eTendering System Government of Kerala

Tender Details

Date : 15-Nov-2023 11:00 AM

Print

Basic Details

Organisation Chain	ANERT		
Tender Reference Number	ANERT-TECH/233/2022-T6		
Tender ID	2023_ANERT_622062_1	**Withdrawal Allowed**	Yes
Tender Type	Open Tender	**Form of contract**	Supply and Service
Tender Category	Works	**No. of Covers**	2
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

	S.No	Bank Name
Online Bankers	1	SBI MOPS

Cover Details, No. Of Covers - 2

Cover No	Cover	Document Type	Description
1	Fee/PreQual/Technical	.pdf	PQ Document
		.pdf	Technical bid
2	Finance	.xls	Financial Bid
		.pdf	Financial Bid

Tender Fee Details, [Total Fee in ₹ * - 2,950]

Tender Fee in ₹	2,950		
Fee Payable To	Nil	**Fee Payable At**	Nil
Tender Fee Exemption Allowed	Yes		

EMD Fee Details

EMD Amount in ₹	50,000	**EMD through BG/ST or EMD Exemption Allowed**	Yes
EMD Fee Type	fixed	**EMD Percentage**	NA
EMD Payable To	Nil	**EMD Payable At**	Nil

Work /Item(s)

Title	Design, Supply, Installation, Testing, Commissioning and Maintenance of Public Electric Vehicle Charging Station for devotees during the festive season on ad-hoc basis at Nilakkal Parking Ground, Sabarimala, Kerala				
Work Description	Design, Supply, Installation, Testing, Commissioning and Maintenance of Public Electric Vehicle Charging Station for devotees during the festive season on ad-hoc basis				
Pre Qualification Details	Please refer Tender documents.				
Independent External Monitor/Remarks	NA				
Tender Value in ₹	NA	**Product Category**	Electrical Works	**Sub category**	NA
Contract Type	Tender	**Bid Validity(Days)**	60	**Period Of Work(Days)**	30
Location	Nilakkal Parking Ground, Sabarimala, Kerala	**Pincode**	689662	**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	14-Nov-2023 06:00 PM	**Bid Opening Date**	20-Nov-2023 03:30 PM
Document Download / Sale Start Date	14-Nov-2023 06:00 PM	**Document Download / Sale End Date**	20-Nov-2023 03:00 PM
Clarification Start Date	NA	**Clarification End Date**	NA
Bid Submission Start Date	14-Nov-2023 06:00 PM	**Bid Submission End Date**	20-Nov-2023 03:00 PM

Tender Documents

NIT Document

S.No	Document Name	Description	Document Size (in KB)
1	Tendernotice_1.pdf	NIT and Abstract	292.96

Work Item Documents

S.No	Document Type	Document Name	Description	Document Size (in KB)
1	Tender Documents	EVCS.pdf	Tender Document	948.29
2	BOQ	BOQ_936238.xls	Financial Bid	342.50

Tender Inviting Authority

Name	CEO ANERT
Address	Office of CEO, ANERT Law College Road, Vikas Bhavan. PO, Thiruvananthapuram - 695033

AGENCY FOR NEW & RENEWABLE ENERGY RESEARCH AND TECHNOLOGY (ANERT)
Department of Power, Government of Kerala
Thiruvananthapuram, Kerala – 695 033;
www.anert.gov.in , projects@anert.in

E-TENDER DOCUMENT

Design, Supply, Installation, Testing, Commissioning and Maintenance of Public Electric Vehicle Charging Station for devotees during the festive season on ad-hoc basis at Nilakkal Parking Ground, Sabarimala, Kerala

Ref. No.: ANERT-TECH/233/2022-T6

PART – 1: GENERAL CONDITIONS

Date of Publishing of Bids : - 14/11/2023

Last Date of Submission of Bids : - 20/11/2023

CONTENTS

E-TENDER NOTICE

Competitive e-tenders in two cover system with Earnest Money Deposit (EMD) and Price Bid in accordance with the ANERT approved technical specifications are invited from reputed Manufacturers/System Integrators with relevant experience for the ***Design, Supply, Installation, Testing, Commissioning and Maintenance of Public Electric Vehicle Charging Station for devotees during the festive season on ad-hoc basis at Nilakkal Parking Ground, Sabarimala, Kerala***. 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 CEO

14/11/2023

TENDER ABSTRACT

Ref. No.	**ANERT-TECH/233/2022-T6**
Name of Work	**Design, Supply, Installation, Testing, Commissioning and Maintenance of Public Electric Vehicle Charging Station for devotees during the festive season on ad-hoc basis at Nilakkal Parking Ground, Sabarimala, Kerala**
Download of Tender Form	http://www.etenders.kerala.gov.in
Last date of submission of Tender	20/11/2023 @ 3.00 PM
Date and Time of opening the Tender	20/11/2023 @ 3.30 PM
Cost of Tender form	**Rs. 2,950/- (Including GST)**
EMD	**Rs. 50,000/- (Refundable)**
Warranty period	5 years from the date of Commissioning the system.
Availability of Tender Forms	Website http://www.etenders.kerala.gov.in
Place of opening of tender	Office of CEO, ANERT Law College Road, Vikas Bhavan. PO, Thiruvananthapuram - 695 033, Kerala

Thiruvananthapuram
14/11/2023

Sd/-
CEO

GENERAL TERMS AND CONDITIONS FOR E-PROCUREMENT

This e-Tender is being published for the Design, Supply, Installation, Testing, Commissioning and Maintenance of Public Electric Vehicle Charging Station for devotees during the festive season on ad-hoc basis at Nilakkal Parking Ground, Sabarimala, Kerala. The tender is invited in two cover system through e-procurement portal of Government of Kerala (www.etenders.kerala.gov.in). Prospective bidders willing to participate in this tender 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

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

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.

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.

3. DOCUMENTS COMPRISING BID:

3.1 (a) The First Stage - Part-I Pre- Qualification cum Technical Bid with Commercial terms without Price Bid

Technical proposal shall contain the scanned copies of the following documents which every bidder has to upload:

Envelop -1 shall contain, Part-I (this document in PDF form)/scanned copies of:

i. Tender documents downloaded (signed with office seal)
ii. Summary of Bid qualification requirement (Annexure A)
iii. Agreement in the prescribed format (Annexure B) on Govt. of Kerala stamp paper worth Rs.200/-
iv. Copy of Registration Certificate of the bidder firm
v. Copy of GST Certificate

vi. Copy of PAN card

vii. Documents to prove the annual Turnover of the bidder along with a certificate from Chartered Accountant regarding net worth. (Capital + Reserves)

viii. Copy of the work orders and certification from the purchase regarding execution of the order, to prove the experience in executing similar orders, as specified

ix. Bill of Material

x. Details of the technical offer, including test certificates issued in the name of the bidder

xi. Declaration by the bidder (format as in Annexure – E)

xii. Declaration of relationship with ANERT employee (format as in Annexure - F)

3.1 (b) The Second Stage (Financial Cover as per two cover system):

Envelop -2: shall contain the Price Schedule as per BOQ in Excel format for this tender to be downloaded from e-tender website, duly digitally signed by the tenderer/authorized signatory of the tender.

3.2 The department doesn't take any responsibility for any technical snag or failure that has taken place during document upload.

3.3 The Bidder shall complete the Price bid as per format given for download along with this tender.

Note: The blank price bid should be downloaded and saved on bidder's computer without changing file-name otherwise price bid will not get uploaded. The bidder should fill in the details in the same file and upload the same back to the website.

3.4 Fixed price: Prices quoted by the Bidder shall be fixed during the bidder's performance of the contract and not subject to variation on any account. A bid submitted with an adjustable/ variable price quotation will be treated as non - responsive and rejected.

4. TENDER DOCUMENT FEES AND EARNEST MONEY DEPOSIT (EMD)

4.1 The Bidder shall pay, a tender document fee of Rs. 2,950/- and Earnest Money Deposit or Bid Security of Rs. 50,000. The Bid security is required to protect

the purchaser against risk of Bidder's conduct, which would warrant the forfeiture of security.

