



Basic Details

| | | | |
|---|---------------------|--|--------------------|
| Organisation Chain | ANERT | | |
| Tender Reference Number | ANERT-ALP/1/2024-DE | | |
| Tender ID | 2024_ANERT_658351_1 | Withdrawal Allowed | Yes |
| Tender Type | Open Tender | Form of contract | Supply and Service |
| Tender Category | Works | No. of Covers | 1 |
| General Technical Evaluation Allowed | No | ItemWise Technical Evaluation Allowed | No |
| Payment Mode | Online | Is Multi Currency Allowed For BOQ | No |
| Is Multi Currency Allowed For Fee | No | Allow Two Stage Bidding | No |

Payment Instruments

| Online Bankers | S.No | Bank Name |
|----------------|------|-----------|
| | 1 | SBI MOPS |

Cover Details, No. Of Covers - 1

| Cover No | Cover | Document Type | Description |
|----------|-------------------------------|---------------|---------------|
| 1 | Fee/PreQual/Technical/Finance | .pdf | Technical Bid |
| | | .xls | Financial Bid |

Tender Fee Details, [Total Fee in ₹ * - 750]

| | | | |
|-------------------------------------|-----|-----------------------|-----|
| Tender Fee in ₹ | 750 | | |
| Fee Payable To | Nil | Fee Payable At | Nil |
| Tender Fee Exemption Allowed | Yes | | |

EMD Fee Details

| | | | |
|------------------------|-------|------------------------------|-----|
| EMD Amount in ₹ | 7,824 | EMD Exemption Allowed | Yes |
| EMD Fee Type | fixed | EMD Percentage | NA |
| EMD Payable To | Nil | EMD Payable At | Nil |

Work / Item(s)

| | | | | | |
|---|---|----------------------------------|---------------------|------------------------------|--------|
| Title | Installation of 5 Nos of Solar LED Street Lighting Systems in the premises of GHSS Mannancherry, in Alappuzha District. | | | | |
| Work Description | Installation of 5 Nos of Solar LED Street Lighting Systems in the premises of GHSS Mannancherry, in Alappuzha District. | | | | |
| Pre Qualification Details | Please refer Tender documents. | | | | |
| Independent External Monitor/Remarks | NA | | | | |
| Tender Value in ₹ | NA | Product Category | Solar Street Lights | Sub category | NA |
| Contract Type | Tender | Bid Validity(Days) | 45 | Period Of Work(Days) | 30 |
| Location | GHSS Mannancherry, in Alappuzha District. | Pincode | 688538 | Pre Bid Meeting Place | NA |
| Pre Bid Meeting Address | NA | Pre Bid Meeting Date | NA | Bid Opening Place | Online |
| Should Allow NDA Tender | No | Allow Preferential Bidder | No | | |

Critical Dates

| | | | |
|--|----------------------|--|----------------------|
| Publish Date | 13-Feb-2024 06:15 PM | Bid Opening Date | 19-Feb-2024 04:00 PM |
| Document Download / Sale Start Date | 13-Feb-2024 06:15 PM | Document Download / Sale End Date | 19-Feb-2024 03:00 PM |
| Clarification Start Date | NA | Clarification End Date | NA |
| Bid Submission Start Date | 13-Feb-2024 06:15 PM | Bid Submission End Date | 19-Feb-2024 03:00 PM |

Tender Documents

| NIT Document | S.No | Document Name | Description | Document Size (in KB) |
|---------------------|-------------|----------------------|--------------------|------------------------------|
| | 1 | Tendernotice_1.pdf | NIT and Abstract | 169.68 |

| Work Item Documents | S.No | Document Type | Document Name | Description | Document Size (in KB) |
|----------------------------|-------------|----------------------|----------------------|--------------------|------------------------------|
| | 1 | Tender Documents | MannacherrySLS.pdf | Tender Document | 467.38 |
| | 2 | BOQ | BOQ_1017844.xls | Financial Bid | 315.00 |

Tender Inviting Authority

| | |
|----------------|---|
| Name | CEO ANERT |
| Address | Office of CEO, ANERT Law College Road, Vikas Bhavan. PO, Thiruvananthapuram - 695 033 |

Tender Document for the Installation of 5 Nos: of Solar LED Street Lighting Systems in the Premises of GHSS Mannancherry in Alappuzha District.

E- TENDER DOCUMENT

Notification No: ANERT – ALP/1/2024- DE (ALP)

Dated: 13-02-2024

Date of Publishing of Bids : 13-02-2024

Last Date of Submission of Bids: 21-02-2024

PART-I



Agency for New and Renewable Energy Research & Technology

Vikas Bhavan. P.O, Thiruvananthapuram – 695 033, Kerala

Phone: (91-471) 2334122, 2334124, 2331803(office), 2329854 Fax: (91-471)2329853

Web: <http://www.anert.gov.in>

email: ceo@anert.in

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I.A – e Tender Notice

Notification No: ANERT-ALP/1/2024-DE (ALP)

Dated: 01-02-2024

As part of Alappuzha District Panchayath Annual Plan 2019-20, it is proposed to install 5 Nos (3 Nos of Model D and 2 Nos of Model E) of Solar Street Lighting Systems in the premises of Govt HSS Mannancherry. Model D consists of 6m mast, 25 W, 3700 lumen LED Luminaire, 100Wp Solar PV Module, 538 Wh Lithium Ferro Phosphate Battery etc. and Model E consists of 6m mast, 35 W, 5200 lumen LED Luminaire, 120Wp Solar PV Module, 768 Wh Lithium Ferro Phosphate Battery etc.

