



**Kerala  
Tenders**

## eTendering System Government of Kerala

### Tender Details

Date : 29-Apr-2024 05:14 PM

Print

#### Basic Details

<b>Organisation Chain</b>	ANERT		
<b>Tender Reference Number</b>	ANERT-EKM/5/2024-DE(EKM)		
<b>Tender ID</b>	2024_ANERT_672164_1	<b>Withdrawal Allowed</b>	Yes
<b>Tender Type</b>	Open Tender	<b>Form of contract</b>	EPC Contract
<b>Tender Category</b>	Works	<b>No. of Covers</b>	1
<b>General Technical Evaluation Allowed</b>	No	<b>ItemWise Technical Evaluation Allowed</b>	No
<b>Payment Mode</b>	Online	<b>Is Multi Currency Allowed For BOQ</b>	No
<b>Is Multi Currency Allowed For Fee</b>	No	<b>Allow Two Stage Bidding</b>	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 ₹ \* - 590]

<b>Tender Fee in ₹</b>	590		
<b>Fee Payable To</b>	Nil	<b>Fee Payable At</b>	Nil
<b>Tender Fee Exemption Allowed</b>	Yes		

#### EMD Fee Details

<b>EMD Amount in ₹</b>	3,409	<b>EMD Exemption Allowed</b>	Yes
<b>EMD Fee Type</b>	fixed	<b>EMD Percentage</b>	NA
<b>EMD Payable To</b>	Nil	<b>EMD Payable At</b>	Nil

#### Work / Item(s)

<b>Title</b>	Supply, Installation and Commissioning of 3 Nos. of (14W-Model-A) Solar Street Lighting Systems at Locations of Vengoor Grama Panchayath, Ernakulam				
<b>Work Description</b>	Supply, Installation and Commissioning of 3 Nos. of (14W-Model-A) Solar Street Lighting Systems at Locations of Vengoor Grama Panchayath, Ernakulam				
<b>Pre Qualification Details</b>	Please refer Tender documents.				
<b>Independent External Monitor/Remarks</b>	NA				
<b>Tender Value in ₹</b>	NA	<b>Product Category</b>	Solar Street Lights	<b>Sub category</b>	NA
<b>Contract Type</b>	Tender	<b>Bid Validity(Days)</b>	45	<b>Period Of Work(Days)</b>	30
<b>Location</b>	Vengoor Grama Panchayath, Ernakulam	<b>Pincode</b>	683546	<b>Pre Bid Meeting Place</b>	NA
<b>Pre Bid Meeting Address</b>	NA	<b>Pre Bid Meeting Date</b>	NA	<b>Bid Opening Place</b>	Online
<b>Should Allow NDA Tender</b>	No	<b>Allow Preferential Bidder</b>	No		

#### Critical Dates

<b>Publish Date</b>	27-Apr-2024 06:00 PM	<b>Bid Opening Date</b>	10-May-2024 03:00 PM
<b>Document Download / Sale Start Date</b>	27-Apr-2024 06:00 PM	<b>Document Download / Sale End Date</b>	10-May-2024 02:00 PM
<b>Clarification Start Date</b>	NA	<b>Clarification End Date</b>	NA
<b>Bid Submission Start Date</b>	27-Apr-2024 06:00 PM	<b>Bid Submission End Date</b>	10-May-2024 02:00 PM

#### Tender Documents

<b>NIT Document</b>	<b>S.No</b>	<b>Document Name</b>	<b>Description</b>	<b>Document Size (in KB)</b>
	1	Tendernotice_1.pdf	NIT and Abstract	277.70

  

<b>Work Item Documents</b>	<b>S.No</b>	<b>Document Type</b>	<b>Document Name</b>	<b>Description</b>	<b>Document Size (in KB)</b>
	1	Tender Documents	TD.pdf	Tender Document	552.30
	2	BOQ	BOQ_1045713.xls	Financial Bid	347.00

**Tender Inviting Authority**

<b>Name</b>	CEO ANERT
<b>Address</b>	Office of CEO, ANERT Law College Road, Vikas Bhavan. PO, Thiruvananthapuram - 695 033



**AGENCY FOR NEW & RENEWABLE ENERGY  
RESEARCH AND TECHNOLOGY (ANERT)**

Department of Power, Government of Kerala  
Thiruvananthapuram, Kerala – 695 033;  
[www.anert.gov.in](http://www.anert.gov.in) , [projects@anert.in](mailto:projects@anert.in)

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## **E-TENDER DOCUMENT**

***Supply, Installation & Commissioning of 3 Nos. of  
(14W/Model-A) Solar Street Lighting Systems at  
Locations of Vengoor Grama Panchayath,  
Ernakulam***