4.2 Bidders who are registered as or under MSME / MSE / NSIC / Udhog Aadhar OR Central/State PSE are exempted from paying EMD and Tender Fee.

4.3 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	Janata Sahakari 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	Shamrao Vitthal 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*** optionto 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.*

5. SUBMISSION PROCESS:

5.1 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 along with online payment of tender document fees and EMD.

5.2 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.

5.3 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.

6. VALIDITY

6.1 The tender offer shall be kept valid for acceptance for a period of 3 months from the date of opening of offers. The offers with lower validity period are liable for rejection. Further, the tenderer may extend the validity of the Bids without altering the substance and prices of their Bid for further periods, if so required

7. DEVIATIONS

7.1 The offers of the Tenderers with Deviations in Commercial terms and Technical Terms of the Tender Document are liable for rejection.

8. BLACK LIST

8.1 All the intending tenderers 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 EMD shall be forfeited against any losses incurred by ANERT.

9. BIDDER'S LOCATION

9.1 The tenderers 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.

9.2 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.

10. CORRUPT AND FRAUDULENT PRACTICES

ANERT requires compliance with its policy in regard to corrupt and fraudulent/prohibited practices as set forth in this proposal. In further pursuance of this policy, the selected service Provider(s) shall permit ANERT or its representatives to inspect the accounts, records and other documents relating to the submission of the Proposal and execution of the contract, in case of award, and to have the records inspected by ANERT.

11. CONFLICT OF INTEREST

i. The service Provider(s) is 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 TENDER

12. 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 a 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. 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

13. 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.

14. AMENDMENT OF TENDER DOCUMENT

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

15. COMMENCEMENT OF SERVICE

The successful bidder should sign the contract agreement within 7 days of issue of work order. The successful bidder should start the services as defined in the scope of work within 15 days of Issue of work order.

16. 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. ANERT requires the agency (ies) to observe the following Government manuals (amended from time-to-time) during the selection process and in execution of such contracts The Kerala Financial Code (KFC), 2008 (7th Edition, 1st Edition was in 1963), The Stores Purchase Manual (SPM), 2013.

17. BID QUALIFICATION REQUIREMENTS

17.1.1 Every tenderer should submit along with his e-tender an Earnest Money Deposit (EMD). This may be done electronically from any of the Nationalized/Schedule Banks. The EMD of the disqualified tenderers will be returned automatically through e-procurement system. The EMD of the successful tenderers may be adjusted towards the security deposit. No interest shall be paid for the earnest money deposited.

17.1.2 An agreement in Rs.200/- Kerala stamp paper as per the format given in Annexure B must be submitted along with e-tender document.

17.1.3 Declaration regarding the use of components – EVCI. The bidder must use Electric Vehicle Charging Infrastructure with in the approved component list of ANERT or EVCI meeting the technical requirements mentioned in this tender. A detailed BoM in the letter head of the bidder is to be provided along with the bid.

17.1.4 The bidder should have service centres/authorised service providers in Pathanamthitta District of Kerala. The Detailed list with address, contact details and proof has to be submitted. If the bidder does not have such facility at the time of tendering, an undertaking should be submitted along with the tender on Kerala stamp paper worth Rs. 200/- agreeing to set up such facility and intimate the same within 15 days of letter of intent. Urja Mithra service centres supported by ANERT can also be included as service centres provided the bidders make separate agreements with them.

17.1.5 Price Bid in excel format, for this tender to be downloaded from e-tender website, duly digitally signed by the tenderer/authorized signatory of the tender.

17.2 **Eligibility Requirement**

17.2.1 The detail of eligibility requirements is provided in the table below. The bidders are required to furnish the required supporting documents along with the Technical Bid.

S. No.	Criteria	Documents Required
1.1	The Bidder should have any of the following legal status: a) Body incorporated in India under the Companies Act, 2013 including any amendment thereto; OR b) Body incorporated in India under the Limited Liability Partnership (LLP) Act, 2008 including any amendment thereto; OR c) Firm registered under Partnership Act, 1932 in India; OR d) Sole Proprietor In case of JV, all the members must jointly fulfill this requirement and submit the documents as per the Tender Document.	a) In case of Company – Copy of Registration/ Incorporation Certificate b) In case of LLP – Copy of Deed of Partnership c) In case of Partnership – Copy of Deed of Partnership d) In case of Sole Proprietor – Duly notarized Undertaking from Sole proprietor
1.2	The Bidder must have the required GST Registration	Copy of GST registration certificate with legible GSTIN.
1.3	The Bidder must have valid PAN Number	Copy of Pan Card
1.5	The bidder should be having unblemished record and must not be blacklisted or declared ineligible for corrupt & fraudulent practices by "any state/ central government" department/ company / entity" as on date of bid opening.	The bidder shall provide an Undertaking as per the format provided as Format A.

10.3 Qualification Requirement

The details of qualification requirements are provided in the table below. The bidders are required to furnish the required supporting documents along with the Technical Bid.

S. No.	Criteria	Documents Required
1.1.	**Technical Criteria**	
	The bidder must have completed installation of cumulative 50 kW capacities EVCI in Public Charging Station with DC fast chargers of min. 24kW capacity.	The details of projects executed during period mentioned above should be listed. Copy of work orders and a certificate towards the satisfactory work completion to be furnished by the bidder.
1.2.	**Financial Criteria**	
1.2.1.	The Bidder should have positive net worth in at least 2 years out of the last five Financial Years (FY 17-18, FY18-19, FY19-20 & FY20-21 & FY 21-22).	1. Certificate fulfilling required financial criteria in the name of Bidder duly certified by Practicing Chartered Accountant as per the format provided Format B, duly mentioning UDIN 2. Firm's Annual Audit Report, Balance sheet, Profit & Loss and Income Tax Returns / CA certificate for last Five years i.e. F.Y: FY 18-19, FY19-20, FY20-21 & FY21-22 & FY 22-23
1.2.2.	Minimum Average Annual Turnover (MAAT) during any 2 best out of last five financial years (FY 18-19, FY19-20, FY20-21 & FY21-22 & FY 22-23) of the bidder shall not be less than 50 Lakhs.	

CONDITIONS OF CONTRACT

18. GENERAL CONDITIONS

18.1 The tenders should be submitted online at www.etenders.kerala.gov.in

18.2 The tenders should be as per the prescribed form which should be downloaded from the e-tender website. The cost of tender forms should be paid online, and once paid will not be refunded. Tender forms are not transferable. Tenders that are not in the prescribed form are liable to be rejected.

18.3 Intending tenderers should submit their tenders on or before the due date and time mentioned in the tender abstract. Late tender will not be accepted.

18.4 The rates quoted should be only in Indian currency. Tenders in any other currency are liable to rejection. The rates quoted should be for the unit specified in the schedule attached.

18.5 Tenders subject to conditions will not be considered. They are liable to be rejected on that sole ground.

18.6 Every tenderer should send along with his tender an Earnest Money Deposit. This may be paid online at the e-tenders website.

18.7 If any tenderer withdraws from his e-tender before the expiry of the period fixed for keeping the rates firm for acceptance, the earnest money if any, deposited by him, will be forfeited.

18.8 The final acceptance/rejection of the tenders rests entirely with CEO, ANERT who do not bind themselves to accept the lowest or any tender.

18.9 In the case of materials of technical nature, the successful tenderer should be prepared to guarantee satisfactory performance for a period of guarantee under a definite penalty. Communication of acceptance of the e-tender normally constitutes a concluded contract. Nevertheless, the successful tenderer shall also execute an agreement for the due fulfilment of the contract within the period to be specified in the letter of acceptance. 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:

a) The successful tenderer shall sign a agreement with ANERT within the period specified in the letter of acceptance of this tender. The amount of stamp duty for the agreement must be in compliance with G.O.(P) No.113/2019/TD. dtd 24.07.2019 with respect to public works. They are to 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.

b) There will be no exemption for MSE's in depositing this security amount. If the successful tenderer fails to deposit the security and execute the agreement as stated above, the earnest money deposited by him 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.

c) 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.

d) 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.

18.10 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.