Thiruvananthapuram
13-02-2024

Chief Executive Officer

I.B – Abstract

| | |
|--|---|
| Notification No. | Notification No. ANERT-ALP/1/2024-DE (ALP) Dated : 01-02-2024 |
| Superscription | Tender Document for Installation of 5 Nos of Solar LED Street Lighting Systems in the premises of GHSS Mannancherry, in Alappuzha District. |
| Date of release of Tender Invitation | 13-02-2024 |
| Last date of submission by the agencies | 15:00 noon, 19 th February2024 |
| Date and time of opening of bids | 16.00 pm, 19 th February 2024 |
| Cost of Tender Form | Rs.750/- (Including GST) |
| EMD Amount | Rs.7,824/- |
| Availability of Tender form for submission | Tender form to be downloaded from the website http://www.etenders.kerala.gov.in |
| Place of opening of tender | Office of CEO, ANERT, PMG-Law College Road, Vikas Bhavan .P.O, Thiruvananthapuram - 695033, Kerala |

Thiruvananthapuram

Chief Executive Officer

13-02-2024

I.C - General Terms and Conditions for e-Procurement

This e-Tender is being published for The Installation of 5 Nos of Solar LED Street Lighting Systems in the premises of GHSS Mannancherry, in Alappuzha District. The tender is invited in single cover system through e-procurement portal of Government of Kerala (www.etenders.kerala.gov.in). Prospective bidders willing to participate in this tender shall be an empanelled agency approved by ANERT for the installation of Solar Street Lighting / Flood Lighting Systems during the year 2024 and shall necessarily register themselves with above mentioned e-procurement portal.

The tender timeline is available in the critical date section of this tender published in www.etenders.kerala.gov.in

I.C.1 ONLINE BIDDER REGISTRATION PROCESS

1.1 Bidders should have a Class III or above Digital Signature Certificate (DSC) to be procured from any Registration Authorities (RA) under the Certifying Agency of India. Details of RAs will be available on www.cca.gov.in. Once, the DSC is obtained, bidders have to register on www.etenders.kerala.gov.in website for participating in this tender. Website registration is a one-time process without any registration fees. However, bidders have to procure DSC at their own cost.

1.2 Bidders may contact e-Procurement support desk of Kerala State IT Mission over telephone at 0471- 2577088, 2577188, 2577388 or 0484 – 2336006, 2332262 through email: helpetender@gmail.com/etendershelp@kerala.gov.in for assistance in this regard

I.C.2 ONLINE TENDER PROCESS

The tender process shall consist of the following stages:

- i. Downloading of tender document: Tender document will be available for free download on www.etenders.kerala.gov.in. However, tender document fees shall be payable at the time of bid submission as stipulated in this tender document.
- ii. Pre-bid meeting: (not applicable)
- iii. Publishing of Corrigendum: All corrigenda shall be published on www.etenders.kerala.gov.in and shall not be available elsewhere.
- iv. Bid submission: Bidders have to submit their bids along with supporting documents to support their eligibility, as required in this tender document on www.etenders.kerala.gov.in. No manual submission of bid is allowed and manual bids shall not be accepted under any circumstances in response to the e tender notification before the last date of receipt of bids.

- v. In case bidder encounters any technical issues pertaining to e-Procurement system while acting on the tender, computer screen shot of the error message with date & time stamp on the web-browser along with the query shall be e-mailed by the bidder to the help desk (**helpetender@gmail.com/ etendershelp@kerala.gov.in**), for resolution of the problem. At the same time, problem must be intimated to the concerned Tender Inviting Authority via email.
- vi. The time taken to ascertain, evaluate and suggest a solution for the problem reported by bidder may vary from case to case. Hence bidders are advised to submit the bid **at least 2 working days before the due date** and time of bid submission to avoid any last-minute issues that may come up.
- vii. Opening of Bid and Bidder short-listing: The single cover bids will be opened, evaluated and shortlisted as per the eligibility. Failure to submit the required documents online will attract disqualification. Price bids of the eligible bidder's will open the same day of opening and the work will be awarded.
- viii. ANERT doesn't take any responsibility for any technical snag or failure that has taken place during document upload

I.C.3 Cost of Tender Form and EMD amount

1. The Bidder shall pay tender form cost of Rs.750/- (Inclusive of GST) and EMD of Rs.7,824/- for participating in the Tender for the Installation of Solar LED Street Lighting Systems.
2. Online Payment modes: The tender document fees can be paid in through e-Payment facility provided by the e-Procurement system. Bidders can make payment only via Internet banking facility

State Bank of India Multi Option Payment System (SBI MOPS Gateway): Bidders are required to avail Internet Banking Facility in any of below banks for making tender remittances in eProcurement System.

