureda_chamoli@rediffmail.com

E-TENDER No- 02/UREDA/CH/SHML(NRJY)/26-27

1.	Name of Work	Supply, erection and Commissioning of LED based Solar High Mast Lights(RMS) at Various Locations/Padav's in Distt-Chamoli Uttarakhand with 05 years Warrantee & Comprehensive Annual Maintenance.
2.	Estimated Cost	73.37 Lacs
3.	Estimated Quantity	50 Nos.
4.	Period of Completion	03 Months from the date of work order
5.	Date & Time of availability of Bid Document in the Portal	28/05/2026 from 11.00 AM
6.	Last Date & Time for receipt of bids in the portal	11/06/2026 from 5.00 PM
7.	Last date of submission of Fees and EMD at UREDA, Chamoli	11/06/2026 up to 05:00 PM
8.	Date of Opening of bids	12/06/2026 at 11:00 AM
9.	Name & Address of the Officer inviting the bid	PROJECT OFFICER,, UREDA, NEAR OLD PETROL PUMP, MANDAL ROAD, GOPESHWAR CHAMOLI

Further details can be seen from the e-procurement portal <https://uktenders.gov.in>. Details of subsequent addendum/corrigendum/cancellation etc. shall be available on this website.

PROJECT OFFICER,
UREDA, CHAMOLI

“Save Energy in Personal and National interest”

श्री नन्दा राजजात यात्रा

श्री नन्दा राज जात यात्रा 2026 उत्तराखण्ड की एक प्राचीन, दुर्गम और अत्यन्त पवित्र धार्मिक पदयात्रा है, जिसे "हिमालय का महाकुंभ" कहा जाता है। यह यात्रा 12 वर्षों के अंतराल पर होती है। यह यात्रा माँ नन्दा देवी को उनके मायके (नौटी गांव) से ससुराल (कैलाश/होमकुण्ड) विदा करने का प्रतीक है। नन्दा देवी राजजात यात्रा लगभग 20 दिनों तक लगभग 260 से 280 कि०मी० की पैदल यात्रा है, यह यात्रा चमोली जिले के नौटी गांव से शुरु होकर रुपकुण्ड होते हुए होमकुण्ड तक जाती है—

यात्रा मार्ग पर पड़ने वाले विभिन्न पड़ावों का विवरण

01. नौटी :
02. ईड़ाबधाणी (दूरी 10 कि०मी०)
03. कांसुवा (दूरी 10 कि०मी०)
04. सेम (दूरी 10 कि०मी०)
05. कोटी (दूरी 10 कि०मी०)
06. भगोती (दूरी 12 कि०मी०)
07. कुलसारी (दूरी 12 कि०मी०)
08. चेंपड़ो (दूरी 10 कि०मी०)
09. नन्दकेशरी (दूरी 05 कि०मी०)
10. फल्दियांगांव (दूरी 10 कि०मी०)
11. मुन्दोली (दूरी 10 कि०मी०)
12. वाण (दूरी 15 कि०मी०)
13. गैरोली पातल (दूरी 10 कि०मी०)
14. बेदनी बुग्याल (ऊंचाई 3350 मीटर)
15. पातर नचौनिया (दूरी 12 कि०मी०—ऊंचाई 4000 मीटर)
16. शिला समुद्र (दूरी 15 कि०मी०)
17. होमकुण्ड
18. चन्दनियाघाट (दूरी 16 कि०मी०)
19. सुतोल (दूरी 18 कि०मी०)
20. नन्दानगर(घाट) (दूरी 25 कि०मी०)
21. कुरुड़ (दूरी 10 कि०मी०)
22. उस्तोली (दूरी 16 कि०मी०)
23. भेंटी (दूरी 16 कि०मी०)
24. डुंग्री (दूरी 20 कि०मी०)
25. सूना (दूरी 05 कि०मी०)

नोट—चूंकि उक्तानुसार कुछ पड़ाव मोटर मार्ग से पैदल दूरी पर स्थित हैं जिस हेतु पड़ावों पर सामग्री हैड लोड ढुलान के माध्यम पहुंचानी होगी। अतः अपने स्तर से यात्रा में पड़ने वाले स्थल/पड़ावों के सम्बन्ध में पूर्ण जानकारी प्राप्त करें।

COVERING LETTER

FROM :- (Full name and address of the tenderer)

M/s.....

.....

.....

.....

To,

Project Officer,
Uttarakhand Renewable Energy Development Agency (UREDA)
Near Old Petrol Pump, Mandal Road,
Gopeshwar Distt-Chamoli

Subject: - Offer in response to Tender Notice No: - 02/UREDA/CH/SHML(NRJY)/26-27

Sir,

We hereby submit our offer in full compliance with terms & conditions of the attached tender. The tender both technical bid & financial bid is being uploaded on Portal.

We declare that we will abide by the 'Code of Integrity of Public Procurement'. In case of transgression, our bid is likely to be rejected, besides any other penalty or more severe action as deemed fit that may be imposed by the Procuring Entity/Employer.

(Signature of Tenderer)

Seal

PARTICULARS OF TENDER

1	Tender Notice No.	02/UREDA/CH/SHML(NRJY)/26-27
2	Particulars of the work	Supply, erection and Commissioning of LED based Solar High Mast Lights(RMS) at Various Locations/Padav's in Distt-Chamoli Uttarakhand with 05 years Warrantee & Comprehensive Annual Maintenance.
3	Quantity	50 Nos. (Approx)
4	Period of contract	Till the completion of all works
5	Cost of tender document	Rs. 4,720/- (inclusive of GST)
6	Date & Time of availability of Bid Document on the Portal	28/05/2026 from 11.00 AM
7	Last date/ time of uploading the tender on portal	11/06/2026 up to 5.00 PM
8	Last date of submission of fees and EMD at UREDA HQ Chamoli	11/06/2026 up to 5:00 PM
9	Amount of Earnest money	1.72 lakhs
10	Validity of offer for acceptance	03 Months from the date of opening of the bid.
11	Date and time of start of tender evaluation	12/06/2026 at 11.00 PM
12	Place of opening of tender	UREDA Office, Near Old Petrol Pump, Mandal Road, Gopeshwar, Distt-Chamoli
13	Period for Completion of work	03 Months from the date of Agreement/Work Order

GENERAL PARTICULARS OF TENDERER

SI	Particulars	Details
1	Name of Tenderer/Firm	
2	Postal Address	
3	E-mail address for communication	
4	Telephone & Mobile No.	
5	Name and designation of the person signing the tender.	
6	Name, designation & contact number of the representative of the tenderer to whom all references shall be made.	
7	Nature of the firm (Individual/ Partnership/ Pvt. Ltd /Public Ltd. Co. /Public Sector etc.) The Association of various firms like Consortium/Joint Venture/ Special Purpose Vehicle etc. is not allowed to participate in this tender. (Attach copy of firm's Registration & Partnership deed/Memorandum of Association)	
8	Amount and particulars cost of Tender documents deposited.	
9	Annual Turnover for last five financial years (Attach balance sheets & Turnover certificate for year 2021-22, 2022-23, 2023-24, 2024-25 & 2025-26 certified from CA with UDIN number in this regard).	
10	Name and address of the Indian/foreign collaboration, if any.	
11	GST Registration no. (Copies of Registration Certificates of GSTIN to be enclosed)	
12	PAN Card No. (attach copy of PAN Card and ITR for last five financial year 2021-22, 2022-23, 2023-24, 2024-25 & 2025-26)	
13	Has the order for debarment is in force against the tenderer/firm by any Government Department/ SNA/PSU etc. for undertaking any work?	
14	Any other information attached by the tenderer (Details & Annexure/page no. where its enclosed)	
15	Does tenderer have any relative working in UREDA? If yes state the name and designation.	

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

(Signature of tenderer with Seal)

DECLARATION BY THE TENDERER

(Notified affidavit to be submitted on Rs. 100/- Non-Judicial Stamp Paper)

I/We

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

1. The tenderer is fully aware of all the requirements of the tender document and agrees with all provisions of the tender document and accepts all risks, responsibilities and obligations directly or indirectly connected with the performance of the tender.
2. The tenderer is fully aware of all the relevant information for proper execution of the proposed work, with respect to the proposed place of works/ site, its local environment, approach road and connectivity etc. and is well acquainted with actual and other prevailing working conditions, availability of required materials and labour etc. at site.
3. The tenderer is capable of executing and completing the work as required in the tender and is financially solvent and sound to execute the tendered work. The tenderer is sufficiently experienced and competent to perform the contract to the satisfaction of UREDA. The tenderer gives the assurance to execute the tendered work as per specifications, terms and conditions of the tender on award of work.
4. The tenderer has no collusion with other tenderers, any employee of UREDA or with any other person or firm in the preparation of the tender.
5. The tenderer has not been influenced by any statement or promises by UREDA or any of its employees but only by the tender document.
6. The tenderer is familiar with all general and special laws, acts, ordinances, rules and regulations of the Municipal, District, State and Central Government that may affect the work, its performance or personnel employed therein.
7. **That no order of debarment, blacklisting, default for similar type of work by any Government Department/SNA/PSU etc. is in force against the bidder.**
8. The tenderer accepts that the earnest money may be absolutely forfeited by UREDA if the tenderer fails to sign the contract or to undertake the work within stipulated time.
9. This offer shall remain valid for acceptance for 3 (Three) months from the proposed date of opening of the Bid.
10. The tenderer fulfills all requirements under MNRE, Govt. of India.
11. All the information and the statements submitted with the tender are true. In case any Information/ Statement is found to be false at a later stage, tender may out rightly be rejected and tenderer shall be labile to pay all the losses incurred by UREDA against the tendered work.