18.11 (a) All payments to the contractors will be made by SCTL/ANERT in due course
(b) All incidental expenses incurred by SCTL/ANERT for making payments outside the State in which the claim arises shall be borne by the contractor.

18.12 Payments will be made only after the supply, Installation and Commissioning of the items and certification by the competent Technical personnel of ANERT.

18.13 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 be given at any time, the contractor shall not be relieved from any obligation, duty or responsibility under this contract.

18.14 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.

18.15 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 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.

18.16 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.

18.17 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.

18.18 The tenderer shall undertake the installation and commissioning of the system according to the standards and specification.

18.19 No representation for enhancement of rate once accepted will be considered.

18.20 The prices quoted should be inclusive of GST and all other expenses which are or may become payable by the contractor under existing or future laws or rules of the country of origin/supply or delivery during the course of execution of the contract.

18.21 Special conditions, if any, of the tenderers attached with the tenders will not be applicable to the contract unless they are expressly accepted in writing by the purchaser.

18.22 The tenderer should send along with this tender an agreement executed and signed in Kerala Stamp Paper of value Rs.200/-. A specimen form of agreement is given as Annexure B to this tender. Tenders without the agreement in stamped paper will be rejected outright.

18.23 **Conditions in the technical document, technical specifications and special conditions of this tender document would override these general conditions, wherever applicable.**

18.24 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.

18.25 E-tender shall be opened at the time and date announced in the tender notice, and the price bid will be evaluated on the same day.

18.26 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.

18.27 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.

19. SPECIAL CONDITIONS

19.1 Each bidder should submit only one (1) bid. Any bidder who submits/participates in more than one bid for the work shall be disqualified.

19.2 The tenders will be opened in the presence of bidders present at the date and time advised in the Bidding Document. If the due date for receiving and opening the tender happens to be declared holiday, then the tender will be received and opened on the very next day, for which no prior intimation will be given.

19.3 If the bidder has NOT submitted the requisite EMD OR Agreement, OR if the price bid is not submitted along with the tender, such tenders will be summarily rejected.

19.4 **During the tender evaluation, ANERT may seek more clarifications/details from any or all of the tenderers, if felt necessary.**

19.5 The price bids of the tenderers, which submitted the required documents only will be opened and the L1 bidder will be awarded the work of supply and installation of items after fulfilling all the requirements.

19.6 **ANERT reserves the right, in the interest of completion of work within the time limit, to award portion/portions of the Work order to next higher bidders, called for negotiation in the increasing order of their price offers, if they agree to supply at the L1 price.**

19.7 **The rate quoted should be all inclusive including delivery of materials at the locations to be specified, and the cost of materials and labour for the civil works, installation and commissioning, warranties, fee for approval from the Electrical Inspectorate if any, GST and all other expenses.**

19.8 **The price quotes should be inclusive of initial cost of supply, installation and commissioning, support during the warranty period of 5-years.**

19.9 The tender offer shall be kept valid for acceptance for a period of 13 months from the date of opening of bid. The offers with lower validity period are liable for rejection.

19.10 The evaluation of the price bid will be based on the grand total of all-inclusive amount quoted excluding GST.

AGENCY FOR NEW & RENEWABLE ENERGY RESEARCH AND TECHNOLOGY (ANERT)
Department of Power, Government of Kerala
Thiruvananthapuram, Kerala – 695 033;
www.anert.gov.in , projects@anert.in

E-TENDER DOCUMENT

Design, Supply, Installation, Testing, Commissioning and Maintenance of Public Electric Vehicle Charging Station for devotees during the festive season on ad-hoc basis at Nilakkal Parking Ground, Sabarimala, Kerala

Ref. No.: ANERT-TECH/233/2022-T6

PART – 2: SCOPE OF WORKS

Date of Publishing of Bids : - 14/11/2023

Last Date of Submission of Bids : - 20/11/2023

SCOPE

20. INVITATION TO BID

20.1 **ANERT is the State Agency for Renewable Energy in Kerala** having its Headquarters at Thiruvananthapuram, Kerala and various district level offices **This tender has been issued by the ANERT for the selection of agency for the Design, Supply, Installation and Commissioning of Public Electric Vehicle Charging Station at Nilakkal Parking Ground at Sabarimala Temple, Pathanamthitta, Kerala.**

20.2 In order to meet the requirements, ANERT proposes to invite bids from Manufacturers of SPV modules / System Integrators of Solar Power Plants and provide services as per details/**scope of work** mentioned in this tender document.

20.3 Bidder shall mean any entity (i.e. juristic person) who meets the **eligibility criteria** of this tender and willing to provide the Services as required in this bidding document. The interested Bidders who agree to all the terms and conditions contained in this document may submit their Bids with the information desired in this bidding document.

20.4 Address for submission of Bids, contact details including email address for sending communications are given in this tender document.

20.5 This document shall not be transferred, reproduced or otherwise used for purpose other than for which it is specifically issued.

20.6 Interested Bidders are advised to go through the entire document before submission of Bids to avoid any chance of elimination. The eligible Bidders desirous of providing services to ANERT are invited to submit their technical proposal in response to this tender. The criteria and the actual process of evaluation of the responses to this tender and the selection of Bidder will be entirely at ANERT's discretion. This tender seeks proposal from Bidders who have the necessary experience, capability & expertise to provide ANERT the proposed Services adhering to its requirements outlined in this tender.

21. SCOPE OF WORK

The scope of works can be split into 3 components as mentioned below.

A. Development of land area for parking including installation of roofing structure for parking of Min 6 Nos of Electric Vehicles during charging including civil foundation works for Charging machines at the land allotted by Travancore Devaswam Board.

B. The development of access roads from the main PWD road till the exclusive parking lot for EV Charging must be fenced with chain linked fencing at a height of 1m, along with Entry Gates of minimum 4m length.

C. The tentatively allotted land is near to the ADM Office, Nilakkal Parking Ground as shown below:

D. The electrical line extension from the existing 500 kVA transformer of KSRTC till the panel board shall be done by the bidder directly or through the KSEBL.

E. Design, Supply, and Installation and Commissioning of 3 Nos of DC Fast Charging Machine CCS Type (minimum 30kW, Dual Gun) including requisite LT Panel boards following safety norms as per Electrical Inspectorate.

F. Decommissioning of the EV Charging machine being installed after completion of the Festive season and transporting the machines to the Regional Transport Office, Pathanamthitta, Regional Transport Office, Kottayam and Regional Transport

Office (Enforcement), Pathanamthitta including separate electrical panel boards and required electrical line extension works,

21.1 **Electric Vehicle Charging Station (EVCS)**

An Electric Vehicle Charging Station which will serve as a public charging infrastructure shall include a DC Fast charger for charging 4 wheelers. The type of chargers required for the public charging station shall comprise the following;

Charger Type	Charger Connectors	Power Rating (kW)	No of Charging Points/ Guns at a single site	Qty
Fast	Combined Charging System (CCS)	Min 30 kW for CCS	2/2 CG (Max output of 30kW to be provided only if one Gun is used)	3

Scope of the Implementing Agency includes but not limited to–

A. Site assessment, Preparation, and Design:
   i. The selected bidder shall undertake detailed site assessment (as required) to identify suitable site design for the deployment of Charging infrastructure. The selected bidder shall verify the load available at each site basis the site assessment.
   ii. The successful bidder shall, undertake the site survey in accordance with foundation requirement of the inlet / outlet / bypass connections, drainage system etc. other open area, connection etc to be cheeked properly.
   iii. After completion of survey contractor shall, at his own cost, charges and expenses prepare Design & Drawings in accordance with the scope, Specification, Standards, site conditions and submit layout drawings including Mechanical, Electrical.
   iv. If during the scrutiny of detailed design calculations and working drawings, any changes therein which are found necessary in the opinion of the concerned Engineer shall be incorporated without altering the offer.
   v. The Tenderer shall be responsible for ensuring that any existing utility on, under or above the Project Site is kept in continuous satisfactory use, if necessary, by the use of suitable temporary or permanent diversions.

vi. The site levelling, refilling or any other requirements will be under the scope of the bidder and hence bidders are required to visit the site before quoting

vii. AII debris and other waste material derived from site activities shall be disposed off by the contractor at his own cost. The cost of this work shall be part of the quoted offer and no separate payment shall be made on this account.