| A) Internet Banking Options (Retail) | | | |
|---|----------------|----|--------------------------|
| 1 | Allahabad Bank | 32 | Kotak Mahindra Bank |
| 2 | Axis Bank | 33 | Lakshmi Vilas Bank |
| 3 | Andhra Bank | 34 | Mehsana Urban Co-op Bank |
| 4 | Bandan Bank | 35 | NKGSB Co-operative Bank |

| | | | |
|--|------------------------------------|----|---|
| 5 | Bank of Bahrain and Kuwait | 36 | Oriental Bank of Commerce |
| 6 | Bank of Baroda | 37 | Punjab and Maharashtra Cooperative Bank |
| 7 | Bank of India | 38 | Punjab National Bank |
| 8 | Bank of Maharashtra | 39 | Punjab and Sind Bank |
| 9 | Bassein Catholic Co-operative Bank | 40 | RBL Bank |
| 10 | BNP Paribas | 41 | Saraswat Cooperative Bank |
| 11 | Canara Bank | 42 | ShamraoVithal Cooperative Bank |
| 12 | Catholic Syrian Bank | 43 | South Indian Bank |
| 13 | Central Bank of India | 44 | Standard Chartered Bank |
| 14 | City Union Bank | 45 | State Bank of India |
| 15 | Corporation Bank | 46 | Syndicate Bank |
| 16 | Cosmos Bank | 47 | Tamilnad Mercantile Bank |
| 17 | DCB Bank | 48 | Tamilnadu Cooperative Bank |
| 18 | Dena Bank | 49 | The Kalyan Janata Sahakari Bank |
| 19 | Deutsche Bank | 50 | TJSB Bank |
| 20 | Dhanalaxmi Bank | 51 | UCO Bank |
| 21 | Federal Bank | 52 | Union Bank of India |
| 22 | HDFC Bank | 53 | United Bank of India |
| 23 | ICICI Bank | 54 | Vijaya Bank |
| 24 | IDBI Bank | 55 | YES Bank |
| 25 | Indian Bank | | |
| 26 | Indian Overseas Bank | | |
| 27 | IndusInd Bank | | |
| 28 | Jammu & Kashmir Bank | | |
| 29 | JanataSahakari Bank | | |
| 30 | Karnataka Bank | | |
| 31 | Karur Vysya Bank | | |
| B) Internet Banking Options (Corporate) | | | |
| 1 | Bank of Baroda | 21 | Laxmi Vilas Bank |
| 2 | Bank of India | 22 | Oriental Bank of Commerce |
| 3 | Bank of Maharashtra | 23 | Punjab & Maharashtra Coop Bank |
| 4 | BNP Paribas | 24 | Punjab & Sind Bank |
| 5 | Canara Bank | 25 | Punjab National Bank |

| | | | |
|----|-------------------------|----|-----------------------------------|
| 6 | Catholic Syrian Bank | 26 | RBL Bank |
| 7 | City Union Bank | 27 | ShamraoViththal Co-operative Bank |
| 8 | Corporation Bank | 28 | South Indian Bank |
| 9 | Cosmos Bank | 29 | State Bank of India |
| 10 | Deutsche Bank | 30 | Syndicate Bank |
| 11 | Development Credit Bank | 31 | UCO Bank |
| 12 | Dhanalaxmi Bank | 32 | Union Bank of India |
| 13 | Federal Bank | 33 | UPPCL |
| 14 | HDFC Bank | 34 | Vijaya Bank |
| 15 | ICICI Bank | 35 | Axis Bank |
| 16 | Indian Overseas Bank | | |
| 17 | JantaSahakari Bank | | |
| 18 | Jammu & Kashmir Bank | | |
| 19 | Karur Vysya Bank | | |
| 20 | Kotak Bank | | |

During the online bid submission process, bidder shall select **SBI MOPS** option and submit the page, to view the **Terms and Conditions** page. On further submitting the same, the e-Procurement system will re-direct the bidder to MOPS Gateway, where two options namely **SBI** and **Other Banks*** will be shown. Here, Bidder may proceed as per below:

- a) **SBI Account Holders** shall click **SBI** option to with its Net Banking Facility., where bidder can enter their internet banking credentials and transfer the Tender Fee and EMD amount.
- b) **Other Bank Account Holders** may click **Other Banks** option to view the bank selection page. Here, bidders can select from any of the 54 Banks to proceed with its Net Banking Facility, for remitting tender payments.

**Transaction Charges for Other Banks vide SBI Letter No. LHO/TVM/AC/2016-17/47 – 1% of transaction value subject to a minimum of Rs. 50/- and maximum of Rs.150/-*

** Bidders who are using Other Banks option under SBI MOPS Payment Gateway are advised by SBI to make online payment 72 hours in advance before tender closing time.*

I.C.4 SUBMISSION PROCESS

1. For submission of bids, all interested bidders have to register online as explained above in this document. After registration, bidders shall submit their Tender online on www.etenders.kerala.gov.in along with online payment of the registration fee.

2. For page-by-page instructions on bid submission process, please visit www.etenders.kerala.gov.in and click “Bidders Manual Kit” link on the home page.
3. It is necessary to click on “Freeze bid” link/ icon to complete the process of bid submission otherwise the bid will not get submitted online and the same shall not be available for viewing/ opening during bid opening process.

I.C.5 VALIDITY OF TENDER OFFER

1. The Tender offer will be valid for a period of 6 months from the last date of submission of tender.
2. Further, ANERT may extend the validity of the Bids without altering the general and technical criteria of Bid for further periods, if so required

I.C.6 DEVIATIONS

1. The offers of the bidders with Deviations of the Tender Document are liable for rejection.

I.C.7 BLACK LIST

1. All the intending bidders shall agree that in the event of the documents furnished with the offer being found to be bogus or the documents contain false particulars, they shall be black listed for future tenders/ association with ANERT and registration fee paid shall be forfeited against any losses incurred by ANERT

I.C.8 BIDDER’S LOCATION

1. The bidders are requested to furnish the exact location of their factories/godownwith detailed postal address and pin code, telephone and fax nos. etc. in their tenders to arrange inspection by ANERT, if considered necessary.
2. All communication shall be made to the registered email of the bidder in the e-tendering systems and ANERT shall not be responsible for non-receipt or delay of any such communication.