(Signature of Tenderer)

SEAL

SECTION -1

INTRODUCTION

1. ELIGIBLE TENDERERS

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

- 1.1 Is an indigenous manufacturer in the field of supply, installation & commissioning of Solar High Mast Light Systems and his firm is registered for more than **five years**.
- 1.2 The tenderer fulfills the terms and conditions of eligibility as an indigenous manufacturer of Solar High Mast Lights in accordance with the directions of Ministry of New and Renewable Energy, Government of India. **(Only those tenderers who manufacture at least one of the major items used in the Solar High Mast Light i.e. PV modules or storage battery or LED luminaries and have adequate facilities for testing of Solar High Mast Lights would be allowed to participate). The major item (PV module/Storage battery/ LED luminaries) manufactured by the bidder should be a mandatory component of the tendered Solar High Mast light.**
- 1.3 Has adequate plant and manufacturing capacity available to perform the works properly and expeditiously within the time frame specified in the tender document (Attach relevant document). UREDA or nominated third party may inspect the manufacturing facility of the tenderer at any time during the evaluation of tender and incase the manufacturing facility is not found satisfactory; the tender shall be rejected.
- 1.4 Has established quality assurance systems and organization designed to achieve high level of equipment reliability in manufacturing of the LED Based Solar High Mast Lights. (Bidder shall submit the list of equipment for testing of LED based solar High Mast Light Systems at the manufacturing facility to establish quality assurance.)
- 1.5 Has adequate financial stability and status to meet the financial obligations pursuant to the scope of work. The firm must have average annual turnover of minimum Rs. 120 Lacs during last five financial years (FY 2021-22, FY 2022-23, FY 2023-24, FY 2024-25 & 2025-26). (Attach balance sheets & turnover certificate from CA having UDIN number in this regard). For FY 2025-26, provisional Balance sheet/certificate shall also be acceptable.
- 1.6 The tenderer must have experience of supply, installation & commissioning of Solar High Mast Light Systems in Hilly states of India.
- 1.7 Has adequate work experience to meet the obligations pursuant to the scope of work. The firm must have experience of manufacturing, supply, installation & commissioning and maintenance/after sale services of at least 40 numbers standalone Solar High Mast lights systems in any Government department/ State nodal agencies/ PSUs as cumulative capacity in the last five years (Year 2021-22, 2022-23, 2023-24, 2024-25 & 2025-26). The details of work experience must be submitted in the Performa given in Technical-Bid **Annexure-I** section of tender document. **(Experience without copies of work orders & completion certificates will not be accepted)**
- 1.8 Has established company owned service center in Uttarakhand and has adequate field service setup to provide good after sale services including necessary repair and maintenance. Bidder should provide documentary proof for established service center in Distt-Chamoli after signing the agreement.

1.9 Has latest valid complete Test Certificate for the model required for LED Based Solar High Mast Light system (complete system) (not before two years from the date tender published) as specified and required in the Technical- Bid of this tender document, from a MNRE/NABL accredited test lab.

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

Note: Any firm, whose contract/work has been terminated during last three years by any of the UREDA office, will not be considered eligible for this tender.

SECTION -2
THE TENDER DOCUMENT

2.1 CONTENT OF TENDER DOCUMENT

- 2.1.1 The tender procedure and contract terms are prescribed in the tender document. In addition to the invitation of tender, the tender document includes the various other documents as given in the table of contents at page no-2.
- 2.1.2 The tenderer is expected to examine all instructions, terms and conditions, specifications, forms and formats etc. as mentioned/ enclosed in the tender document. Failure to furnish all information required in the tender document or submission of a tender not substantially responsive to the tender document in every respect will be at the tenderers risk and is likely to result in out-right rejection of the tender.

2.2 INFORMATION REQUIRED WITH THE PROPOSAL

- 2.2.1 The tender must clearly indicate the name of the manufacturer, the types and model & make of each principal item of equipment proposed to be supplied. The tender may also contain details of specifications and other comprehensive descriptive materials in support of technical specifications.
- 2.2.2 The above information may be provided by the tenderer in the form of separate sheets, specifications, catalogues etc.
- 2.2.3 Any tender not containing sufficient descriptive material to describe the proposed equipment may be treated as incomplete and hence may be rejected. Such descriptive materials and specifications submitted by the tenderer will be retained by UREDA. Any deviations from these will not be permitted during the execution of contract, without specific written permission of UREDA.

2.3 AMENDMENTS IN TENDER DOCUMENT

- 2.3.1 At any time prior to the due date for submission of the tender on portal, UREDA may for any reason, whether at its own initiative or as a result of a request for clarification/ suggestion by a prospective tenderer, amend the tender document by issuing a notice.
- 2.3.2 In case any amendment is required to be done, it shall be notified on the website at least 3 days before the proposed date of submission of the tender. UREDA will bear no responsibility or liability arising out of non-receipt of the information in time or otherwise. If any amendment is required to be notified within 3 days of the proposed date of submission of the tender, the last date of submission shall be extended for a suitable period of time.
- 2.3.3 In case any amendment due to legal reason is required to be done after submission of the tender (prior to the opening of financial bids), all the tenders received by UREDA shall be returned, for getting their offer revised according to the amended terms and conditions.

2.3.4 **In Future all the notices/ corrigendum/ amendments etc. related to this tender shall only be placed on the web portal.** UREDA will not bear any responsibility or liability arising out of non-receipt of the information regarding any amendment in time or otherwise. Tenderers must check the website for any such amendment before submitting their tender.

2.4 CLARIFICATIONS REGARDING TENDER DOCUMENT

2.4.1 To clarify the doubts (if any) regarding various provisions / requirements/ preparation/ submission of the tender, a pre-bid conference will be held on the date and place as specified in the 'PARTICULARS OF TENDER'.

2.4.2 It will not be imperative on UREDA to incorporate any suggestion of any prospective tenderer in the tender document UREDA shall not be bound to reply or to explain the reason of not considering the suggestion. However logical proposals with necessary supporting document may be considered & incorporated in the tender. The decision of UREDA shall be final in this regard.

2.4.3 Verbal Clarifications & information shall not be entertained in any case.

SECTION 3
PREPARATION OF TENDER

3.1 LANGUAGE OF TENDER AND MEASURE

The tender prepared by the tenderer along with all the related documents shall be in English/Hindi. Any printed literature furnished by the tenderer may be in another language so long as it is accompanied by an English/Hindi translation of its pertinent passages. Unit measurements shall be metric in accordance with international system. All correspondence between the tenderer and UREDA shall also be in English/Hindi.

3.2 TENDER FEE, EARNEST MONEY AND SECURITY MONEY

3.2.1 The tenderer shall furnish Tender Fee & EMD in the form of DD & FDR respectively pledged in favor of PROJECT OFFICER, UREDA CHAMOLI . Tender Fee & EMD in PDF format should necessarily be uploaded with technical bid tender documents as a part of his tender. Tenders without Fee and EMD amount shall be rejected by UREDA as being non-responsive.

3.2.2 The earnest money may be forfeited: -

a) If a tenderer withdraws his tender during the specified period of validity of offer.

b) If the successful tenderer fails to sign the contract agreement within stipulated period.

3.2.3 Successful tenderers have to deposit performance security money amounting to 5% of the **contract value or allotted work value** in the form of FDR / CDR /TDR /BG pledged in favor of **Director, UREDA, Dehradun.**

If quoted rates are below the estimated rates, extra/additional security money shall have been deposited as per Uttarakhand Procurement Rules-2025, as under -

“(2) Item Rate tenders

a) For up to 5% below the estimated Item rate, no additional Performance Security.

b) For 5% to 15% below the estimated rate, for each 1% below rates from the estimated item rate, an additional Performance Security of 0.5% shall be required.

c) For Item Rates more than 15% below the estimated rate, for each 1% below rates from the estimated item rate, an additional Performance Security of 1% shall be required.

The performance Security/additional performance Security shall be provided by the contractor to the Employer not later than the date specified in the letter of acceptance.

The additional performance security shall be returned to the contractor after satisfactory completion of the work.

3.2.4 The earnest money of all the other bidders shall be released after signing of the agreement by the lowest bidder.

No interest shall be paid by UREDA on the amount of Earnest/security money deposited.

3.3 PERIOD OF VALIDITY AND CONTRACT OF TENDER

- 3.3.1 Validity of the offer should be ninety (90), days from the proposed date of opening of the bid. Tenders without this validity will be rejected.
- 3.3.2 In exceptional circumstances, UREDA may solicit the consent of the tenderers to an extension of the period of validity of offer and validity of contract. The request and the response there of shall be made in writing.

3.4 FORMATS AND SIGNING OF TENDER

1. The tender must contain the name and places of business of the firm/person/persons participating in the tender and must be signed and sealed by the tenderer with his usual signature. The name and designation of the person/persons signing the tender document should be written below every signature.
2. The original copy of the tender should be typed or written in indelible ink and must be signed & stamped with the legal name of the corporation/ company by the President/ Managing Director/ Secretary of the firm or a person duly authorized to bid. In case of authorized person, the letter of authorization by written power-of-attorney should be enclosed with the technical bid of the tender. The person or persons signing the tender shall initial all pages of the tender document.
3. The tender shall contain no interlink actions, erasers or overwriting except as necessary to correct the errors made by the tenderer in the preparation of tender. The person or persons signing the tender shall also sign at all such corrections.

3.5 PRICE AND CURRENCIES

The tenderer shall submit his rates in Indian Rupees only, on the format for Financial Bid attached to this tender document. The rates should include all applicable taxes, duties & surcharges.

- 3.6 The tenderers are suggested to collect all relevant data regarding the proposed place of work/ site, its local environment, approach road and connectivity, actual prevailing working conditions, weather conditions, availability of required materials and labour and all other information/ data required for proper completion of the proposed work. If required, the tenderer must pre-visit the sites before submitting his tender. UREDA shall not entertain any request of contractor for clarifications related to such local conditions and shall bear no responsibility in this regard.