B. Supply of Charger and installation:

i. The bidder shall procure, install, test and commission the charging infrastructure, including necessary auxiliary equipment such as canopy, barricading, etc. required for the Charging Infrastructure.

ii. Construction of platform is in the scope of successful bidder.

iii. The Canopy for the EVCS as per the approved design of ANERT shall be provided by the Bidder. The Canopy shall include the following:

a. Hood canopy structure on the top of the EV Charger with sufficient LED panel lights for illumination during evening hours.

b. An auto day-light sensor enabled or remotely through ON/OFF using GPRS.

c. ACP sheet of minimum thickness of 4mm shall be used for the canopy structure. The facia of canopy shall also be of lighted through LED. ACP false ceiling shall be provided.

d. ACP clad steel pipes shall be used for supporting the canopy structure.

e. Hood structure should be supplied with pre-branding as approved by ANERT.

f. The hood canopy structure should be painted & rust free.

g. Proper wiring conduits or channels should be used to avoid the theft of electricity.

h. LED panel lights should be 12V/24V DC operated & will be powered from the EV charger power supply

i. Bollards around each EV station to protect chargers from vehicle impacts, concrete/MS painted bollards as per site requirement should be used of appropriate thickness (atleast 5 inches)

j. Minimum four bollards should be used at the front/side/rear of charger.

k. The bidder should put up relevant signage/markings for identifying the parking spot. Also, signages should be placed at the 1 KM and 300 m mark from both sides of the approach roads.

l. Vehicle parking space marking is in the scope of bidder.

C. Charger design, engineering, and testing: The bidder shall be completely responsible for design, engineering and testing of EV charging station including the power infrastructure. All proposed chargers have to be tested and approved by ARAI / ICAT / NABL accredited laboratory. The Test certificate should be enclosed along with the proposal ANERT reserves the right to carry out PDI (Pre-Dispatch Inspection) of the proposed chargers by bidder, if required.

D. Permits and Approvals: All the necessary permits and approvals including CEIG, if any, required for successful commissioning of the EV charging station shall be in the scope of the bidder. The bidder shall comply with the State EV Policy in site planning, permissions, operationalization and billing.

E. Maintenance: The bidder shall take complete responsibility of Maintenance of the charging infrastructure including all the infrastructure developed and deployment of necessary staff, as a part of the Contract, from the date of signing of Contract till the end of the contract period.

F. Power Connection: The bidder shall be responsible for a new LT connection from the Discom - KSEBL, and towards any charges for the new power connections. The cost for the same shall be borne by the bidder. ANERT shall facilitate necessary assistance and documentation from DISCOM for this purpose. Electrical Panel Boards including RCBO & associated cables, Battery Management system, necessary DC connection gear, Fire protection & safety equipment etc. Installation of panel board with all accessories like MCCB, Earth leakage relay, CT meters, Busbars etc cabling between panel board and machines, Earthing as per IS standards etc are under the scope of Agency.

G. Charging Management System (CMS): The charging station shall be operated through the cloud-based solution technology owned by ANERT. Charging stations will also be hosted on the CMS of ANERT and the bidder shall ensure that there is OCPP integration capabilities between software system of the bidder and ANERT. Furthermore, the bidder should ensure that ANERT receives real time notifications and on-demand reports on all charging stations.

H. The successful bidder is required to provide M2M Sim Cards in all EV machines for uninterrupted internet access during the entire period of warranty. The charges for the same are to be borne by the bidder.

I. Branding: ANERT shall provide guidelines and norms for branding on EV chargers and same shall be disclosed with selected bidders. The co-branding shall be done considering proper representation of ANERT.

J. Energy Meter: The bidder shall responsible for installation of energy meter through DISCOMs at input point of power supply for obtaining actual energy consumption of EVCI. The power connection costs shall comply to the latest grid code of the DISCOM.

K. Insurance: Cost towards the Insurance during Construction and O&M period shall be borne by the bidder. The insurance agency would be selected by bidder at its own discretion. The insurance shall be a comprehensive business liability insurance in nature for any and all type of vendor, customer and or third- party liabilities including covering legal costs against lawsuits

L. Warranty of the Equipment: A copy of the warranty certificates of the installed equipment (EVSE) shall be submitted to ANERT within 03 days from the date of commissioning of EVSE. Equipment shall carry the standard warranty as per Industry standards.

M. Availability of chargers: The bidder must maintain charger availability for customers at minimum 95% uptime at all the times.

N. Installation of CCTV equipment along with data connectivity for real time access and playback for a period of 15 days must be provided in the EV Charging Stations.

O. EVSE shall be interoperable and vendor neutral and type independent to meet the requirement of major EV and battery manufacturers and complying with relevant national standards and regulations.

P. Training: The bidder shall provide training to ANERT personnel before handing over. The firm should provide manuals and training materials to the officials concerned. Also, the details and literature of various components of the EV PCS shall be handed over to ANERT.

22. SCHEDULE OF SUPPLY

22.1 The items should be delivered and installed at sites as specified by ANERT below, under prior intimation and supervision of ANERT.

22.2 The supply and installation of the entire system shall be completed within **15 days from the issue of work order.** The successful bidder is bound to complete the work within the stipulated period.

22.3 The extension of time of completion that can be granted at a time shall will be 25% of the original time. The maximum extension that can be granted for a work shall be limited to half the original time of completion.

22.4 When the contract period has to be extended wholly or partly due to default on the part of the bidder, the Agreement Authority may sanction extension of time after imposing fine as mentioned below;

Period	Rate of Fine
First Extension	1% of the PAC subject to a minimum of Rs. 1000/- and maximum of Rs. 50000/-.
Second Extension	2% of the PAC subject to a minimum of Rs. 2000/- and maximum of Rs. 100000/-

22.5 Penalty for delay in supply and installation after the extended time period will be imposed at 0.5 % per week up to a maximum 10 %. In case of delay in supply and installation even after this time period, Director, ANERT may cancel the contract and take recourse to other action as deemed appropriate.

23. SELECTION PROCESS FOR BIDDER

ANERT will evaluate all the proposals to determine whether these are complete in all respects as specified in the tender document. Evaluation of the proposals shall be done in three stages as:

23.1 **Level - I (Technical Evaluation):**

ANERT shall evaluate the technical bid(s) to determine whether these qualify the essential eligibility criteria, whether the bidder has submitted the EMD whether any computational errors have been made, whether all the documents have been properly

signed & stamped, whether all the documents as mentioned / or required to submitted with technical bid are submitted and whether bids are completed and generally in order.

After evaluation of technical bid(s), a list of the qualifying bidder(s) shall be made. Short-listed bidder{s) shall be informed of the date, time and place of opening of financial bid(s) (online).

23.2 Level - II (Financial Evaluation):

The financial bid(s) of Technically Qualified Bids shall be ranked in the ascending order of their respective financial bids (L1, L2, ..,Ln). The bids which have quoted the same amount shall be assigned the same rank. If there are more than one L1 bidders quoting the same cost in Rs, tie breaking is based on the time of submission of the bid as recorded in the e-tender site. The bidder who has submitted the bid first will be the lowest bidder (L1 Bidder) and work shall be awarded to the L1 successful bidder.

23.3 Level – III (Execution of Contract Agreement)

The successful bidder shall execute the contract agreement within 3 days from the date of issue of work order as per the terms and conditions set forth in the Bid document.

23.4 Level – IV (Maintenance Agreement)

The successful bidder shall execute the Maintenance agreement after the Commercial Operation Date as per the terms and conditions set forth in the Bid document.

24. SPECIAL CONDITIONS

i. Each bidder should submit only one (1) bid. Any bidder who submits/participates in more than one bid shall be disqualified.
ii. If the bidder has NOT submitted the requisite tender fee and EMD as specified by ANERT is not submitted along with the RFP, such bids will be summarily rejected
iii. During the technical evaluation period, ANERT may seek more clarifications/details from any or all of the participants, if felt necessary.