I.C.9 CONFLICT OF INTEREST

- i. The registered vendors are required to provide professional, objective, and impartial services, at all times holding ANERT’s interests paramount, strictly avoiding conflicts with other assignments or its own corporate interests, and acting without any consideration for future work. The supplier has an obligation to disclose to

ANERT any situation of actual or potential conflict that impacts its capacity to serve the best interest of ANERT. Failure to disclose such situations may lead to the disqualification of the supplier or the termination of its Contract and/or sanctions by the Government.

- ii. Relationship with the ANERT staff: a service Provider (including its subsidiaries /partners) that has a close business or family relationship with a professional staff of the ANERT who are directly or indirectly involved in any part of the preparation of the Terms of Reference for the assignment, the selection process for the Contract, or the supervision of the Contract, may not be awarded a Contract, unless the conflict stemming from this relationship has been resolved in a manner acceptable to ANERT throughout the selection process and the execution of the Contract. Any other types of conflicting relationships as indicated in the document

I.C.10 CONFIDENTIALITY

- i. From the time the proposals are opened to the time the Contract is awarded, the agency (ies) should not contact any of the officials of ANERT on any matter related to its Technical and/or Financial Proposal. Information relating to the evaluation of Proposals and award recommendations shall not be disclosed to the agency (ies) who submitted the Proposals or to any other party not officially concerned with the process, until the publication of the Contract award information.
- ii. Any attempt by the agency (ies) or anyone on behalf of the Suppliers to influence improperly ANERT in the evaluation of the Proposals or Contract award decisions may result in the rejection of its Proposal and may be subject to the application of prevailing Government sanctions procedures.
- iii. Notwithstanding the above provisions, from the time of the Proposals“ opening to the time of Contract award publication, if an agency (ies) intends to contact ANERT on any matter related to the selection process, it should do so only in writing.
- iv. Proposals must be direct, concise, and complete. ANERT will evaluate bidder’s proposal based on its clarity and the directness of its response to the requirements of the project as outlined in this document. Bidders shall furnish the required information on their technical and financial proposals in the enclosed formats only. Any deviations in format or if the proper information is not provided properly, the bidder will be liable for rejection. The Evaluation committee may seek clarification, if required, while evaluating the proposal.

I.C.11 APPLICABLE LAW

The work order shall be governed by the laws and procedures established by Government of Kerala, within the frame work of applicable legislation and enactment made from time to time concerning such commercial dealings. Any default in the terms and conditions of the document by the service provider will lead to rejection of work order.

I.C.12 AMENDMENT OF TENDER DOCUMENT

At any time prior to the deadline for submission of the bid, ANERT may for any reason, modify the document. The amendment document/ corrigendum shall be notified through the website www.anert.gov.in and such amendments shall be binding on all the bidders.

I.C.13 GOVERNMENT OF KERALA – CORRUPT AND FRAUDULENT PRACTICES

ANERT follows the policy of the Government of Kerala for anti-corruption and fraudulent practices to maintain sound procurement principles of open competition, economy and efficiency, transparency, and fairness. The selected service provider shall permit the representative of ANERT to inspect the accounts, records and other documents relating to the submission of the proposal and execution of the contract, in case of award of the contract work.

I.D. BID QUALIFICATION AND ELIGIBILITY REQUIREMENTS

1. Prospective bidders willing to participate in this tender shall be an empanelled agency approved by ANERT for the installation of Solar Street Lighting / Flood Lighting Systems during the year 2024
2. **Annexure A** on letter head of the bidder firm, an agreement on Rs.200/- Kerala stamp paper as per the format given in **Annexure B** and **Annexure C** must be submitted along with Tender document.
3. The bidders should quote their allowable rate of price inclusive of expenses related to transportation, handling, supply, installation and commissioning and inclusive of applicable taxes.
4. The uploaded bid document shall necessarily contain the scanned copies of the whole tender document signed and stamped by the authorized signatory of the bidder for the acceptance of all the tender conditions. No relaxation or change in the tender conditions will be allowed.
5. The technical specifications of this particular tender will supersede the technical conditions for empanelment 2024
6. Since the work is of urgent nature owing to impending elections lowest bidder L1 has to submit at least 50 % of the materials at sites within two weeks of issue of the work order, failing which second lowest bidder L2 will be given opportunity, provided he is agreeing to match the rate and supply materials with similar conditions.