3.7 CHECK LIST FOR ENCLOSURES

Sl. No.	<u>DD/NSC/FDR/CDR/BG/RTGS</u>	Page/ Annexure No
1	Cost of Tender Document	
2	Earnest Money	
	OTHER DOCUMENTS	Page/ Annexure No
1	Complete tender document duly signed and stamped	
2	DECLARATION on stamp paper	
3	Copy of Registration/Partnership deed/MOA (if applicable)	
4	Power-of-attorney to sign/submit the tender	
5	Registration Certificates of GST	
6	Details regarding manufacturing capacity	
7	Details regarding staff/ personnel/ field service setup	
8	Details of experience as mentioned Last five Years 2021-22, 2022-23, 2023-24, 2024-25 & 2025-26. (Attach copies of Work orders & completion reports)	
9	Details regarding company owned service center established in Uttarakhand (Attach ownership/lease related document of the property)	
10	Turnover certificate & Balance sheets of last five Years 2021-22, 2022-23, 2023-24, 2024-25 & 2025-26 (Attach balance sheets & turnover certificate from CA having UDIN number in this regard)	
11	Test Reports of complete Solar High Mast light system and also the reports for batteries, solar modules & LED lights as desired in Technical Specifications.	
12	Copy of the PAN Card & last five financial year ITR (Year 21-22, 2022-23, 2023-24, 2024-25 & 2025-26)	
13	Any other information attached by the tenderer	

Note-The above documents should be enclosed in the serial order as mentioned in above table. This index of documents should be enclosed in the beginning of the tender document, entering the Page/ Annexure Nos. of the documents.

SECTION 4

SUBMISSION OF TENDER

4.1 SEALING AND MARKING OF TENDER

- 4.1.1 The tender must be complete in all technical and commercial respect and should contain requisite certificates, drawings, informative literature etc. as required in the tender document. All documents should be uploaded on web portal & should be legible; otherwise, the bid may get rejected.
- 4.1.2 The complete tender documents in original downloaded from the portal should be uploaded **(Technical and Financial Bid separately)** by the tenderer after furnishing all the required information on relevant pages including details of Tender Fee deposited / Submitted & EMD. Each page of the tender document should be signed & stamped. Tenders with any type of change or modification in any of the terms/ conditions of this document shall be rejected. If necessary, additional papers may be attached by the tenderer to furnish/ submit the required information on the web portal.
- 4.1.3 Any term/condition proposed by the tenderer in his technical bid which is not in accordance with the terms and conditions of the tender document or any financial conditions, payment terms, rebates etc. mentioned in financial bid shall be considered as a conditional tender and will make the tender invalid.

Note: Hard copies of Technical Bid & Price Bid need not to be sent to UREDA office.

4.2 DEADLINE FOR SUBMISSION OF TENDER

- 4.2.1 Tender must be uploaded on web portal(www.uktenders.gov.in) till the date & time of submission as specified in tender document. Tender fee & EMD, in the form of DD/ FDR etc., must reach UREDA office on 11/06/2026 upto 5.00 PM. Otherwise, bid will not be considered.

SECTION 5
TENDER OPENING AND EVALUATION

5.1 OPENING OF TENDER

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

- 5.1.1 Tender Technical Bid downloaded from web portal & **Tender Fee & EMD envelope** bearing **Tender No 02/UREDA/CH/SHML(NRJY)/26-27** and subscribed 'Tender fee & Earnest Money' shall be opened by UREDA's representatives at the time and date mentioned in the 'Particulars of Tender', in the presence of tenderers who choose to be present. The financial and technical suitability of offers will be examined by UREDA in detail. If required, clarifications regarding the suitability of the offers may be obtained.
- 5.1.1 Financial Bid uploaded on portal shall be opened for only those tenderers whose technical bid is found responsive, suitable and in accordance with the various requirements of the tender.

5.2 CLARIFICATIONS REGARDING THE SUBMITTED TENDERS

- 5.2.1 During the process of evaluation of the tender, UREDA may at its discretion ask the tenderer for a clarification of his tender. The request for clarification and the response shall be in writing.
- 5.2.2 Any query regarding any clarification required by UREDA on the information submitted by the tenderer, must be replied by the tenderer within 3 days.

SECTION 6

AWARD OF CONTRACT

6.1 EVALUATION CRITERION

- 6.1.1 The tender shall be finalized on the basis of cost of per unit for both type of LED Based Solar High Mast Lights including 05 years Warrantee and Comprehensive Annual Maintenance as offered by the tenderer in his financial bid.
- 6.1.2 Applicable preferences/benefits will be given to eligible MSME Firms established & registered in Uttarakhand as per Govt. Policy of this state. Registration Certificate issued by Industry Department of Uttarakhand should be enclosed with the Technical Bid & also the proof that the firm is registered online under Purchase Preference Policy. No other relaxation shall be allowed to any Bidder. No relaxation in the turnover and experience shall be allowed as per the point no. 05 of MSME GO- 1542/VII-3-19/143-m|ksx/2003 dated 20th August 2019.

6.2 SELECTION OF SUCCESSFUL BIDDER(S)

- 6.2.1 Work shall be offered/allotted by UREDA to bidders' offering the lowest rate (L1) for each type of Solar High Mast Light systems.

In case, the bidder offering lowest rate (L1) expresses inability or is unable to perform the allotted work, Director UREDA at sole discretion may retender the work or may seek written consent from bidder offering second lowest rates (L2), to work on the lowest rate (L1 rates), then the bidder offering second lowest rate (L2) may also be considered for allocation of work.

If in case, the bidder offering second lowest rate (L2) is offered work and L2 also expresses inability or is unable to perform the allotted work, Director UREDA at sole discretion may seek written consent from bidder offering the third lowest rate (L3), to work on the lowest rate (L1 rates), then the bidder offering the third lowest rate (L3) may also be considered for allocation of work.

However, the finalization of overall quantity and allocation of work to the firms shall be at sole decision of Director UREDA.

6.3 NOTIFICATION OF AWARD

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

6.4 AWARD OF WORK CONTRACT

- 6.4.1 Before placement of supply orders, an agreement shall be signed between UREDA and the lowest successful tenderer.
- 6.4.2 Contract shall be awarded to the lowest bidders. The Bidders shall provide the schedule of each activity in PERT Chart from manufacturing to supply and installation within 15 days after signing the agreement,

6.5 RIGHT TO VARY QUANTITIES

UREDA may increase or decrease the quantity mentioned in the tender at the time of award of contract.

6.6 RIGHT TO ACCEPT/REJECT ANY OR ALL TENDERS.

UREDA reserves all the rights to reject any or all the tenders, accept any tender in total or in part.

6.7 EXPENSES OF AGREEMENT

The respective suppliers shall pay all the expenses of stamp duties and other requirements for signing the agreement with UREDA.

GENERAL CONDITIONS OF CONTRACT

1. DEFINITIONS

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

- 1.1 UREDA shall mean The Director or his representative of 'Uttarakhand Renewable Energy Development Agency, Govt of Uttarakhand' with its Head office at Energy Park Campus, Patel Nagar Dehradun and shall also include its successors in interest and assignees. The '**Contractor**' shall mean the **Firm/ Person (whose tender has been accepted by UREDA)** and shall include his legal representatives, successor in interest and assignees
- 1.2 The contract shall be for "**Supply, erection and Commissioning of LED based Solar High Mast Lights(RMS) at Various Locations/Padav's in Distt-Chamoli Uttarakhand with 05 years Warrantee & Comprehensive Annual Maintenance**" and shall be valid till the completion of all related works.
- 1.3 The period of the rate contract for the said work shall be of one year from the date of agreement. However, the validity of rates may further be extended to a specified period of time and/or to other work orders in other locations of Uttarakhand on the mutual consent of both the parties.
- 1.4 The contractor shall be deemed to have carefully examined all the papers, drawings etc. attach to the contract deed. (If he shall have any doubt as the meaning of any portion or any condition(s) /specifications etc., can discuss during the pre-bid meeting as per schedule).

2. COMPLETION PERIOD

- 2.1 The total work assigned to the contractor shall have to be completed by him within Three (03) months from the date of signing the agreement/Work Orders. The work shall have to be completed within time and shall be binding on the contractor. In case of any urgency, the contractor may be asked to complete the work even earlier and contractor will be bound to fulfill the requirements.
- 2.2 In case the contractor fails to execute the said work or related obligations within stipulated time, UREDA will be at liberty to get the work executed from the open market at the risk and cost of the contractor, without calling any tender and without any notice to the contractor. Any additional cost incurred by UREDA during such execution of the work shall be recovered from the contractor.
- 2.3 If the cost of executing the work as aforesaid shall exceed the balance payments due to the contractor and the contractor fails to execute the balance, then the 'additional cost', UREDA may recover it from the contractor's pending claims against any work in UREDA or in any other lawful manner. All risks & responsibilities related to the execution of the said work and fulfillment of related obligations directly or indirectly connected with the performance of the contract shall be the sole responsibility of contractor.
- 2.4 The calculation of aforesaid 'additional cost' will be finalized by the UREDA at its sole discretion. The contractor shall have no right to challenge the mode or amount relating to calculation at any forum. For completion of the work through any other agency, in case some changes are required in terms and conditions of the contract; the contractor shall not have any right to challenge the decision of UREDA.

3. LIQUIDATED DAMAGES

If the contractor fails to perform the work within maximum 08 months or the time periods specified in the work orders or within the extended time period, if any, UREDA shall without prejudice to its other remedies under the contract, deduct from the contract price as liquidated damage, a sum equivalent to 0.5% of the price of the un-performed work / services for each week of delay until actual completion of work, up to a maximum deduction of 5%. Once the maximum is reached, UREDA may consider termination of the contract.

4. PERFORMANCE SECURITY

The amount of the performance security as mentioned in the 'Payment Terms' shall be forfeited in case of breach of any term or condition by the contractor. If required, the other balance payments may also be forfeited, depending on the liabilities on the part of the contractor.

5. FORCE MAJEURE

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

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

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

5.4 For other justified cases also, not covered under force majeure conditions, UREDA may consider the request of contractor and additional time for completion of work may be granted as per Uttarakhand Procurement Rules-2025.