25. RIGHTS TO ACCEPT/REJECT ANY OR ALL PROPOSALS

ANERT reserves the right to accept or reject any proposal, and to annul the RFP process and reject all Bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidders or any obligation to inform the affected Bidders of the grounds for ANERT's action.

26. FAILURE TO AGREE WITH THE TERMS & CONDITIONS /CONTRACT

Failure of the Bidder to agree with the Terms & Conditions of the RFP shall constitute sufficient grounds for the annulment of the award of contract and seizure of EMD amount. The contract may be awarded to the next most responsive bid of other Bidder.

27. PAYMENT

27.1 No advance payment will be given. All the documents submitted should be certified by the concerned official at ANERT.

27.2 The terms of payment shall be:

i. Upon completion of land development and access road, the payment for 15% of the contract value for the work will be released based on the work completion certified by a chartered Civil Engineer.

ii. Upon completion of civil foundation works and canopy structure as per design, the payment for 15% of the contract value for the work will be released based on the work completion certified by a chartered Civil Engineer.

iii. Upon delivery of the EV charging machine at the site along with completion of installation at the site, 30% of the machine cost will be released. The supplier shall submit the invoice for the materials (including serial numbers and delivery chalan) duly certified by the concerned District Office along with a report regarding the supply of materials.

iv. On commissioning of the EVCS, 20% of the contract value will be released after performing the Pre-commissioning tests and enabling CMS communication. All documents related to the completion of the work including commissioning report and commissioning certificate issued by the electrical utility shall be submitted for the release of the amount.

v. Upon Decommissioning of the EVCS and shifting the Charging machines to the locations mentioned, 10% of the contract value will be released upon submission of signed material delivery chalan as acknowledgement of delivery.

vi. The balance 10% shall be retained as performance security and will be released in equal part of 2% after each year of operation till the completion of the 5th year of warranty. The warranty of the EV charging machine and yearly maintenance of the electrical panel board etc are to be done by the bidder.

vii. The security deposit of 3% furnished along with the contract agreement shall be released on successful completion of supply, installation and commissioning.

27.3 Income tax, contribution to workers' welfare fund and other statutory deductions shall be made from the payment as per prevailing norms.

28. PERFORMANCE SECURITY

The successful bidder has to remit an amount @ 3% of the total amount quoted by the bidder as performance security deposit in terms of Bank Guarantee/Deposit having validity for 3 months from the date of agreement. The bank guarantee/deposit will be released/refunded to the successful bidder after completion of the contract period after deducting the penalties if any.

29. WARRANTY

The EVCS shall be provided with Five (5) years comprehensive on-site warranty and maintenance services, under the Contract. The Contractor shall be responsible for supply of all spare parts and consumables, repairs / replacement of any defective equipment(s) at his own cost as required from time to time during the warranty period. The Contractor shall replace/repair all the associated equipments / components getting faulty/damaged at its own cost so as to maintain the chargers availability throughout the contract period. During contract period, contractor to undertake all best practices to

i. reduce downtime
ii. maintain the charger safe for operations
iii. maintain the aesthetics.

The rates quoted by the bidder shall be inclusive of replacement cost of spares and consumables as well as services cost.

30. SERVICE AND MAINTENANCE (Service Level Requirement)

A. The Operation and Maintenance shall be comprehensive. The maintenance service provided shall ensure project functioning of the EVCS as a whole. All preventive / routine maintenance and breakdown / corrective maintenance required for ensuring maximum uptime shall have to be provided on annual basis. Accordingly, the Comprehensive Operation & Maintenance shall have two distinct components as described below:
   a. Preventive / Routine Maintenance: This shall be done by the Contractor regularly and shall include activities such as cleaning and checking the health of the EV CCS, tightening of all electrical connections, and any other activity including the associated civil works, wear and tear that may be required for proper functioning of the EVCS as a whole. This is to be done on quarterly basis.
   b. Breakdown / Corrective maintenance: Whenever a fault occurs, the Contractor has to attend to rectify the fault & the fault must be rectified within the 12 hours of the complaint. The Contractor must maintain all the records pertaining to all such faults and necessary measures taken. The date of Comprehensive Operation & Maintenance Contract period shall begin from the COD. However, operation of the Project means operation of system as per tender documents and workmanship in order to keep the project trouble free covering the O&M period.

B. Contractor shall maintain a Complaint log book, which shall include the timing of logging of complaint including unique Complaint number, time of closure of complaint & it's Root Cause Analysis.

C. Bidder is requested to provide the list of all the spares and consumables required to maintain the facility for O&M period. Contractor agrees to supply such spare parts and consumables, as recommended or otherwise required for the effective and hassle-free operation and maintenance of the Facilities. However, the Contractor, with its previous experience, is to provide a list of spares and consumables including specifications, supplier details and indicative price, as recommended by him and

OEM. The Contractor shall keep and maintain the inventory of such spares and consumables for the hassle-free operation during the complete O&M period without additional cost to ANERT.

D. Also, at the end of penultimate year of the O&M contract, Contractor shall supply a list of all recommended spares and consumables as per the operational requirement of the Project and with reference to the mean time between failures (MTBF), along with detailed specifications, supplier details and tentative cost for future purchase. The price of such spare parts and consumables shall include the breakup of taxes and duties as applicable towards purchase and supply of spare parts and consumables. ANERT, at its discretion, will purchase the spare and consumables as required for future operation. However, the Contractor shall replenish the mandatory spares and consumables at his cost prior to the completion of the O&M period.

30.1 **Availability Conditions**

The charger shall be available for charging and shall communicate with the remote servers with an availability of 90% during Warranty period. The Contractor must ensure that all chargers (13 sites) are always maintained in working condition. The uptime includes the working condition of the charger, which shall be monitored online with the CMS.

30.2 **Problem Categorization**

Problems for EVCS shall be categorized into following severity levels

Category	Definition
Severity 1 – Urgent	i Complete system failure except due to upstream outage (i.e. loss of power at DISCOM tapping point) ii Loss, failure or malfunction of any major subsystem including communication loss of chargers
Severity 2 – Serious	Failure of any sub-system which does not immediately cause adverse effect on system availability
Severity 3 – General/ Technical Help	Request for information, technical configuration assistance, “how to” guidance, and enhancement requests.

30.3 Problem Resolution

Severity	Initial Response Time (Working Hours)	Initial Response Time (Non Working Hours)	Action Resolution Time	Action
1	15 minutes	30 minutes	24 hours	An urgent or emergency situation requiring continuous attention from necessary support staff until system operation is restored
2	15 minutes	2 Hours	48 Hours	Attempt to find a solution acceptable to Employer (dependent on reproducibility), as quickly as practical.
3	2 hours	1 day	5 days	Report on the problem/query is to be furnished.

30.4 System Availability and Maintenance Charges

The non-availability hours for availability calculation shall be counted from the end of the allowed Action Resolution time. A standardized digital register shall be maintained for each site containing full details of each outages, actions taken by Employer to correct the problem, applicable Severity level, time of reporting to the contractor support engineer/support, allowed Response time as per the Response times defined in above section, actual Resolution time, and signature of Engineer-incharge as well as the contractor's support engineer of the site.

30.5 Availability Calculations

Availability computation shall be done on per quarter yearly basis per site. The formula to be used for availability computation shall be as under:

Availability yearly (per site) = $[\boldsymbol{THQ} - (\boldsymbol{S1\ x\ 1 + S2\ x 0.8})] * \mathbf{100\%}\ \boldsymbol{THQ}$

Total downtime hours= ***S1 + S2 x 0.8***

Quarterly Downtime percentage= ***(S1 +S2 x 0.8) x100% /THQ***

Where THQ is total hours in the quarter

S1 is the total non-available hours in Severity Level-1

S2 is the total non-available hours in Severity Level-2

30.6 **Availability during Warranty Period**

During warranty period the availability constraints included herein shall be required to be met by the contractor (i.e. 90% availability). In case of downtime calculated is beyond allowable limit (i.e. 10%), the warranty period shall be increased by the corresponding time period of excess downtime.