I.E Conditions of Contract

I.E.1 GENERAL CONDITIONS

1. The bids should be as per the prescribed form which should be downloaded from the website www.etenders.kerala.gov.in. Bids that are not in the prescribed form are liable to be rejected. Bids subject to conditions will not be considered. They are liable to be rejected on that sole ground.
2. The listed OEM / Distributor should be prepared to guarantee satisfactory performance for a period of guarantee under a definite penalty. Communication of acceptance of the bid normally constitutes a concluded contract. Nevertheless, the successful bidder shall also execute an agreement for the due fulfillment of the contract within the period to be specified in the Registration order to be issued. The contractor shall have to pay all stamp duty, Lawyer's charges and other expenses incidental to the execution of the agreement. Failure to execute the agreement within the period specified will entail the penalties set out below:
3. A non-refundable licensing fee of 2.5% has to be remitted by tenderer for all the works undertaken by them on behalf of ANERT. This will be deducted from the payment during release of payment. The successful tenderer shall before sign the agreement and within the period specified in the letter of acceptance of his tender, deposit a sum equivalent to 3% of the value of the contract as security for the satisfactory fulfillment of the contract less the amount of money deposited by him along with his tender. The amount of security may be deposited in the manner prescribed to be specified in the work order issued by ANERT.
4. There will be no exemption for MSEs in depositing this security amount. If the successful tenderer fails to deposit the security and execute the agreement as stated above, the EMD deposited by the bidder will be forfeited to ANERT and contract arranged elsewhere at the defaulter's risk and any loss incurred by ANERT on account of the purchase will be recovered from the defaulter who will however not be entitled to any gain accruing thereby.
5. In cases where a successful tenderer, after having made partial supplies fails to fulfil the contracts in full, all or any of the materials not supplied may at the discretion of the Purchasing Officer be purchased by means of another tender/quotation or by negotiation or from the next higher tenderer who had offered to supply already, and the loss if any caused to ANERT shall thereby together with such sums as may be fixed by ANERT towards damages be recovered from the defaulting tenderer.
6. If the contractor fails to deliver all or any of the stores or perform the service within the time/period(s) specified in the contract, the purchaser shall without prejudice to its other remedies under the contract, deduct from the contract prices, as liquidated damages, a sum equivalent to 0.5 % of the delivered price of the delayed stores or unperformed services for each week of delay until actual delivery or performance, up to a maximum deduction of 10% of the contract price of the delayed stores and services. Once the maximum is reached, the purchaser may consider termination of the contract at the risk and cost of the contractor.

7. The Security deposit shall, subject to the conditions specified herein be returned to the contractor within three months after the expiration of the contract but in the event of any dispute arising between ANERT and the contractor, ANERT shall be entitled to deduct out of the deposits or the balance thereof, until such dispute is determined the amount of such damages, costs, charges and expenses as may be claimed. The same may also be deducted from any other sum which may be due at any time from ANERT to the contractor. In all cases where there are guarantee for the goods supplied, the security deposit will be released only after the expiry of the guarantee period.
8. All payments to the contractors will be made by ANERT/concerned in due course as mentioned in this document.
9. All incidental expenses incurred by ANERT for making payments outside the State in which the claim arises shall be borne by the contractor.
10. Payments will be made only after the supply, installation and commissioning of the items and certification by the competent technical personnel of ANERT.
11. The contractor shall not assign or make over the contract on the benefits or burdens thereof to any other person or body corporate. The contractor shall not underlet or sublet to any person or persons or body corporate the execution of the contract or any part thereof without the consent in writing of the purchasing officer who shall have absolute power to refuse such consent or to rescind such consent (if given) at any time if he is not satisfied with the manner in which the contract is being executed and no allowance or compensation shall be made to the contractor or the subcontractor upon such rescission. Provided always that if such consent given at any time, the contractor shall not be relieved from any obligation, duty or responsibility under this contract.
12. In case the contractor becomes insolvent or goes into liquidation, or makes or proposes to make any assignment for the benefit of his creditors or proposes any composition with his creditors for the settlement of his debts, carries on his business or the contract under inspection or behalf of or his creditors or in case any receiving order(s) for the administration of his estate are made against him or in case the contractor shall commit any act of insolvency or in case in which under any clause or clauses any act of insolvency or in case in which under any clause(s) of this contract the contractor shall have rendered himself liable to damages amounting to the whole of his security deposits, the contract shall, thereupon, after notice given by the Purchasing Officer to the contractor, be determined and ANERT may complete the contract in such time and manner and by such persons as ANERT shall think fit. But such determination of the contract shall be without any prejudice to any right or remedy of ANERT against the contractor or his sureties in respect of any breach of contract committed by the contractor. All expenses and damages caused to ANERT by any breach of contract by the contractor shall be paid by the contractor to ANERT and may be recovered from him under the provisions of the Revenue Recovery Act in force in the State.
13. In case the contractor fails to supply and deliver any of the said articles and things within the time provided for delivery of the same, or in case the contractor commits any breach of any of the covenants, stipulations and agreements herein contained, and on his part to be

observed and performed, then and in any such case, it shall be lawful for ANERT (if they shall think fit to do so) to arrange for the purchase of the said articles and things from elsewhere or on behalf of ANERT by an order in writing under the hand of the CEO put an end to this contract and in case ANERT shall have incurred sustained or been put to any costs, damages or expenses by reason of such purchase or by reason of this contract having been so put an end to or in case any difference in price, compensation, loss, costs, damages, expenses or other moneys shall then or any time during the continuance of this contract be payable by the contractor to ANERT under and by virtue of this contract, it shall be lawful for ANERT from and out of any moneys for the time being payable or owing to the contractor from ANERT under or by virtue of this contract or otherwise to pay and reimburse to ANERT all such costs, damages and expenses they may have sustained, incurred or been put to by reason of the purchase made elsewhere or by reason of this contract having been so put an end to as aforesaid and also all such difference in price, compensation, loss, costs, damages, expenses and other moneys as shall for the time being payable by the contractor aforesaid.