6. QUALITY, WARRANTY/ GUARANTEE AND ANNUAL MAINTENANCE

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

- 6.2 After erection of the Solar High Mast Lights at site, the contractor shall ensure satisfactory performance of the equipment's for a period of time as specified in the scope of work.
- 6.3 The contractor shall rectify defects developed in the Systems within Warranty/ Guarantee/annual maintenance period promptly. In case the contractor does not rectify the defects within 07 days of the receipt of complaint, UREDA may restore the System in working condition on contractor's expenses.
- 6.4 Frequent and unjustified delays in rectifying defects may lead to cancellation of the contract, recovery of losses and imposing of additional penalty. In such circumstances UREDA shall have the full liberty to recover the losses/penalty from the contractor pending claims, security deposit or in other law full manner. The amount of losses/penalty shall be decided by Director, UREDA and will be binding on the contractor.
- 6.5 UREDA may inspect the ongoing installation or installed Street lights. In case the installed systems are not as per standards, non-functional on account of poor quality of installation or non-compliance of Annual Maintenance, UREDA reserves the right to blacklist the vendor. Blacklisting may inter-alia include the following:
 - 6.5.1 The vendor/Firm will not be eligible to participate in tender for Government supported projects.
 - 6.5.2 In case, the concerned Director(s) of the firm/Company joins another existing or starts/joins a new firm/company, the company will automatically be blacklisted.

7. STANDARDS

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

8. INSPECTION AND TESTS

- 8.1 UREDA or its duly authorized third party representatives shall have the right to inspect and /or to test the goods to confirm their quality according to the contract and shall have access to the contractor's works premises and the power to inspect and examine the materials and workmanship of the Solar High Mast Lights at all reasonable times during their manufacture.
- 8.2 The cost for inspection by third party shall be deducted from the due payments of the contractor.
- 8.3 The contractor shall inform UREDA through a written notice regarding any material being ready for testing at least 7 days in advance. The conditions of contract and/or the technical specifications shall specify what inspections and tests shall be conducted by UREDA. All the arrangements of necessary equipment's and expenses for such tests shall be on the contractor's account excluding the expenses of the inspector.

- 8.4 UREDA's Inspector, unless the witnessing of the tests is virtually waived off, will inspect and attend such test within 7 days from the date on which the equipment's are notified as being ready for test /inspection.
- 8.5 UREDA shall within 7 days, give written notice to the contractor, about any objection regarding the quality of the system. The contractor shall either make the necessary modifications to remove the cause of such objection or shall clarify the objections in writing if modifications are not necessary to comply with the contract.
- 8.6 After satisfactory testing of the systems during inspection, UREDA's Inspector shall issue of dispatch clearance for the supply of material at site.
- 8.7 The inspection by UREDA and issue of dispatch instruction there on shall in no way limit the liabilities and responsibilities of the contractor in respect of the agreed and specified quality. Nothing in clause 8 shall in any way relieve the contractor from any Warrantee/ Guarantee or other obligations under this contract.
- 8.8 At the time of inspection and testing of the systems at the works of the contractor, one system from the manufactured lot may also be randomly picked up by the inspecting officers and contractor shall have to get it tested at any of the MNRE approved/NABL accredited test center.
- 8.9 In case in the testing at MNRE approved/NABL accredited test center, the system is not found in accordance with the required technical specifications, all the systems supplied against work order shall be rejected. All the work order(s) shall be canceled and all the payments made by UREDA to the contractor shall be recovered. Such contractor shall also be blacklisted from participating in any tender in URDEA in future. MNRE/other SNAs shall also be informed for the necessary action against such contractor.

9. SPARE PARTS

The contractor shall make arrangement to maintain a sufficient (atleast 2%) stock of essential spares and consumable spare parts at their local service center in every district to ensure proper and timely maintenance of the system.

10. PACKING FORWARDING

- 10.1 Contractors, wherever applicable shall properly pack and crate all materials in such a manner as to protect them from deterioration and damage during transportation. The contractor shall be responsible for all damage due to improper packing.
- 10.2 The contractor shall inform the project offices of UREDA regarding the probable date of each shipment of materials from his works.

11. TRANSPORTATION

The contractor is required to deliver the goods at various locations as defined in the scope of work. Transportation, storage, safety and security of the supplied material, issuance of road permit etc. shall be the sole responsibility of the contractor/bidder.

12. DEMURRAGE WHARFAGE, ETC

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

13. INSURANCE

13.1 The goods supplied under the contract shall be fully insured against loss or damage incidental to manufacture or acquisition; transportation and the expenses shall be borne by the contractor.

13.2 The contractor shall arrange security & storage of their materials to avoid any theft or losses during execution of work. UREDA will, in no case, shall be responsible for providing any security/storage for the materials & equipment's lying at site during execution of work. Under the contract, contractor shall be responsible for any loss or damage until the systems/ supplies are taken over.

14. LIABILITY FOR ACCIDENTS AND DAMAGES

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

15. DUTIES AND TAXES

The rates/ prices mentioned in the price-schedule include all applicable taxes, duties & surcharges. No additional payments shall be made by UREDA on this account.

16. PATENT RIGHT AND ROYALTIES

The contractor shall indemnify UREDA against all third-party claims of infringement of patent, royalties, trademark or industrial design rights arising from use of the goods supplied/ erected by the contractor or any part thereof.

17. RIGHT TO VARY QUANTITIES

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

18. LOCAL CONDITIONS

18.1 The proposed sites shall be anywhere in the State of Uttarakhand Some sites may be remote and not connected to road. It will be imperative on contractor to have full information of all local conditions and factors which may have any effect on the execution of the works. The contractor shall be deemed to have collected all the relevant information regarding the proposed place of works/ site, its local environment, local whether approach road and connectivity etc. and be well acquainted with actual working and other prevailing conditions.

18.2 If required, the contractor should pre-visit the site before starting the work. UREDA shall not entertain any request of contractor for clarifications related to such local conditions and shall bear no responsibility in this regard.

19. TOOLS &TACKLES

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

20. TERMINATION FOR DEFAULT

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

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

20.1.2 If the contractor fails to perform any other obligation(s) under the contract.

However, in the event of termination of the contract in part, the contractor shall continue performance of the contract to the extent not terminated.

21. TERMINATION FOR INSOLVENCY

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

22. TERMINATION FOR CONVENIENCE

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

23. COMPLETION OF WORK

On completion of the work, the contractor shall submit 2 set of "As Executed Report" to UREDA Chamoli which will include photographs, Warrantee certificate, installation report and O & M manual containing all Technical Details, Detailed Circuit Diagram of the Electronic/ Electrical components of all the system also containing details of erection from the point of view of future maintenance of the installed systems.

24. OTHERS CONDITIONS

24.1 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 UREDA in writing.

24.2 UREDA may at any time either stop the work all together or reduce or cut it down by sending notice in writing to the contractor. If the work is stopped all together, the contractor will only be paid for work done and expenses distinctly incurred by him as on preparation or the execution of the work up to the date on which such notice is received by

him. The decision of UREDA regarding assessment of such expenses shall be final and binding on the contractor. If the work is cut down, the contractor will not be paid any compensation what to ever for the loss of profit which he might have made if he had been allowed to complete all the work awarded to him.

- 24.3 Fulfillment of various requirements, not particularly mentioned in the specifications or drawings but necessary for satisfactory and proper completion of the work shall be the contractor's responsibility within the prices offered by him. But additional works beyond the scope and essence of this contract shall be carried out by the contractor as extra items. For such works the rates shall be decided by UREDA and shall be binding on the contractor.
- 24.4 Work carried out without UREDA's approval shall not be accepted and UREDA shall have rights to get it removed and to recover the cost so incurred from the contractor.
- 24.5 The contractor shall not display the photographs of the work and not take advantage through publicity of the work without written permission of UREDA.
- 24.6 The contractor shall not make any other use of any of the documents or information of this contract, except for the purposes of performing the contract.
- 24.7 UREDA will not be bound by any Power of Attorney granted/ issued by the contractor or by any change in the composition of the firm made during or subsequent to the execution of the contract. However, recognition to such Power of Attorney and change (if any) may be given by UREDA after obtaining proper legal advice, the cost of which will be chargeable to the contractor concerned.

25. STATUTORY ACTS

- 25.1 All legal formalities/clearances are to be obtained by the contractor regarding the execution of the said work.
- 25.2 In respect of all labour directly or indirectly employed on the work by the contractor, the contractor shall comply with all the provisions of hiring the contract labour and rules of State/ Central Government or any other authority framed from time to time. The rules and other statutory obligations in this regard will be deemed to be the part of this contract.
- 25.3 The contractor shall comply with the all the Acts & rules and regulations, laws and by-laws framed by State/ Central Government/ organization in whose premises the work has to be done. UREDA shall have no liabilities in this regard.

26. APPLICABLE LAW

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

27. RESOLUTION OF DISPUTES /ARBITRATION

- 27.1 The purchaser and the supplier shall make every effort to resolve any disagreement or dispute arising between them under or in connection with the contract, amicably by direct informal negotiation.

- 27.2 If the purchasers and the supplier are unable to resolve a contract dispute amicably; the matter may be referred in writing by either party to the Dispute Resolution Board.
- 27.3 Subject to aforesaid, the arbitration and conciliation Act 1996 and rules made thereafter or any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration (Also refer Uttarakhand Procurement Rules-2025).
- 27.4 Work under the contract shall if reasonably possible, continue during the arbitration proceedings and dues if any, payable by UREDA to the contractor with respect to the work not in dispute shall not ordinarily be withheld on account of such proceedings unless it becomes necessary to withhold the same.
- 27.5 The proceedings, if any, in relation to the arbitration referred to above, shall be held by the arbitrator aforesaid at Dehradun and courts at Dehradun shall have jurisdiction to entertain and decide the matter involved.
- 27.6 No decision given by the officer in charge of the work under this contract, in accordance with the forgoing provisions shall disqualify him as being called as a witness or giving evidence before the arbitrators on any matter whatsoever relevant to the dispute of difference referred to the arbitrator as aforesaid.
- 27.7 In case during the Arbitration proceedings the appointed Arbitrator becomes unable, due to any reason whatsoever, to continue with the proceedings or making of Award; it will be prerogative of UREDA to nominate any other person as sole Arbitrator instead thereof. The contractor shall not raise any objection to such appointment having been made by UREDA.
- 27.8 The High court of Uttarakhand at Nainital or Courts subordinate to it as the case may be, shall alone have jurisdictions to the exclusion of all other courts.