30.7 **Payment of Maintenance Charges**

In the event of availability below a certain level, the maintenance charges would be proportionately reduced as follows:

Availability of Chargers	**Deduction as % of the total retention amount**
> 90%	NIL
Less than 90%	Deduction of 1% of the apportioned retention amount to be released charges for every 2% or part there of decrease in availability under 92%. The maximum deduction shall be limited to 50% of the maintenance charges to be paid for that year.

31 TECHNICAL REQUIREMENTS (ELECTRIC VEHICLE CHARGING STATION)

A. General Requirement

Following specifications are applicable to all the EV chargers.

	Parameter	Description
1	Energy Transfer Mode	Conductive
	System Structure	
1	Connector Guns	Each gun should be isolated from each other with proper insulation
2	Environmental conditions	Outdoor use
3	Power supply	EV charging station connected to A.C. mains
	Input Requirements	
1	AC Supply System	3-Phase, 5 Wire AC system (3Ph+N+E)
2	Nominal Input voltage	3Ø, 415V (+6% and -10%) as per IS 12360
3	Input Frequency	50Hz ±1.5Hz
4	Input Supply Failure backup	Battery backup for minimum 01 hour for control system and billing unit, to enable activities such as billing, to be provided. The data logs should be synched with CMS during back-up time, in case battery drains out. CMS service provider shall be identified by ANERT.
Cable and Connector Requirement		
1	Charging Cable to EV	5 Meter, Straight Cable. Suitable arrangement for storage of cable assembly and connectors (when not in use) should be provided at a height of 0.5 – 1.5 m above ground level.
2	Cable and Connector Type	The cables as well as connectors shall be suitable for delivering required electrical supply without derating and within permissible temperature increase, as specific to the corresponding connector and applicable standard. The charging cable and connector should be permanently attached to the charger
3	Cable for supply to charger	3 or 4 core cables for each charger of adequate size and suitable length (as per site requirement) shall be supplied
	Marking	

	Parameter	Description
1	Marking Requirements	The EV Charger shall bear the markings in a clear manner as per clause No. 11.14.3 of AIS 138 Part 1.
2	Logo	Frontside of charger shall be free from logo, design, marking etc. For identification of connector type required marking is to be given at output & storage point. Colour combination of charger to be approved by ANERT.
User Interface & Display Requirements		
1	ON- OFF (Start-Stop) switches	Simple Push button type or through Touch Screen
2	Emergency stop switch	Simple Push button type in Red Colour, visible and easily accessible (Mushroom head type)
3	Visual Indicators	Error indication, Presence of input supply indication, State of charge process indication
4	Graphical User Interface	The Graphical User Interface (GUI) shall be designed in a user-friendly manner from a customer perspective.
5	Support Language	English (Mandatory), Other Languages (Optional)
6	Display Messages	EVSE (also referred as EV charger) should display appropriate messages for user during the various charging states like: • Vehicle plugged in & out • Duration since start of charge, kWh. • User authorization status • Idle / Charging in progress: SOC • Fault conditions • Metering Information: Energy Units consumed
7	Authentication	As per OCPP 1.6 or above. Further, for higher version of OCPP in future, the charger must have capability to support the higher version after due firmware upgradation during warranty and AMC period without any additional cost to ANERT.
8	Authorisation	• OTP • RFID Card Necessary functionalities to operate the charger with RFID card both in online and offline (w.r.t. communication) mode with backend service arranged by ANERT. Properly visible card reader to be inbuilt in the charger.

	Parameter	Description
		Charger supplier shall inform RF protocol (the protocol should be widely used type like ISO 14443 Type A/Type B (13.56 MHz), PSAM & ESAM ISO7816) to ANERT.
9	Display	Min 6 inches with 720 x 480 pixels TFT LCD/LED Screen, user interface with touch screen or keypad. Toughened unbreakable glass to be used for display screen
10	Memory	Facility to store at least 1-month data or min 1000 charging logs, with suitable facility to extract the details online and also at site.
Communication Requirement		
1	Communication between EVSE and Vehicle	As specified by corresponding connector protocol PLC Communication for CCS II connector IEC-61851-1 based communication for Type II AC (PWM control)
2	Communication interface between charger and central management system (CMS)	Ethernet (Standard), GPRS {Dual SIM card provision, Wi-Fi (Optional) The modem is to be kept inside charger unit while ensuring avoidance of signal loss.
3	Communication between EVSE and Central Server	Open Charge Point Protocol (OCPP) 1.6 protocol or higher versions compatible to OCPP 1.6 Metering: Grid responsive metering
Mechanical Requirements		
1	Mechanical Stability	Shall not be damaged by mechanical impact as defined in • Section 11.11.2 of IEC 61851-1 for 122 kW charger • Section 11.11.2.3 of AIS 138 for AC 001
2	Mechanical Impact	Shall not be damaged by mechanical impact as defined in • Section 11.11.3 of IEC 61851-1 for 122 kW charger • Section 11.11.2.2 of AIS 138 for AC 001
3	Mounting	• In case of 122 kW charger: Floor Mounting Pillar Type • In case of AC 001: Provision like Wall / Pole Mount / Pillar type arrangement with Stand/Wall arrangement as per site & approval of Engineer In-charge.
4	Ingress Protection	IP 54 or better
5	Cooling	Air Cooled

	Parameter	Description	
6	Dimension(W*H*D)/Weight	as per manufacturer design	
Performance Requirements for DC Charger			
1	Converter Efficiency	≥ 94 %	
2	Power factor	≥ 0.99 (Full load)	
3	Current & Voltage THD	< 5%	
Type Testing (Clause no. of AIS 138 Part 1)			
1	Safety Functions Verification	Earth Presence Detection (Socket – EVSE)	6.4.1.1
		Earth Continuity Check (EVSE – EV)	6.4.1.2
		Over current and Short-Circuit Protection	6.4.1.5
		Leakage Current (RCD)	6.4.1.6
		Dielectric withstand Voltage	11.6.1
2	Mechanical Stability	Mechanical Impact	11.11.2.2
		IP Testing	11.11.2.4
3	Climatic Environmental Tests	Ambient Air Temperature	11.11.1.2
		Ambient Air Humidity	11.11.1.4
4	EMC Verification	Immunity to Electrostatic Discharges	11.11.3.2
		Supply voltage dips and interruptions	11.11.3.2
		Fast transient bursts	11.11.3.2
		Voltage Surges	11.11.3.2
		Radiated electromagnetic disturbances Electrical Field (30 MHz – 1000 MHz)	11.11.3.3

B. 30 kW (CCS-II + CCS-II)

The power rating of the Charger should be minimum 30 kW (2 Guns of *CCS II each of 15 kW capacity and capable of charging at 30 kW, if only a single gun is used*). In case of parallel operation, the wattage should not go lower than the power rating defined for each output. Required specification summary is given below:

#	Parameter	Description
General Requirements		
1	EVSE Type	Single Unit with 2 Guns as under: CCS-II-15 kW, CCS-II-15 kW (Cumulative capacity - 30 kW)
2	Charging mode	CCS-II – Type-2/Combo-2 – Mode 4 (DC Charging)
3	Reliability and Serviceability	Modularity, self-diagnostic features, fault codes and easy serviceability in the field
System Structure		
1	Regulation Method	Regulated D.C. EV charging station with combination of CVC (Constant Voltage Charging) or CCC (Constant Current Charging) but not simultaneously
2	DC output voltage rating	200-500V or higher CCS-II
4	Charge control communication	Communicate by digital and analog signals
5	Interface inter-operability	Inter-operable with any EV supporting CCS-II or AC Type-2 (for each gun respectively)
Output Requirements		
1	Output Connector Compatibility	CCS-II: As per IEC 61851-23/-24, IEC 62196-3, DIN 70121
Performance Requirements		
1	DC Output voltage and current tolerance	DC Output current regulation in Constant Current Charging (CCC): ± 2.5 A for the requirement below 50 A, and ± 5 % of the required value for 50 A or more DC Output voltage regulation in Constant Voltage Charging (CVC): Max. 2 % for the max rated voltage of the EVSE
2	Control delay of charging current in CCC	DC output current Demand Response Time: <1 s Ramp up rate: 20 A/s or more Ramp Down rate: 100 A/s or more
3	Descending rate of charging current	EVSE should be able to reduce DC current with the descending rate of 100 A/s or more
4	Periodic and random deviation (current ripple)	DC output current ripple limit of EVSE: 1.5 A below 10 Hz, 6 A below 5kHz, 9A below 150 kHz
5	Periodic and random deviation (voltage ripple)	Max. ripple voltage: ±5V. Max slew rate: ±20 V/ms
6	End of Charging	Once the charging stops, the connector shall be released only after successful payment/acknowledgement is received.