**Ref. No.: ANERT-EKM/5/2024-DE (EKM)**

### **PART 1 – GENERAL CONDITIONS**

**Date of Publishing of Bids                    :-    27/04/2024**

**Last Date of Submission of Bids           :-    10/05/2024**

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## E-TENDER NOTICE

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Competitive e-tenders in one cover system with Price Bid in accordance with the ANERT approved technical specifications are invited from ANERT registered vendors for the ***Supply, Installation & Commissioning of 3 Nos. of (14W/Model-A) Solar Street Lighting Systems at Locations of Vengoor Grama Panchayath, Ernakulam*** The e-tender documents can be downloaded from the e-tendering website of Govt. of Kerala. Tender form will not be available in any other form.

Thiruvananthapuram

Chief Executive Officer

27/04/2024

## TENDER ABSTRACT

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Ref. No.	<b>ANERT-EKM/5/2024-DE(EKM)</b>
Name of Work	<b>Supply, Installation &amp; Commissioning of 3 Nos. of (14W/Model-A) Solar Street Lighting Systems at Locations of Vengoor Grama Panchayath, Ernakulam</b>
Cost of Tender Form	<b>Rs. 590/- (incl 18% GST)</b>
EMD Amount	<b>Rs. 3,409/-</b>
Download of Tender Form	<a href="http://www.etenders.kerala.gov.in">http://www.etenders.kerala.gov.in</a>
Last date of submission of Tender	06/05/2024 @ 03.00 PM
Date and Time of opening the Tender	06/05/2024@ 04.00PM
Availability of Tender Forms	Tender form to be downloaded from the website <a href="http://www.etenders.kerala.gov.in">http://www.etenders.kerala.gov.in</a>
Place of opening of tender	Office of CEO, ANERT Law College Road, Vikas Bhavan. PO, Thiruvananthapuram - 695 033, Kerala

Thiruvananthapuram

27/04/2024

Chief Executive Officer

## GENERAL TERMS AND CONDITIONS FOR E-PROCUREMENT

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This e-Tender is being published for the Supply, Installation & Commissioning of 3 Nos. of (14W/Model-A) Solar Street Lighting Systems at Locations of Vengoor Grama Panchayath, Ernakulam. The tender is invited in single cover system through e-procurement portal of Government of Kerala ([www.etenders.kerala.gov.in](http://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 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](http://www.etenders.kerala.gov.in)

### 1. ONLINE BIDDER REGISTRATION PROCESS:

- i. 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](http://www.cca.gov.in). Once, the DSC is obtained, bidders have to register on [www.etenders.kerala.gov.in](http://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.
- ii. 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](mailto:helpetender@gmail.com)/[etendershelp@kerala.gov.in](mailto:etendershelp@kerala.gov.in) for assistance in this regard

### 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](http://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](http://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](http://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.

### **3. COST OF TENDER FORM AND EARNEST MONEY DEPOSIT (EMD)**

- a. The Bidder shall pay, a tender form fee of Rs. 590/- and Earnest Money Deposit or Bid Security of Rs. 3,409/- for participating in the Tender for the Installation of Solar LED Street Lighting Systems. The Bid security is required to protect the purchaser against risk of Bidder's conduct, which would warrant the forfeiture of security.



- b. 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.

<b>A) Internet Banking Options (Retail)</b>			
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	Janata Sahakari Bank		

30	Karnataka Bank		
31	Karur Vysya Bank		
<b>B) Internet Banking Options (Corporate)</b>			
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	Janta Sahakari 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.*

#### **4. SUBMISSION PROCESS:**

- i. For submission of bids, all interested bidders have to register online as explained above in this document. After registration, bidders shall submit their Technical bid and Financial bid online on [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in) along with online payment of tender document fees and EMD.
- ii. For page-by-page instructions on bid submission process, please visit [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in) and click “Bidders Manual Kit” link on the home page.
- iii. 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.

#### **5. VALIDITY**

- i. The tender offer shall be valid for a period of 6 months from the last date of Submission of tender.
- ii. Further, ANERT may extend the validity of the Bids without altering the general and technical criteria of Bid for further periods, if so required

#### **6. DEVIATIONS**

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

#### **7. BLACK LIST**

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 blacklisted for future tenders/ association with ANERT and registration fee paid shall be forfeited against any losses incurred by ANERT

## **8. BIDDER'S LOCATION**

- i. The bidders are requested to furnish the exact location of their factories/godown with detailed postal address and pin code, telephone and fax nos. etc. in their tenders to arrange inspection by ANERT, if considered necessary
- ii. 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.

## **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 this document, 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 Tender document.