14. Any sum of money due and payable to the contractor (including security deposit returnable to him) under this contract may be appropriated by the CEO or any other person authorised by ANERT and set off against any claim of ANERT for the payment of a sum of money arising out of or under any other contract made by the contractor with ANERT or any other person authorised by ANERT. Any sum of money due and payable to the successful tenderer or contractor from ANERT shall be adjusted against any sum of money due to ANERT from him under any other contracts.
15. Every notice hereby required or authorised to be given may be either given to the contractor personally or left at his residence or last known place of abode or business, or may be handed over to his agent personally, or may be addressed to the contractor by post at his usual or last known place of abode or business and if so addressed and posted, shall be deemed to have been served on the contractor on the date on which in the ordinary course of post, a letter so addressed and posted would reach his place of abode or business.
16. **Conditions in the technical document and technical specifications of this document would override these general conditions, wherever applicable.**
17. ANERT, by notice sent to the Supplier, may terminate the contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for ANERT's convenience, the extent to which performance of the Supplier under the contract is terminated, and the date upon which such termination becomes effective.
18. In case any difference or dispute arises in connection with the contract, all legal proceedings relating to the matter shall be instituted in the Court within whose jurisdiction the CEO, ANERT voluntarily resides.
19. The courts situated at the place where the headquarters of ANERT is situated viz, Thiruvananthapuram alone will have jurisdiction to entertain civil suits and all other legal pertaining to this contract.

20. I.F TECHNICAL SPECIFICATIONS FOR SOLAR LED FLOOD LIGHTING SYSTEMS

1. The system installed should conform to the minimum technical requirements by ANERT as indicated below.
2. The approved make and model number of components enlisted in the Empanelment during 2024 for the installation of Solar Street Lighting / Flood Lighting Systems with additional features specified in this e tender should be used for the work.
3. The commencement of the work should be intimated to the District Authority of ANERT and the work should be done under constant supervision of the representative of the Alappuzha District Office of ANERT.

I.F.1 White LED Based Solar Street Lighting Systems

A stand- alone solar photovoltaic street lighting system is an outdoor lighting unit used for illuminating a street or an open area. A solar street lighting system consists of a PV Module, control electronics, storage battery, W-LED based Luminaire, inter connecting cables and module mounting pole including hardware and battery box. The luminaire is based on White Light Emitting Diode (W-LED), a solid state device which emits light when electric current passes through it. The luminaire is mounted on the pole/ mast at a suitable angle to maximize illumination on the ground. The PV module is placed at the top of the pole facing South direction at an inclination of 10 degree from horizontal. The system should be installed at a place where direct sunlight falls on the PV modules without any hindrance. There should not be any shadows falling on the PV modules during day time. The battery placed inside the battery box is charged by electricity generated by the PV module during day time and the luminaire provides light from dusk to dawn. The system lights at dusk and switches off at dawn automatically. During the dusk to dawn operation, the brightness of the LED will be reduced by 50% for 4 hours for saving power from 12 mid night to 4 am (Timing subject to site specific conditions)

The LED based solar street lighting systems should be with the following minimum rated parameters.

1. Solar Street Lighting System Model D (Non integrated with 50% dimming for 4 hours)

| | |
|--|--|
| LED Luminaire | 25 W, 3700 lumen |
| Solar Module (Poly/Mono Crystalline Silicon) | 100 Wp |
| Battery (Lithium Ferro Phosphate) | 538 Wh |
| G.I Pole | Height -6m above ground level, Dia - 10 cm |
| Autonomy of operation | 24 hours |

The housing of the luminaire should be of pressure diecast aluminium with 500 hours salt spray tested finish and the transparent cover should be of poly carbonate. 6 metre hot dip galvanized pole with dia. 10 cm made of 3mm sheet thickness, base plate of size not less than 220 x220x16mm, single arm bracket, foundation bolts and all accessories included. Foundation casting should be with M25 grade concrete in 500x500mm and 800mm under soil and 200 mm above ground level along with required reinforcement as required.

2. Solar Street Lighting System Model E (Non integrated with 50% dimming for 5 hours)

| | |
|--|--|
| LED Luminaire | 35W, 5200 lumen |
| Solar Module (Poly/Mono Crystalline Silicon) | 120Wp |
| Battery (Lithium Ferro Phosphate) | 768 Wh |
| G.I Pole | Height -6m above ground level, Dia - 10 cm |
| Autonomy of operation | 24 hours |

The housing of the luminaire should be of pressure diecast aluminium with 500 hours salt spray tested finish and the transparent cover should be of poly carbonate. 6 metre hot dip galvanized pole with dia. 10 cm made of 3mm sheet thickness, base plate of size not less than 220 x220x16mm, single arm bracket, foundation bolts and all accessories included. Foundation casting should be with M25 grade concrete in 500x500mm and 1000mm under soil and 200 mm above ground level along with required reinforcement as required.

I.F.2 BROAD PERFORMANCE PARAMETERS

| | |
|------------------------|--|
| LED | White Light Emitting Diode (W-LED) with minimum luminous efficacy of 160 lumen/watt |
| Luminaire | Minimum luminaire efficacy should be 150 lumen/watt |
| Colour Temperature | White colour (colour temperature 5000°-6500°K), the illumination should be uniform without dark bands or abrupt variations and soothing to the eye. Higher light output will be preferred. |
| Electronics Efficiency | Min 90% total. |
| Duty cycle | Dusk to dawn with 50% dimming for 12 midnight and 4 am. |
| Make of LED | NICHIA/ CREE/ OSRAM/ PHILIPS or equivalent |
| Charge Controller | MPPT |

I.F.3 DUTY CYCLE

The W-LED solar street lighting system should be designed to operate from dusk to dawn, under average daily insolation of 5.0 kWh /sq.m on a horizontal surface.