28. NOTICES

- 28.1 Any notice to be given by one party to the other, pursuant to the contract shall be sent in writing. A notice shall be effective when delivered or from the effective date mentioned in the notice, whichever is later.
- 28.2 Notices, statements and other communications sent by UREDA to the contractor at his specified addresses through registered post/ email/ fax shall be deemed to be delivered to the contractor.

29. APPLICATION

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

30. PAYMENT TERMS:

- 30.1 80% amount of the work value shall be paid after supply, installation & commissioning of Solar High Mast light systems at site. Bills along with installation report (Annex-II) & other desired documents alongwith details about the establishment of service center in all related districts must be submitted.

- 30.2: Balance 20% of the contract value shall be treated as annual maintenance security and shall be paid yearly against satisfactory performance and maintenance of the solar systems during the 05 years warrantee & comprehensive Annual Maintenance period. This amount shall be paid in 5 equal annual installments, starting from completion of one year from the date of installation at site. Submission of annual satisfactory performance reports (**Annexure- III**) from the concerned beneficiary/user agency of the systems and duly verified & recommended by concerned district officer of UREDA is a must for release of this payment. The amount should be claimed every year within 60 days from the date of installation of the systems.
- 30.3 If annual satisfactory performance reports not submitted to the respective district office of UREDA within 60 days of 1/2/3/4/5 years respectively from the date of submission of installation bill of the systems to respective district office of UREDA (complete in all respect), the annual performance security amount of that particular year shall be forfeited.
- 30.4 Security money deposited by the contractor at the time of signing of contract agreement will be released after completion of 05 years Warrantee, Operation and Annual Maintenance period.

Note:

1. No price escalation due to any reason (including any change in the applicable taxes, duties, surcharge etc.) shall be considered by UREDA during the validity/ extended validity of the contract agreement.
2. All the FDR/CDR/TDR/BG should be issued from nationalized bank only.

General Technical Specifications

The scope of work includes design, supply, installation, commissioning of **Solar LED High Mast Lighting Systems** including five (05) years comprehensive warranty maintenance in various sites of various districts of Uttarakhand as per the following specifications.

GENERAL TECHNICAL SPECIFICATION:

Type-I: 7 Meter Pole height-

A Solar PV White- LED High Mast Light consist of white LED luminary of maximum 4*18 Watt (LED + Driver) as per configuration along with solar PV modules and battery of given capacity, necessary control electronics-inter connecting wires / cables, module mounting structures etc. to operate the load for dusk to dawn. The broad performance specifications of a White Light Emitting Diode (W-LED) light source based solar High Mast lighting system are given below

BROAD PERFORMANCE PARAMETERS

PV Module	Only indigenous modules shall be used in the Project. SPV module aggregate capacity 440 Wp (110 Wp X 4 Nos.) at under STC. Module Voc minimum of 21V.
Battery (Li-fe-Po4)	Lithium Ferro Phosphate battery aggregate capacity 12.8 Volt, 200Ah (50Ah x 4 nos.) 12.8 Volt 50 Ah of one unit.
Light Source	White Light Emitting Diode (W-LED) 4x18 Watt (LED +Driver) Using LEDs which emits ultraviolet light will not be Permitted
Light Out put	White colour (colour temperature 5500-6500 K). Lumen efficacy of LED- min 135 lumens/Watt @350 mA. The illumination should be uniform without dark bands or abrupt variations, and soothing to the eye. Higher light output will be preferred.
Average duty cycle	Dusk to dawn

Make of Items must be as per the BIS/ MNRE technical specification and equivalent make offered by the bidders in the Bid. The Bidders may change the make of items with the permission of competent authority of UREDA as and when required on valid circumstantial conditions. The bidder shall provide Test Certificate of the proposed make of items issued from MNRE authorized testing center or NABL accredited test lab.

MINIMUM TECHNICAL REQUIREMENTS / STANDARDS

1. DUTY CYCLE

The Solar PV White- LED High Mast Light system should be designed to operate for dusk to dawn.

2. PV MODULE

1.1 Only indigenous modules of reputed brand (IEC/BIS Tested) as per latest updated ALMM list-I (for Solar PV Module) & List-II (for Solar PV Cells) shall only be used in the project. The PV modules must conform to the latest edition of any of the following IEC / equivalent BIS/ Equivalent IS Standards for PV module design qualification and type approval:

Crystalline Silicon Terrestrial PV Modules	:	IEC 61215 / IS14286
Thin Film Terrestrial PV Modules	:	IEC 61646
Concentrator PV Modules & Assemblies	:	IEC 62108

1.2 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

1.3 PV modules to be used in a highly corrosive atmosphere must qualify Salt Mist Corrosion Testing as per IEC 61701 / IS 61701.

1.4 IDENTIFICATION AND TRACEABILITY

Each PV module must use a RF Identification tag (RFID), which must contain the following information:

- (i) Name of the manufacturer of PV Module
- (ii) Name of the Manufacturer of Solar cells
- (iii) Month and year of the manufacture (separately for solar cells and module)
- (iv) Country of origin (separately for solar cells and module)
- (v) I-V curve for the module
- (vi) Peak Wattage, I_m , V_m and FF for the module
- (vii) Unique Serial No and Model No of the module
- (viii) Date and year of obtaining IEC PV module qualification certificate
- (ix) Name of the test lab issuing IEC certificate
- (x) Other relevant information on traceability of solar cells and module as per ISO

Test reports/ certificate from IEC/NABL accredited laboratory to be mandatorily enclosed with the Bid for relevant IEC/equivalent BIS Standard.

3. BATTERY

Lithium-Ferro-Phosphate (Li-Fe-Po4) Battery:

1. The Battery pack should be got tested as per IEC 62133-2012 or BIS latest standard from BIS recognized labs or MNRE accredited test center, (Certificate Enclosed). The cell capacity should be 3.2 volt, 10AH/ 50AH.

2. Capacity of the battery shall not be less than 12.8 V (nominal), 50 Ah at STC, 640 Watt Hour (4*50 AH= 200 AH, i.e. 2560 Watt Hour).
3. The battery cycle life should be 2000 cycle at 95% discharge.
4. BMS (Battery Management System) should be part of battery pack and battery pack enclosure should be as per standard. The battery pack should be integrated with the system in such way that it is theft proof and not removable from system. It should be installed with combination of module structure/luminaire. The height of battery pack will be approximate, 6.5 meters above the ground. The system must withstand wind velocity of 180 km/hr. The battery pack should be capable of high rate of heat dissipations. The battery box should be acid proof and corrosion resistant, hot dip galvanized metallic box (IP 65) with anti-theft locking arrangement.
5. The battery should operate between temperature range of 0 degree C to 55 degree C The other feature of the battery should be:

Sr. No.	Description	Specifications
1	Battery Configuration	12.8V- 200AH; LifePO4 (4*50AH)
2	Working Temperature Range (both for charging & discharging)	0-60 deg C
3	Storage Temperature Range	@ 0-25 Deg- 6 months
4	Cycle Life (Full charge to full discharge @ 25 deg C before capacity of battery falls below 75%)	more than 2000 Cycles
5	Battery Warranty	5 years
6	Capacity of Individual Cells	3.2V cell of 10 AH, 50AH
7	Type of Cell	Prismatic/Cylindrical
8	Nominal Capacity	12.8 volt - 50AH
9	Nominal Voltage	12.8V
10	Voltage Range	10.5V - 14.6V
11	Total Energy	640 WHr
12	Rated Charging current	20 Amps
13	Maximum Charging current	20 Amps
14	Maximum Discharging Current	10 Amps
15	Discharge Cut off Voltage	>10.5V
16	Over Charge Cut off Voltage	14.4V+/- 0.2V
17	Charging Time	Around 5 - 5.5 Hours

4. Light Source:

- i) The light source will be of white LED type The color temperature of white LEDs used in the system should be in the range of 5500-degree K – 6500-degree K. Use of LEDs which emits ultraviolet light will not be permitted. The temperature of heat sink should be not increase by more than 20 degree centigrade above ambient temperature during the dusk to dawn operation.
- ii) The illumination should be uniform without dark bands or abrupt variations, and soothing to the eye. Higher light output will be preferred. The light output from the white LED light

source should be almost constant. The lamps, DC-DC driver and battery management system (BMS) should be housed in aluminum die-casted casing suitable for outdoor use and shall comply with IP 65.