#	Parameter	Description
Protection & Safety Requirements		
1	Safety Parameters	Over current, under voltage, over voltage, Residual current protection, Surge protection, short circuit, Earth fault at output, Input phase reversal, Emergency shut-down with alarm, Over temperature, Effective earth continuity between the enclosure and the external protective circuit, as per IEC 61851

EVSE shall have provision of emergency switching, protection against uncontrolled reverse power flow from vehicle. The specific requirements defined in Section 102.2 of IEC 61851-23 shall be applicable except for *Rated outputs and maximum output power*: The rating shall be as per clause from Section 101.2.1.1 of IEC 61851-23; however, the temperature range shall be as specified in this TS instead.

Specific Requirements:

- Double-pole breaking RCD (IEC 60309) of less than 30mA (As per section 7.4 of AIS 138 Part 1) should be provided for leakage current protection.
- Limiting Output Current: Circuit breaker for each outlet should limit the output current to 15A. Breaker should be reset to resume normal operation.
- Output selection: The breaker inside to be energized in sequence - one round of all three phases before the second round.
- Socket readiness: An LED to indicate that the socket is ready.

C1. Input Requirement

i. A.C. Supply System is 3 phase, 5 wire AC system (3 phases + N + PE)

ii. Nominal Input Voltage is 415V (+6% and -10%) as per IS 12360.

iii. Input Frequency is 50Hz ± 1.5 Hz

iv. Input Supply Failure back-up: Battery backup for minimum 1 hour for the control System and billing unit. Data logs should be synchronized with CMS during back up time, in case battery drains out.

C2. Output Requirements

The Charger shall have two outputs, compliant with CCS type 2

The maximum rated output of the Charger shall be limited to 120 kW, where in only one output shall charge the EVSE at a time capable of delivering full load. While both guns are operating, the power shall be limited to 60 kW each. The parameters such as DC voltage & current levels, efficiency, power factor etc. shall comply with the applicable IEC61851 series of standards for DC Conductive Charging Systems.

C3. Cable Requirements

The charging cable shall be at the EVSE side. The cable assembly, length, storage etc. shall comply with IEC61851.

C4. Mechanical Requirements

i. Ingress Protection: The minimum IP degrees for ingress of objects is IP 54

ii. Mechanical Impact: As per IEC 61851-1 Section 11.11.2

iii. Mechanical Stability: The EVSE - DC shall be installed as intended by the manufacturer's installation instructions. A force of 500 N shall be applied for 5 min in the horizontal direction to the top of the EVSE - DC in each of the four directions or in the worst possible horizontal direction. There shall be neither deterioration of the Electric vehicle charging neither station nor deformation at its summit greater than
    a. 50 mm during the load application.
    b. 10 mm alter the load application.

iv. Cooling: Air cooled or forced cool for protection and safety of equipment from any fire hazards.

C5. Protection Requirements

ii. Protection against Electric Shock: Hazardous live parts shall not be accessible. Exposed conductive parts shall not become a hazardous live part under normal conditions (operation as intended use and in the absence of a fault), and under single-fault conditions. Protection against electric shock is provided by the application of appropriate measures for protection both in normal service and in case of a fault. For systems or equipment on board the vehicle, the

requirements are defined in AIS-038 (Rev.1) - For systems or equipment external to the vehicle, the requirements are defined in IEC 60364-4-41.

iii. Accessibility to live parts: When connected to the supply network, the EVSE shall not have any accessible hazardous live part, even after removal of parts that can be removed without a tool. All accessible parts (eg. metal enclosures) must be prevented from becoming hazardous live. Compliance is checked by inspection and according to the requirements of IS/IEC 60529 (IPXXB).

iv. Disconnection of EV: One second after having disconnected the EV from the supply (mains), the voltage between accessible conductive parts or any accessible conductive part and earth shall be in compliance with IS 13252/IEC 60950. If the voltage is greater than 42.4 V peak (30 Vrms) or 60 V D.C., or the energy is 20 J or more, a warning label shall be attached in an appropriate position. Compliance is checked by inspection and by test.

v. Disconnection of EVSE: Conditions for the disconnections of the EVSE from the supply mains are identical to Clause (ii) of 2.1.2.6.

vi. Fault protection: Protection against indirect contact shall consist of one or more recognized provision(s). According to IEC 60364-4-41, recognized individual provisions for fault protection are:

   a. Supplementary or reinforced insulation
   b. Protective equipotential bonding
   c. Protective screening
   d. Automatic disconnection of supply
   e. Simple separation

      i. Supplementary measures: To avoid indirect contact in case of failure of the basic and/or fault protection or carelessness by users, additional protection against electric shock shall be required.

      ii. An RCD (IAN < 30 mA) shall be provided as a part of the EV conductive supply equipment for earthed systems. The RCD shall have a performance at least equal to Type A and be in conformity with standard IEC 60364-4-41

iii. Where power supply circuits that are galvanically separated from mains and are galvanically isolated from earth, electrical isolation between the isolated circuits and earth, and between the isolated circuits and exposed conductive parts of vehicle and EVSE shall be monitored.

iv. When a fault condition related to the electrical isolation is detected, the power supply circuits shall be automatically de-energized or disconnected by the EVSE.

v. Effective earth continuity between the enclosure and the external protective circuit, as per AIS 138 Part 1 Section 6.4.1.2

C6.Environmental Requirements

i. Ambient Temperature Range: 0 to 55°C as per 11.11.1.2 of IEC-60068-2-14.
ii. Ambient Humidity: 5 to 95% as per IEC 60068-2-30.
iii. Ambient Pressure: 86 kpa to 106 kpa as per IEC 60529.
iv. Storage temperature: 0 to 60°C

C7.Communication Requirements

The conductive digital communication between DC EVSE and EV shall comply with the IEC-6185124:2014

C8.Internet of Things - EVSE

The Electric Vehicle Station Equipment shall be IOT enabled. The details about uptime, availability, charge status, power consumption etc as per OCPP 1.5 protocol shall be provided. The EVSE shall be provided with GPRS communication for EVSE to communicate with CMS. The GPRS services shall be provided by the successful bidder during the warranty and AMC period.

C9.User Authentication Mechanism

The EV Charging units shall have user authentication mechanism with the help of which the Charging Stations shall be enabled for unmanned operation along with digitized cashless payment solutions. The important features /requirements are

i. The user authentication mechanism shall be through both mobile application and

radio frequency identification (RFID) card reader type.

ii. The user must be able to charge the vehicle only after the authorization of the Vehicle through RFID / Mobile app.

iii. Once the user is authorized, user must agree to pay the amount which is auto-deducted from the linked payment account.

iv. Only after the payment authorization, the charging process shall be initiated.

v. The RFID card reader shall be integrated type and shall be compatible with NFC technology.

vi. The successful bidder shall also provide supporting RFID Cards/Tags for each of the charging stations.

The user authentication mechanism shall strictly follow the OCPP 1.6 or above. The EVSE thus supplied shall be future proof to be operated as an unmanned EV Charging Station.

C. Test Certificates

The Chargers should be type tested as per AIS 138 (listed above) at ARAI (Automotive Research Association of India) or International Centre for Automotive Technology (ICAT) or accredited laboratory of National Accreditation Board for Testing and Calibration Laboratories (NABL) or any Internationally Accredited Laboratory. The type test report shall be submitted for review and approval by employer on or before Factory Acceptance Test (FAT). Type test certificate of charger with different combination of guns or higher capacity shall also be acceptable meeting requirements of this specification.

32. CIVIL AND ELECTRICAL WORKS

Construction of platform and extension of power supply to EVSE and supply of canopy will be under the scope of successful bidder.