## **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 agency (ies) intends to contact ANERT on any matter related to the selection process, it should do so only in writing.
- iv. The Bids should be submitted only through the e-tender portal [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in). Agency (ies) shall upload all the necessary documents in the e tender portal before the last date & time for online submission. Proposal received after the submission deadline will be treated as non-responsive and will be excluded from further evaluation process.
- v. 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 tender 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 tender will be liable for rejection. Tender Evaluation committee may seek clarification, if required, while evaluating the proposal.
- vi. The technical bid opening date, time and the address are as stated in the tender document. The Financial Proposal shall remain securely stored online till the technical evaluation is completed and the results intimated to all successful bidders

## **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.

## **12. AMENDMENT OF TENDER DOCUMENT**

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

## **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.

## BID QUALIFICATION AND ELIGIBILITY REQUIREMENTS

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### 14. BID QUALIFICATION AND ELIGIBILITY REQUIREMENTS

- i. 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.
- ii. **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.
- iii. 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.
- iv. 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.

## CONDITIONS OF CONTRACT

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### 15. GENERAL CONDITIONS

- i. The bids should be as per the prescribed form which should be downloaded from the website [www.etenders.kerala.gov.in](http://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.
- ii. 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 fulfilment 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:
- iii. 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 fulfilment 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.
- iv. 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.



- v. 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.
- vi. 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.
- vii. 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.
- viii. All payments to the contractors will be made by ANERT/concerned in due course as mentioned in this document.
- ix. All incidental incurred by ANERT for making payments outside the State in which the claim arises shall be borne by the contractor.
- x. Payments will be made only after the supply, Installation and Commissioning of the items and certification by the competent technical personnel of ANERT.

- xi. 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, that if such consent be given at any time, the contractor shall not be relieved from any obligation, duty or responsibility under this contract.
- xii. 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.
- xiii. In case the contractor fails to supply and deliver any of the said articles and things or the works 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 of 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.

- xiv. 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.
- xv. 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.
- xvi. **Conditions in the technical document, technical specifications of this tender document would override these general conditions, wherever applicable.**
- xvii. 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.

- xviii. 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.
- xix. 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.

## **16. TECHNICAL SPECIFICATIONS FOR SOLAR STREET LIGHTING SYSTEMS**

- The system installed should conform to the minimum technical requirements by ANERT as indicated below.
- The approved make and model number of components enlisted in the Empanelment during 2024 for the installation of Solar Street Lighting Systems with additional features specified in this tender should be used for the work.
- 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 respective District Office of ANERT

### **a. 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, interconnecting 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 daytime. The battery placed inside the battery box is charged by electricity generated by the PV module during daytime 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.

## Solar Street Lighting System Model - A (Non-integrated without dimming)

LED Luminaire	: 14 W, 2100 lumen
Solar PV Module (Poly/Mono Crystalline Silicon)	: 60 Wp
Battery (Lithium Ferro Phosphate)	: 384 Wh
G.I Pole Height -5m above ground level	: Dia -10 cm
Autonomy of operation	: 24 hours

5 metre hot dip galvanized pole with dia. 10 cm made of 3mm sheet thickness, base plate of size not less than 200 x 200 x 12mm, single arm bracket, foundation bolts and all accessories included. Foundation casting should be with M25 grade concrete in 500 x 500mm and 800mm under soil and 200 mm above ground level along with required reinforcement as required.

### b. 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 during 12 midnight and 4 am.
Make of LED	<b>NICHIA/ CREE/ OSRAM/ PHILIPS or equivalent</b>
Charge Controller	<b>MPPT</b>

### c. 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.

### d. 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.

#### **e. 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.

#### **f. 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

#### **g. ELECTRONICS INCLUDING PROTECTION.**

- 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.

#### **h. 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/Aluminium 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 500mm x 500mm x 800mm 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. and Height of the mast should be 5 metre with dia 10cm. The foundation base plate should be of size 200mm x 200mm x 12 mm fixed above ground level. The minimum thickness of the G.I shaft shall be 3 mm. The system shall include ring arm bracket for mounting luminaires, bracket for mounting PV modules and battery box.

#### **i. 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

#### **j. OTHER FEATURES**

- 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.

## **k. QUALITY AND WARRANTY**

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

## **l. 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 troubleshooting 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**

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(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 Supply, Installation & Commissioning of 3 Nos. of (14W/Model-A) Solar Street Lighting Systems at Locations of Vengoor Grama Panchayath, Ernakulam

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. 3,409/- 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

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(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 District or adjacent districts. Details of service centres 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

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E-Tender Notification No: ....., dtd .....  
for Supply, Installation & Commissioning of 3 Nos. of (14W/Model-A) Solar Street  
Lighting Systems at Locations of Vengoor Grama Panchayath, Ernakulam

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 :