- iii) The lamps should be housed in an assembly suitable for outdoor use and shall comply with IP65. The LED housing should be made of pressure die cast aluminum having sufficient area for heat dissipation and heat resistant toughened clear glass/ high quality poly carbonate fitted with pressurized die cast aluminum frame with SS screws. The temperature of heat sink should not increase more than 30 degree C above ambient temperature even after 48 hrs. of continuous operation. This condition should be complied for the dusk to dawn operation of the lamps while battery operating at any voltage between the loads disconnect and charge regulation set point.
- iv) High power LED of minimum 1 watt each capacity capable to withstand maximum 1 amp driving current having lens angle greater than 120 degrees shall be used. The LED of reputed make having LM 80 and LM 79 test report shall only be used.
- v) The LED efficacy should be more than 140 lumen / watt @ 350 mA; the total luminaire efficacy should not be less than 125 lumens per watt. (Including all losses) i.e. the lumens output of each luminaire should not be less than 2250 lumens.
- vi) All LED in circuit must be connected in series only. It must incorporate fail short mechanism in all LEDs. The LEDs used in the luminaire should have life time more than 50,000 hrs.
- vii) The lumen depreciation of LED shall not be more than 30% even after 50,000 burning hours.
- viii) Power consumption of each LED Luminaire / Lighting unit shall not be more than 18 W (including LED Driver power loss).
- ix) The lux level over a 16 meter of radius should not be less than 5% at the point mentioned below in the lux level distribution chart. The chart is plotted for 6.5 meter high, with lamp bracket arm of 1 meter with 5 degrees. Grid spacing 1×1 meter. Maintenance factor 0.8. The average Lux should be min 6 lux and average/min = min 0.25

Other Parameters:

- LED DC current regulation – better than 3 %
 - Input – 12 V DC
 - Driver Type- DC-DC (as per IEC 62384)
 - CRI - 70 % Typical
 - Lighting quality- Free from glare and flickering and UV
 - Ambient temp– upto 50 deg
 - DC to DC convertor efficiency > =90 %
- x) The connecting wires used inside the luminaries, shall be low smoke halogen free, fire- retardant e-beam cable and fuse protection shall be provided at input side.
 - xi) Auto resettable reverse polarity protection shall be provided
 - xii) LED lighting unit shall comply to LM -79-08 Standards and copy of test certificate should be submitted.
 - xiii) The make, model number, country of origin and technical characteristics of white LEDs used in the lighting system must be furnished. The luminaries must have light distribution polar curve. The bidder should submit the polar curve of luminaries in LM 79 report.

6. ELECTRONICS

MPPT charge controller to maximize energy drawn from the Solar PV array. The MPPT charger shall be microcontroller based. The MPPT should have four stage charging facilities i.e. Bulk, Absorption, Float and Equalization. The auto equalization facilities for battery at every (30±2 days) and provision to verify it during testing should be incorporated. The PV charging efficiency shall not be less than 90% and shall be suitably designed to meet array capacity. The charge controller shall conform to IEC 62093, IEC 60068 as per specifications.

- i) MPPT Charge controller to maximize energy drawn from the solar PV array. The MPPT Charger should be microcontroller based. The charge controller should have:

Solar Charge Controller

Sr No.	Description	Specification
1	Charge controller Type	MPPT type -Maximum Power point Tracking EN 50530: Performance evaluation of maximum power point tracking (MPPT)
2	Charge controller Rating @ Related Voltage	10 Amps
3	Module Rating	110 Wp @ 16.4 volt ± 0.2 v, if MPPT is not used with positive tolerance
		36 Cell configuration
		Voc-> 21 Volts
		Vmp-16.4 volt ± 0.2 at STC without MPPT

- Protection against polarity reversal of PV array and battery, Over Current, Short Circuit, Deep Discharge, Input Surge Voltage; Blocking Diode protection against battery night time leakage through PV Module
- Electronics should operate 21 volt and 10 volt and its Euro efficiency should be at least 90 %.
- The system should have protection against battery overcharge and deep discharge conditions. The numerical values of the cut off limits of lower voltage should not be less than 11.2 Volt and over voltage cutoff should be 16.5 V
- Full protection against open circuit, accidental short circuit and reverse polarity should be provided
- Charge controller shall have automatic dusk-dawn circuit based on spv module as sensor for switching on/off the high mast light without manual intervention. The sensor must not get triggered by impulse lighting like lightning flashes and firecrackers.
- The self-consumption of the charge controller shall not be more than 20 mA at rated voltage and rated current.
- Adequate protection shall also be incorporated under no-load conditions (i.e. when the system is ON & the load (LED Lamp is removed)
- The system should be provided with 2 LED indicators: a green light to indicate charging

in progress and a red LED to indicate deep discharge condition of the battery. The green LED should glow only when the battery is actually being charged.

- All capacitors shall be rated for max. temp of 105° C.
 - Resistances shall preferably be made of metal film of adequate rating.
- ii) Device shall have adequate thermal margin should be at least 25 degrees below the allowable junction temperature while operating at an ambient temperature of 55 degree C and full load.
- Fiber glass epoxy of grade FR 4 or superior shall be used for PCB boards. Preferably the electronics (both charge controller and driver) should be housed in a separate box and installed on pole suitably in order to perform the repairing of electronics quickly without removing the whole luminaire.

Technical Requirement/Standards

Item / System	Applicable BIS /Equivalent IEC Standard Or MNRE Specifications	
	Standard Description	Standard Number
Solar PV Systems Charge Controller/MPPT Units and Protections	Crystalline Silicon Terrestrial PV Modules	IEC 61215 and 61730 part- 1 and part-2, IS14286 Test Certificates / Reports from IECQ / NABL accredited laboratory for relevant IEC / equivalent BIS standard. IECIEC 62093 Equivalent BIS Std.
Storage Batteries	General Requirements & Methods of Testing Tubular Lead Acid /Capacity Test Charge/Discharge Efficiency Self- Discharge	IS 1651/ IS 13369
Cables	General Test and Measuring Method PVC insulated cables for working voltage up to and including 1100 V UV resistant for outdoor installation	IEC 60189 IS 694/ IS 1554 IS/IEC 69947
Charge Controllers/ Luminaries		IP 65
LED	LED performance Luminary performance	LM -80-08 LM 79-08

1. MECHANICAL HARDWARE

- i) A galvanized metallic frame structure to be fixed on the pole to hold the SPV module(s). The frame structure should be fixed at 30 degree from horizontal facing true south.
- ii) The pole should be hot deep Galvanized Iron Octagonal pole in single length for 7.0 mtr. Height as per specification as under:
 - a) The Octagonal poles shall be Hot dip galvanized. The material of pole shall be as per specification of BS EN 100025, ISO 1461.
 - b) The size of the pole shall be min 75 mm at Top side, 150 mm at bottom side with thickness of 4 mm minimum.
 - c) The base plate of pole shall be of size 260 X 260 X 18 mm duly welded to pole.
 - d) Pole should have the arrangement at top for mounting of Solar panel of design capacity with mounting structure at an angle of latitude $\pm 2^{\circ}$ degree.
 - e) The four LED luminaire shall be mounted on this pole at height of 6.5 meter from pole bottom.
 - f) The pole shall be mounted on suitable RCC foundation at least 1.25 meter deep and 0.5 meter above ground with 4/6/8 bolt of min 20 mm size
 - g) The Nut -Bolts in battery box and panel structures should be proper riveted to ensure the theft.
 - h) The design and foundation details of the pole shall be got approved from UREDA before execution of work.

2. BATTERY BOX:

The battery box should be acid proof and corrosion resistant, hot dip galvanized metallic box (IP 65) with anti-theft locking arrangement. The size of box should be as per battery pack size The battery box is to be properly rest/mounted on pole approx. 6.5 meters of height from ground level. The edges of box should be turned properly to give smooth edge and good strength. Components and hardware shall be vandal and theft resistant. All parts shall be corrosion- resistant.

3. ELECTRIC CABLE

The electric cable used shall be twin core PVC insulated water and UV resistance copper cable of minimum size 1.5mm. Cable shall meet IS 1554 / 694 Part 1:1988 & shall be of 650 V/ 1.1 kV.

4. OTHER FEATURES

The contractor/ bidder will have to rectify the complaint to make/ restore the system to working position within 72 hours in the warrantee period of 5 years, failing which the system may be get rectified on contractor/ bidder cost and the cost will be recovered by contractor/ bidders pending claims what so ever and appropriate action as per noncompliance etc of agreement will be considered/taken.

5. INSTALLATION OF SYSTEM:

The system should be properly installed at site. The SPV module mounting structure along with telescopic octagonal pole should be properly grouted depending upon the location and requirement of the site. The grouting should be such that it should withstand the maximum wind speed /storm of 180 kmph. The pole should be rest on a suitable foundation. (RCC Foundation size 600 mm x600 mm x 1250 mm deep and 250 mm above the ground level. must have 4/6/8 nos. foundation bolts of 1200 mm & 20mm dia.) Adequate space should be provided behind the PV module/array for allowing un- obstructed air flow for passive cooling. Cables of appropriate size should be used to keep electrical losses to a bare minimum. Care should be taken to ensure that the battery is placed with appropriate levelling on a structurally sound surface. The control electronics should not be installed directly above the battery. All wiring should be in a proper conduit or capping case. Wire should not be hanging loose. Any minor items which are not specifically included in the scope of supply but required for proper installation and efficient operation of the SPV systems is to be provided by the manufacturer as per standards.

TECHNICAL BID

(As per technical specifications mentioned in the tender)

To be submitted with the Technical Bid

	Description	To be furnished by the Contractor/Bidder
A	Solar PV Module	
	Type of Module:	
	Manufacturer of cell	
	Manufacturer of Module	
	Max power at STC Pmax (W)	
	Voltage at Max power Vmp (V)	
	Current at Max power Imp(A)	
	Open circuit voltage Voc (V)	
	Short circuit current Isc (A)	
	Module efficiency	
	Cell efficiency	
	Fill factor	
B	Battery (Li-Fe-Po4)	
	Make of battery pack	
	Make of cell	
	Capacity of Battery	
	Capacity of each cell of battery	
	No of cell	
	Design Cycle Life of battery	
C	Electronics	
	Make	
	Charger Type	
	Operating voltage	
	Temperature compensated set points	
	Details of Indicators provided	
	Details of Protections provided:	
	i. Battery over charge set value	
	ii. Deep discharge set value	
	iii. Short circuit	
	iv. Open circuit	
	v. Reverse polarity	
	vi. Others	

D	LED Lighting Unit	
1	Make of Luminaire	
2	Power consumption of LED lighting unit	
3	No of LEDs	
4	Wattage of each LED	
5	Driver Consumption	
6	Make and origin of LED	
7	Lumens output	
8	LED DC Current Regulation	
9	Input Voltage	
10	Beam Angle	
11	CRI	
12	LED Efficacy	
13	Luminaire Efficiency	
14	Other features (IP)	
15	Average lux at work table.	
E	Module Mounting frame	
1	Material used	
2	Whether Protection against corrosion provided	
3	Angle of inclination to horizontal	
F	Battery housing	
1	Material	
2	Dimension	
3	Whether Protection against Corrosion provided	
4	locking arrangement	
G	Connecting cables/wire	
1	Materials and size	
2	Details of Switches (Nos.)	
	Any other Details	