I.F.4 LUMINAIRE

The light source will be of white LED type. The colour temperature of white LED used in the system should be in the range of 5000°K–6500°K. Use of LEDs which emits ultraviolet light is not permitted.

The light output from the white LED light source should be constant throughout the duty cycle. Proper lens to be provided for the LED for effective lumen spread.

The lamps should be housed in an assembly suitable for outdoor use. It should be made of pressure die cast aluminium. The temperature of heat sink should not increase more than 20°C above ambient temperature during the dusk to dawn operation.

The make, model number, country of origin and technical characteristics (**including LM-80, LM-79 report**) of white LEDs/LED Luminaire used in the lighting system must be furnished. The enclosure of luminaire should be with **IP66** protection.

I.F.5 BATTERY

Lithium Ferro Phosphate Battery.

Battery should conform to the latest BIS/International standards (IEC 62133).

- Battery should have minimum 5 year warranty.
- The battery should be fixed at a minimum height of 3 metre from ground level on the pole in a battery box with IP66 protection.

I.F.6 PV MODULE

- The PV module(s) should be indigenously manufactured and contain crystalline silicon cells (Poly-crystalline or Mono-crystalline). It is required to have certificates for the supplied PV module as per IEC 61215, IEC 61730 and IEC 61701 specifications or equivalent BIS specifications.
- The power output of the PV module must be reported under standard test conditions (STC) at 16.4 volt load voltage. I-V curve of the sample module should be submitted.
- The open circuit voltage of the PV modules under STC should be at least 21.0 volt.
- The PV module efficiency should be above 14 %.
- The terminal box on the module should have a provision for opening for replacing the cable, if required.
- Each PV module should be provided with RF identification tag. The following information must be mentioned in the RFID used on each module (This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions.)
 - a) Name of the Manufacturer or distinctive Logo
 - b) Model or Type No.
 - c) Serial No.

d) Year of make

I.F.7 ELECTRONICS, INCLUDING PROTECTIONS

- The total electronic efficiency should be at least 90%.
- Electronics should operate at 24V/36V/48V and should have temperature compensation for proper charging of the battery throughout the year.
- The light output should remain constant with variations in the battery voltages.
- The system should have protection against battery overcharge and deep discharge conditions.
- Fuse should be provided to protect against short circuit conditions.
- A blocking diode should be provided as part of the electronics, to prevent reverse flow of current through the PV module(s). In case such a diode is not provided with the PV module, full protection against open circuit, accidental short circuit and reverse polarity should be provided.
- The charge controller should be incorporate with MPPT. Programmable facility should be incorporated for regulating dimming of the luminaire.
- Adequate protection to be provided against battery reverse polarity
- Adequate protection is to be incorporated under No Load conditions.
- Load reconnect should be provided at 60% of the battery capacity status.
- Necessary lengths of wires / cables and appropriate fuses should be provided.

I.F.8 MECHANICAL COMPONENTS AND INSTALLATION

Aluminum frame structure, with anodizing to be fixed on the pole to hold the SPV module. The frame structure should be inclined at an angle of 10 degree from the horizontal to mount the PV module. The luminaire should be fixed to the pole on aluminium arm. The Aluminum arm for holding the luminaire should have suitable length and should be set at a suitable angle to maximize lux of desired level over the specified area.

A vented ABS/Alluminium box (IP66 protection) with suitable structure is to be fixed on the pole for housing the storage battery with locking arrangement facility.

All mechanical metallic parts shall be of aluminium/ stainless steel of suitable thickness to withstand loads including wind loads and should have good aesthetic appearance. All external parts should be Aluminium/Stainless Steel and should be replaced during the warranty period in case of any defects. All nuts and bolts used should be of stainless steel.

The foundation of the mast should be of M25 grade concrete 750mm x 750mm x 1500mm below ground level and 200 mm above ground level. PCC of 100mm thickness shall be done after earth compacting, 12 mm and 8 mm dia reinforcement also to be used.

The mast should be of G.I. Height of the mast should be 8 metre with minimum 210 mm size at bottom and 90 mm size at top. The foundation base plate should be of size 350mmx 350mm x 25 mm fixed above ground level. The minimum thickness of the G.I shaft shall be 4 mm. The system shall include ring arm bracket for mounting luminaires, bracket for mounting PV modules and battery box.

I.F.9 INDICATORS

- The system should have two indicators, green and red.
- The green indicator should indicate the charging under progress and should glow only when the charging is taking place. It should stop glowing when the battery is fully charged.
- Red indicator should indicate the battery “Load Cut Off” condition

I.F.10 OTHER FEATURES

1. A plaque in Marble or Granite carrying the inscription “MPLADS 2023-24” indicating the name of work, cost involved, the commencement, completion and inauguration dates and the name of the MP, implementing agency sponsoring the project should be permanently erected.
2. There will be a Name Plate (12” X 6”) on the pole(2 m above ground level), which should be displayed with the following details
 - a) Name of the supplier.
 - b) Phone number of service centres.
 - c) Date of installation.
 - d) Name of Implementing Agency.

Quality stickers with post number will have to be provided on the pole.

I.F.11 QUALITY AND WARRANTY

Components and parts used in White LED solar street lighting systems should conform to the latest BIS/ International specifications, wherever such specifications are available and applicable. A copy of the test report/ certificate stating conformity of BIS/ International standards must be submitted.