REMOTE MONITORING SYSTEM (RMS)

Inbuilt remote monitoring facility should be available and it should record following System Parameters at a fixed time interval for system health analysis (time interval should be changeable from 15 minutes to 4 hours and will be intimated at the time of award of work as per the requirement). The detail regarding Remote Monitoring Systems is given below: -

- 1 Battery Parameters:
 - Battery Voltage (BV).
 - Battery Current (BI).
 - Battery Power (BP)
- 2 Solar PV Parameters:
 - Solar PV Voltage (SV)
 - Solar PV Current (SI)
 - Solar PV Power (SP)
- 3 Load Parameters:
 - Load Voltage (LV).
 - Load Current (LI)
 - Load Power (LP)
 - Load ON/OFF condition
- 4 System shut down due to fault (event fault should be recorded)
- 5 Site coordinates (Latitude and Longitude)
- 6 The remote monitoring can be done using any available communication mode like GSM/GPRS/SMS. The cost for the same should be borne by the successful bidder.
- 7 The contractor shall develop a portal for online monitoring of the Solar High Mast light systems & shall also provide access of the online Monitoring Portal to UREDA officials and also ensure integration of the portal with UREDA portal.

OPERATION AND MAINTENANCE MANUAL

An operation instruction and maintenance Manual, in English and Hindi language, should be provided with each Solar High Mast Lighting System. The following minimum details must be provided in the Manual:

- Basic principle of Photovoltaic.
- A small write-up (with a block diagram) on Solar High Mast Lighting System- its components, PV module, Battery, electronics and Luminaire and expected performance.
- Type, Model number, Voltage & capacity if the battery, used in the system.
- The make, model number, country of origin and technical characteristics (including IESNA LM-80 report) of W-LEDs used in the lighting system.
- About Charging and Significance of indicators.
- Clear instruction about erection of pole and mounting of PV module (s) and lamp housing assembly on the pole.
- Clear instructions on regular maintenance and troubleshooting of the Solar High Mast Lighting System.
- DO's and DON'T's
- Name and address of the contact person for repair and maintenance, in case of non- functionality of the Solar High Mast Lighting System.

QUALITY AND WARRANTY

1. The LED Solar High Mast lighting system (including the battery) will be warranted for a period of five (05) years from the date of supply/ installation whichever is later.
2. The PV module(s) will be warranted for a minimum period of 25 years from the date of supply. The PV modules must be warranted for their output peak watt capacity, which should not be less than 90% at the end of Ten (10) years and 80% at the end of Twenty-five (25) years. Warrantee certificate from the module manufacturer shall be provided in this regard.
3. The Warranty Card to be supplied with the system must contain the details of the system.
4. During the Warrantee/ Guarantee period, MNRE/UREDA / Users will have all the rights to cross check the performance of the Solar High Mast Lights. UREDA may carry out the frequent inspections of the Solar High Mast Lights erected and randomly pick up to get them tested at MNRE approved/NABL accredited any test center. If during such tests the Solar High Mast Lights or its any component is not found as per the specified technical parameters, UREDA will take the necessary action. The decision of UREDA in this regard will be final and binding on the contractor.
5. The mechanical structures, electrical components including battery and overall workmanship of the LED Solar High Mast Lighting Systems must be warranted for a minimum of 05 years from the date of commissioning and handing over of the system.
6. The Comprehensive Maintenance (within warranty period) shall be executed by the firm themselves or through the authorized dealer/ service center of the firm in the concerned district.
7. It is mandatory for the contractor/ bidder to open a service center in the concerned district for timely service of the system.
8. Necessary maintenance spares for five years trouble free operation shall also be supplied with the systems.
9. The contractor/ bidder shall be responsible to replace free of cost (including transportation and insurance expenses) to the purchaser whole or any part of supply which under normal and proper use become dysfunctional within 07 days of any such complaint by the purchaser/User.
10. The service personnel of the Successful Bidder will make routine annual maintenance. The maintenance shall include cleaning of solar panel, thorough testing & replacement of any damaged parts. Apart from this any complaint registered/ service calls received / faults notified should be attended to and the system should be repaired/ restored/ replaced within 07 days.
11. A separate Service & Maintenance passbook shall be maintained with each system. The deputed personnel shall be in a position to check and test all the components regularly, so that preventive actions, if any, could be taken well in advance to save any equipment from damage. Any abnormal behavior of any component shall be brought to the notice of UREDA for appropriate action.
12. Normal and preventive maintenance of the LED Solar High Mast Lighting systems such as cleaning of module surface, topping up of batteries (if required), tightening of all electrical connections, cleaning & greasing of battery terminals, also the duties of the deputed personnel during maintenance visits.
13. During operation and maintenance period of the LED Solar High Mast Lighting systems, if there is any loss or damage of any component due to mis management/mis handling or due to any other reasons pertaining to the deputed personnel, what-so-ever, the supplier shall be responsible for immediate replacement/rectification. The damaged component may be repaired or replaced by new component.

Traceability of the product to be supplied

In order to prevent the misuse of the product such as unauthorized sale or diversion to the open market, the following incorporation shall be made in the product.

- a) Engraving (or) Screen printing of UREDA/SHML-NRJY/2026-27 at a suitable place on the main

components viz., SPV Panel, Battery, Pole, LED Lighting Units to be used in the installation of the Solar High Mast lighting systems.

- b) The **unique system ID number** as provided by UREDA shall be painted with weather proof outdoor type paint, embossed or punched or permanently riveted on each pole of the system and it should be readable from ground level.

OTHER FEATURES

- (i) Only indigenously manufactured Solar High Mast Lights, which fully conform to the MNRE specifications, shall be procured. Fully imported Solar High Mast Lights shall not be procured, however use of imported components of PV system would be permitted, subject to adequate disclosure and compliance to specified quality norms and standard.
- (ii) Components and parts used in the Solar High Mast Lights should conform to the latest BIS specifications, wherever such specifications are available and applicable.
- (iii) Necessary lengths of wires/cables and fuses should be provided with the system.
- (iv) All the LED's use in luminary should have same characteristics.
- (v) I -V curve of each module technical details such as Voc, Isc, FF, cell efficiency and Pmax etc shall be supplied along-with each consignment and soft copy of the same should be sent to concerned distt offices of "UREDA" for records.
- (vi) The Contractor/ bidder shall continue to provide spare parts after the expiry of warranty period at the users cost. If the contractor / bidder fails to continue to supply, spare parts and services to users "UREDA" shall take appropriate action against the Contractor/ bidder.
- (vii) After successful supply/commissioning of the system and training, the system will be handed over to the concerned gram Pradhan/public representative/benefited group/organization.
- (viii) It shall be the sole responsibility of the contractor/ bidder to get verified the quality & quantity of the supplied material at the site of delivery.

List of BIS standards applicable for components of Solar PV Applications

Sl. No (1)	Product (2)	Indian Standard Number (3)	Title of Indian Standard (4)
1	Crystalline Silicon Terrestrial Photovoltaic (PV) modules (Si wafer based)	IS 14286	Crystalline Silicon Terrestrial Photovoltaic (PV) module - Design Qualification and Type Approval
2	Thin- Film Terrestrial Photovoltaic (PV) Modules (a-Si, CiGs and CdTe)	IS 16077	Thin- Film Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval
3	(PV) Modules (Si wafer and Thin based)	IS/ IEC 61730 (Part-1) IS/IE C 61730 (Part-2)	Photovoltaic (PV) modules Safety Qualification Part-1 Requirements for Construction Photovoltaic (PV) modules Safety Qualification Part-2 Requirements for Testing
4	Power converters for use in photovoltaic power system	IS 16221 (part-1) IS 16221 (Part-2)	Safety of Power converters for use in photovoltaic power system Part -1 General Requirements Safety of Power converters for use in photovoltaic power system Part -2 Particular Requirements for Inverters
5	Storage Batteries	IS 16270 IS 16046	Secondary Cells and Batteries for Solar Photovoltaic Application General- Requirement and Methods of test Standard for Lithium-ion Battery
	LED Lights & Luminaries	IS 16101 IS 16102 IS 16103 IS 16107	General Lighting - LEDs and LED modules- Terms and Definitions Self-Ballasted LED Lamps for General Lighting Services LED Modules for General Lighting Luminaries Performance

SECTION-9

SCOPE OF WORK

The scope of work shall include Supply, erection and Commissioning of LED based Solar High Mast Lights(RMS) at Various Locations/Padav's in Distt-Chamoli Uttarakhand with 05 years Warrantee & Comprehensive Annual Maintenance in accordance with the technical specifications and other terms and conditions of the contract.

1. SUPPLY, ERECTION, COMMISSIONING

- 1.1 The contractor shall have to supply Solar High Mast Lights (as per technical specifications, terms & conditions specified in the tender document) in various locations/Padav's of Nandarajjat Yatra in Distt-Chamoli Uttarakhand. Some of the Grams/villages may not be connected with road; hence contractors are advised to collect all necessary information regarding type of approach to the village, distance and mode of transportation etc; before submitting the tender.
- 1.2 Proper storage of Solar High Mast Light systems before erection shall be the responsibility of the contractor.
- 1.3 Proper erection of the Solar High Mast Lights shall be done by the contractor. The village/place wise details of the locations for erection of Solar High Mast Lights shall be provided by the UREDA.
- 1.4 After erection, the contractor shall receive a satisfactory erection, functionality and handover report from the concerned Gram Pradhan/Beneficiaries/User Agency, duly verified by concerned distt officer of UREDA and submit it to the UREDA Headquarter. The format for this report is enclosed at **Annexure II & Annexure III**.
- 1.5 The contractor will submit soft and hard copy of photographs (Geotagged) of the installed 12 W LED Solar High Mast lights (with latitude and longitude of the place of installation of system) along with handing over certificate.

2. WARRANTEE/ GUARANTEE & ANNUAL MAINTENANCE

- 2.1 The contractor shall submit monthly performance report of installed systems generated from RMS portal to concerned distt. office & head office of UREDA.
- 2.2 The Warrantee/ Guarantee & Annual Maintenance period for complete 12W Solar High Mast Light against any manufacturing/ design/ erection defects shall be minimum 05 years from the date of erection. After erection of systems must be submit Warrantee/ Guarantee Card to UREDA Office. The format for this report is enclosed at **Annexure-V**
- 2.3 The contractor shall provide a toll-free number/WhatsApp number to register the complaint for defect in the Solar High Mast light system and ensure provision that the complaint should get logged and an SMS/message of complaint registration number is sent to the complainant. This number should be mandatorily me written on the name plate of the Solar High Mast light system.

- 2.4 Rectification of all the defects developed in the 12W Solar High Mast Light during Warrantee/ Guarantee & Annual Maintenance period shall have to be done by the contractor promptly, at the most within 07 days from the date of receipt of compliant. This will include rectification /replacement of all the defective and consumable components/items including batteries, distilled water and Luminary/ lamps. All the arrangements for keeping all the Solar High Mast Lights functional shall be the sole responsibility of the contractor.
- 2.5 PV modules used in Solar High Mast Lights must be warranted by the contractor minimum period of 25 years from the date of erection. The PV modules must be warranted for their output peak watt capacity, which should not be less than 90% at the end of Ten (10) years and 80% at the end of Twenty-five (25) years. Warrantee certificate from the module manufacturer shall be provided in this regard.
- 2.6 Replacement of any component broken or lost due to theft or natural calamity shall not be the responsibility of the contractor. Any damaged or broken component due to negligence or fault of beneficiary or natural calamity shall be replaced at the user's cost. The safety and security of the Solar High Mast Lights shall be sole responsibility of the users.
- 2.7 All the non-functional parts/ materials/ items replaced during Warrantee/ Guarantee & Annual Maintenance period shall be the property of the contractor.
- 2.8 Vendors will mandatorily provide Annual Maintenance for a period of 5 years from the date of commissioning of the systems. Annual Maintenance will include submission of annual inspection report of the installation as per prescribed format **(Annexure-IV)**.
- 2.9 During Warrantee/ Guarantee & Annual Maintenance period, the contractor shall have to submit, annual, village/Place wise certificates regarding functionality of the erected Solar High Mast Lights to the concerned district Project Office of UREDA. Theses certificates shall be taken by the contractor from the concerned Gram Pradhan/Beneficiaries/user agency, from the date of erection of systems in the village/Place.
- 2.10 The tenderer shall ensure to timely submit the annual performance reports of the installed systems to the concerned district Office of UREDA.

3. **ESTABLISHMENT OF SERVICE CENTER**

- 3.1 After award of work, the **contractor will have to establish service centers in District Chamoli** for the timely maintenance of the Solar High Mast Lights. Consumable parts (charge controller, inverter, switches, fuse, LED for luminary etc. should be maintained at the service centers as spare parts for carrying out the proper maintenance of the Solar High Mast Lights. This shall be at least for 5% of the number of Solar High Mast Lights erected in the district.

- 3.2 Details of local person for overseeing the installed system shall have to be provided in the installation reports submitted by the contractor.
- 3.3 The list of the established service centers along with address and contact numbers, shall have to be submitted by the contractor to the UREDA along with the satisfactory erection and functionality report of the Solar High Mast Lights issued by Gram Pradhan/Beneficiaries/user agency.

DETAILS OF EXPERIENCE

Please fill in information about Solar PV High Mast Lights Systems installed in last Five financial years.

Details	Year 2021-22	Year 2022-23	Year 2023- 24	Year 2024-25	Year 2025-26
Solar High Mast lights (in Nos.)					
Total contract amount (in Rs.)					

(Signature of Tenderer)

Seal

NOTE: All above information and details must be mentioned by the tenderer. But without copies of work orders and work completion certificates/satisfactory performance certificates from the users, bid will not be considered. UREDA may cross check the authenticity of the above documents with the issuing authority.

योजना के अन्तर्गत एल0ई0डी0 आधारित सोलर स्ट्रीट लाईट संयंत्रों की स्थापना एवं हस्तान्तरण प्रमाण पत्र।

जनपद..... वि0ख0..... ग्राम पंचायत ग्राम/तोक

आपूर्ति/स्थापनाकर्ता फर्म-.....सोलर पैनल मेक-..... बैट्री मेक-.....

क्र0सं0	संयंत्र का स्थापना स्थल	संयंत्र की यूनिक ID	स्थल का Latitude	स्थल का Longitude	सोलर पैनल नम्बर 75 वाट	बैट्री नम्बर 12.8 वो0 30 ए.एच.	बी0ओ0एस0 न0 12 वाट LED	देखरेखकर्ता के हस्ताक्षर व मो0न0
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

नोट: उक्त सूची की सॉफ्ट कापी, जिसमें प्रत्येक संयंत्र की Geotag फोटो भी लगी हो, बिल प्रस्तुत किए जाने के साथ कार्यालय को उपलब्ध कराई जानी अनिवार्य होगी।

रखरखाव हेतु प्रशिक्षित व्यक्ति की नाम एवं मो0 नं0

प्रमाणित किया जाता है कि :-

- 1 उपरोक्तानुसार कुल सं0 सोलर स्ट्रीट लाईट की स्थापना दिनांक को पूर्ण कर ली गई है एवं समस्त लाईट सुचारु रूप से क्रियाशील हैं।
- 2 सभी लाईटों का ग्रामसभा के द्वारा हस्तान्तरण लिया गया है एवं इनका परिसम्पत्ति पंजिका में अंकल एवं सुरक्षा की जिम्मेदारी ग्राम पंचायत की होगी।
- 3 स्थापना के पांच वर्ष उपरान्त संयंत्रों का रखरखाव ग्राम पंचायत स्तर से कराया जायेगा।
- 4 लाईटों का संचालन एवं रखरखाव मैनुअल प्राप्त कर लिया गया है।

हस्ताक्षर ग्राम प्रधान /ग्राम पंचायत अधिकारी

हस्ताक्षर फर्म प्रतिनिधि

हस्ताक्षर उरेडा कार्मिक/अधिकारी

नाम :

नाम :

नाम :

मोहर:

मोहर:

पदनाम:

दिनांक:

दिनांक:

दिनांक:

मोबाईल नं0:

उरेडा के जनपदीय कार्मिक/अधिकारी की टिप्पणी

उपरोक्तानुसार सं0 सोलर हाई मास्ट लाईट की प्रविष्टि माप पुस्तिका सं0 के पृष्ठ सं0 पर दिनांक को कर ली गई है।

हस्ताक्षर उरेडा कार्मिक

हस्ताक्षर

नाम :

जनपदीय उरेडा अधिकारी

पदनाम :

मोहर :

दिनांक :

दिनांक :

योजना के अन्तर्गत एल0ई0डी0 आधारित सोलर हाई मास्ट लाईट संयंत्रों की वार्षिक परफारमेन्स एवं क्रियाशीलता प्रमाण पत्र।

- 01- ग्राम का नाम
- 02- विकासखण्ड जनपद
- 03- स्थापित संयंत्रों की संख्या
- 04- स्थापना की तिथि/माह स्थापना वर्ष.....
- 05- रखरखाव कार्य का वर्ष (प्रथम/द्वितीय/तृतीय/चतुर्थ/पंचम)

प्रमाणित किया जाता है कि उपरोक्तानुसार स्थापित कुल सं० सोलर हाई मास्ट लाईट वर्तमान में सुचारु रूप से क्रियाशील है तथा फर्मद्वारा सभी सोलर हाई मास्ट लाईट संयंत्रों का अनुबन्धानुसार वार्षिक नियमित रखरखाव का कार्य पूर्ण कर लिया गया है।

हस्ताक्षर ग्राम प्रधान /ग्राम पंचायत अधिकारी

हस्ताक्षर फर्म प्रतिनिधि

हस्ताक्षर उरेडा कार्मिक/अधिकारी

नाम :

नाम :

नाम :

मोहर:

मोहर:

पदनाम:

दिनांक:

दिनांक:

दिनांक:

मोबाईल नं०:

प्रतिहस्ताक्षरित

परियोजना अधिकारी,

उरेडा चमोली।

मोहर :

दिनांक :

FORMAT FOR WARRANTEE/ GUARANTEE CARD TO BE SUPPLIED WITH EACH SOLAR HIGH MAST LIGHT

1	Name & Address of the Manufacturer /Supplier	
2	Name & Address of the Purchasing Agency	
3	Date of Erection of system	
4.	<u>PV Module</u> a) Make b) Model c) Serial No d) Wattage under STC e) Warrantee/ Guarantee valid up to	
5	<u>Battery</u> a) Make b) Model c) Batch / Serial No d) Rated V & AH capacity at C/10 e) Warrantee/ Guarantee valid up to	
6	<u>Electronics & Luminary</u> a) Make b) Model c) Serial No d) Warrantee/ Guarantee valid up to	
7	<u>Other B.O.S.</u> Make & No.	
8	Designation & Address of the person to be contacted for claiming Warrantee/ Guarantee obligations	

Place:

(Signature)

Date:

Name

Designation

Name & Address of the Manufacturer

(SEAL)

SECTION-10

FINANCIAL BID

TENDER NO. – 02/UREDA/CH/SHML(NRJY)/26-27

Name of Work : Supply, erection and Commissioning of LED based Solar High Mast Lights(RMS) at Various Locations/Padav's in Distt-Chamoli Uttarakhand with 05 years Warrantee & Comprehensive Annual Maintenance

Financial Bid must be submitted in online mode with the help of BOQ File only.