White LED solar street lighting system including the battery will be warranted for a period of 5 years from the date of commissioning.

The PV module used should be warranted for its output peak watt capacity, which should not be less than 90% at the end of 10 (ten) years.

I.F.12 DOCUMENTATION

An Operation, Instruction and Maintenance Manual, in English and Malayalam, should be provided with the solar street lighting system. Besides other information the Manual should contain the following minimum details:

- a) About Photo Voltaics. A small write up (with a block diagram) on PV Module, electronics, lamps and battery.
- b) About White LED solar street lighting system - its components and expected performance The make, model number, country of origin and technical characteristics of W-LEDs should be stated in the product data sheet
- c) Clear instructions about mounting of pole, grouting details, fixing of PV module, battery and luminaire, clear wiring instructions with line diagram
- d) About significance of indicators
- e) DO's and DONT's
- f) Clear instructions on regular maintenance and trouble shooting of the system
- g) Name and address of the person or service centre to be contacted in case of failure or complaint.

ANNEXURE A
Format for Covering Letter

(On the official letter head of the Bidder signed by authorised signatory)

Sir,

I/We hereby offer e-tender to supply, under annexed terms and conditions of contract, the whole of the articles referred to and described in the attached specification and quantity decided by the Agency for New and Renewable Energy Research and Technology (ANERT), at the rates quoted for the Installation of 5 Nos of Solar LED Street Lighting Systems in the premises of GHSS Mannancherry, in Alappuzha District.

The work allotted to me/us will be completed within the time frame as per the work order from ANERT.

I am/we are remitting herewith the required amount of Rs. 7,824/- as EMD by electronic payment vide transaction No.dt:.....

Yours faithfully,

Place:

Signature:

Date:

Name:

Designation:

(Office Seal)

(This letter is to be submitted on the official letter head of the Agency, signed by the authorised signatory.)

Annexure B - Undertaking by the Agency

(In Kerala stamp paper worth Rs. 200/- (Rupees two hundred only))

I (Name, Designation) authorised signatory of
..... (Name and full address of the EPC contractor /Public sector undertaking) hereby undertake that

1. The solar devices supplied/installed in various Govt. departments in Kerala shall be as per technical specification stipulated by ANERT/ MNRE. The wiring and installation shall be done as per the recommended installation practices and by using components as per the prescribed Technical Specifications.
2. All the Solar Devices supplied and installed should be given warranty for 5 years.
3. Solar modules will have warranty of 90% of rated output at the end of 10 years.
5. The rates quoted include transportation, handling, installation and commissioning charges.
6. At least one service centre will be maintained in Palakkad or adjacent districts. Details of service centers provided are true and correct.
7. **No alteration in the downloaded document is made. If any alterations are detected at any stage, my offer is liable to be rejected.**
8. All the components of solar devices supplied should be approved by ANERT before installation.
9. All the above terms and conditions are acceptable to me/us.

Date:

Signature of the authorised signatory:

Name:

Designation:

(Office Seal)

Annexure C –Declaration by the Bidder

E-Tender Notification No:, dtd
..... for The Installation of 5 Nos of Solar LED Street Lighting Systems in the
premises of GHSS Mannancherry, in Alappuzha District.
To

The CEO

ANERT

We, the undersigned, declare that:

1. We have examined and have no reservations to the Bidding Document, including Addenda No.: (if any)
2. We offer to supply in conformity with the Bidding Document and in accordance with the delivery schedule
3. Our Bid shall be valid for a period of 6 months from the date fixed as deadline for the submission of tenders in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
4. If our Bid is accepted, we commit to submit a Security Deposit in the amount of 3 percent of the Contract Price;
5. We are not participating, as Bidders, in more than one Bid in this bidding process;
6. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed.
7. We declare that our firm is not currently black listed by MNRE or any other State Govt. agencies.

Signature

Date

Name

Seal

Tender Document for the Installation of 5 Nos: of Solar LED Street Lighting Systems in the Premises of GHSS Mannancherry in Alappuzha District.

PRICE SCHEDULE

Notification No: ANERT – ALP/1/2024- DE (ALP)
Dated: 13-02-2024

PART-II

| | |
|--|---|
| Submitted by (Name and address of bidder) | : |
|--|---|



Agency for New and Renewable Energy Research and Technology

Vikas Bhavan (PO), Thiruvananthapuram – 695 033, Kerala
Phone: (91-471) 2334122, 2334124, 2331803(office), 2329854 Fax: (91-471)2329853

Web: <http://www.anert.gov.in> **email:** ceo@anert.in

II- Price Schedule

B2- Price Schedule for supply, installation and commissioning of 5 Nos of Solar Street Lighting Systems (3 Nos of Model D and 2 Nos of Model E).

1. Name of the Agency :

2. Address in Full :

| Model | Quantity | Rating of Luminaire | Capacity of Module | Price for 5 Nos (all-inclusive in Rupees) | |
|----------------|--------------|---------------------|--------------------|---|----------|
| | | | | In digits | In words |
| Model D | 3 Nos | 3700 lm | 100W | | |
| Model E | 2 Nos | 5200 lm | 120W | | |

The price quoted by the bidder for each configuration shall be inclusive of cost of pre-installation survey report, transportation, handling, supply and commissioning and cost of insurance, taxes if any and including warranty etc.

Date:

Signature of the authorised signatory:

Name:

Designation:

(Office Seal)