The successful bidder shall provide the drawings for the platform required for installing the Charging Unit(s) showing dimensions and get approved before start of works;

The following works will come under the scope of the contractor:

- Construction of Platform

- Extension of supply to EVSE – New connections if any required will be provided by ANERT.
- Canopy for the charging station.
- Vehicle stoppers to avoid vehicle - charger collision.
- There shall be suitable illumination, 2x8 Amps power sockets for the shelter.
- All the metal parts shall be painted with anti-rust blue paint.
- The front of the shelter shall be provided with a name board as approved by ANERT.
- Marking of parking space for 2nos of 4wheeler vehicles with sufficient space between the vehicles.
- Extension of Power Supply to the CS is to be done by the successful bidder. Also, the successful bidder shall ensure proper safety measures while executing the line works. ANERT shall not be responsible for an undesired incident that occurs because of not ensuring safety the successful bidder.

Also the charging station created shall be subjected to the inspection and approval of the Electrical Inspectorate, Government of Kerala and KSEBL before commissioning.

- ANERT will not be responsible for any damage caused due to negligence of the contractor during the execution of the works.
- The EV Charging Stations must be installed so that any socket outlet of supply is at least 800 mm above the finished ground level.
- The EV Charging Stations must use the armored type cable from EV Charging Station to the Electric Vehicle and the maximum length of the cable shall be limited to 05 metres.

32.1 TECHNICAL DETAILS OF CIVIL & STRUCTURAL WORKS:

A. Soil investigation and Land Development

i. Soil investigation shall be carried out with minimum one Trial pit and two bore holes (150mm Diameter, 10m depth into virgin soil or to refusal whichever occurs earlier) per each EV station and topographical survey needs to be carried at 2m x 2m grids for plan area and 5m beyond the plot boundary.

ii. Site grading for Parking area shall be provided with Interlocking tiles with minimum thickness of 75mm with 300mm thickness sand cushion below and proper sloping

towards peripheral drains.

iii. Minimum Plot area and Roof Canopy Area requirements for EV station
   a. For One Car - Plot Area- Length 6.5m and Width 2.4m per Car / Canopy Area- Length 5.7m and Width 2.4m per Car

iv. Minimum height clearance of canopy shall be 3m for car

B. Roof Canopy Arrangement

i. The Roofing system shall serve as the roof for the EV charger and hence a waterproof roofing is expected. The rainwater falling on the roof is to be drained such that no water falls on the vehicles parked for charging.

ii. Roof shall be provided with Seamless steel color coated sheet of minimum thickness 0.5mm TCT suitable for solar module fixing as well as to serve as roof covering for charging vehicles.

iii. Stainless steel clip lock shall be used for module fixing with roof.

iv. Canopy structure shall be connected to foundations using base plate and foundation bolts.
   - The base plates and stiffeners shall be welded to the main leg. The welds shall be continuous fillet type welds.
   - The minimum thickness of members considered are as follows:

     Main leg members - 5 mm
     Bracing - 5 mm
     Gusset/Stiffener plates - 5 mm

v. Permanent barrier posts galvanized (610g/sq.m) tubular pipe structure of grade minimum Yst. 240 conform to IS:1161 shall be provided in front side of EV chargers to allow a safe distance between EV charger and vehicles.

C. Foundation for Canopy Structure and other structures:

i. Finished ground level shall be minimum 300mm above existing ground level/ nearest road level whichever is higher.

ii. All the Foundations shall be designed based on soil investigation report.

iii. Canopy Structure pedestal shall be minimum 500mm above Finished ground level. EV charger and LT panel Foundations plinth shall be minimum 300 mm above finished ground level.

iv. Factor of safety for stability against overturning, sliding and uplift shall be considered as per IS 456.
v. Exposed surface of concrete shall be plastered in CM 1:3 with 12mm thick.
vi. Exposed surface of concrete shall be painted with 2 two coats of distemper paint.

D. EV charger, Transformer and Double Pole Foundation:

i. Block/Pedestal type foundation shall be provided for the EV charger, transformer, and LT panel with suitable structural base frame and mounting arrangement.
ii. Double pole structure for Transformer shall be provided with Muffing and Foundation depth shall be minimum $1/6^{th}$ the height of Pole.

E. Chain – link Fencing:

i. Fencing shall be provided at the two ends of the service road and the also around the proposed EV Charging station with 1No. of Gate.
ii. The Minimum height of fence shall be 1.5m above the FGL.
iii. All fence posts shall be of 50 x 50 x 6 MS angles spaced at 2m center to center distance.
iv. Vertical and horizontal flats of size minimum 50mmX4mm thickness shall be provided at an interval of 300mm throughout the length and height of the fence
v. Edge of the fence and at center of fence shall be provided with minimum 50X50X6 MS angles
vi. All gates shall be of structural steel of minimum 1.5 meters width.
vii. All structural steel sections shall be painted with synthetic enamel paint.

F. Gravel Spreading for Access Road and Parking area

i. A layer of 80mm thickness of stone aggregate of 35mm nominal size shall be spread uniformly over compacted soil across the access road and in the Proposed parking area.
ii. Floor tiles shall be provided at the parking area designated for charging of 6 Nos of Electric vehicles.

G. CIVIL AND STRUCTURAL DESIGN PARAMETERS

LIST OF INDIAN STANDARDS TO BE FOLLOWED: The under mentioned codes are basic codes to be referred for civil design of EV charging stations

- IS 456 - 2000: Indian Standard Code of Practice for Plain and Reinforced Concrete.
- IS 800 - 2007: Indian Standard Code of Practice for General Construction in Steel.
- IS 875 (Part 1)-1987: Indian Standard Code of Practice for Design loads (other than Earthquake) for buildings and structures. (Dead Loads)
- IS 875 (Part 2)-1987: Indian Standard Code of Practice for Design loads (other than Earthquake) for buildings and structures (Live Loads)
- IS 875 (Part 3)-2015: Indian Standard Code of Practice for Design loads (other than Earthquake) for buildings and structures. (Wind Loads)
- IS 1893 (Part-1 & 4) - 2005: Criteria for Earthquake resistant design of structure (General Provisions & Buildings).
- IS 13920 - 2016: Ductile Detailing of Reinforced Concrete Structures subjected to Seismic Forces (where applicable).
- SP – 34-1987 for detailing of concrete structures.
- IS 808 -1989: Dimensions for Hot rolled Steel Beams, Column, Channel and Angle section

H. MATERIALS:

i. R.C.C.

- Ordinary Portland Cement Grade 43 conforming to IS 8112 or Portland Pozzolana Cement conforming to IS: 1489
- Grade of RCC shall be Minimum M25 & PCC shall be 1:4:8. minimum PCC shall be 75mm thick below foundations.
- Reinforcing steel shall be HYSD/TMT Bars of Grade Minimum Fe500 conforming to IS: 1786.

ii. CANOPY STRUCTURAL STEEL

- Structural steel shall be of mild steel conforming to IS: 2062 -2011. Minimum Grade shall be E250A in accordance to IS: 808 – 1989. Grade for Structural pipes shall be Minimum Yst:240MPa and shall conform to IS:1161- 2014

- Cold form steel shall conform to IS:811- 1987 and minimum thickness shall be 1.5mm.
- All fastening bolts and nuts shall be hexagonal type & mild steel property class 5.6 and shall conform to IS: 1367 (part II) - 2002, IS: 1367 (part III) – 2002 and IS: 1367 (part IV) – 1994.
- All foundation bolts shall be mild steel (property class 4.6) and shall conform to IS: 1367 (Part- 6) - 1994 & IS: 5624 - 1993 and material grade shall be as per IS: 2062 (Grade E250A).
- All nuts shall conform to IS: 1363 Part 3 -2002 of property class 5.
- All plain washers shall conform to IS: 2016.
- All spring washers shall conform to IS: 3063.
- Minimum diameter of fastening bolts for steel structures shall be 12 mm.
- EV station canopy supporting structure shall be hot dip galvanized with a minimum coating thickness of 610 g/sqm.
- All foundation bolts shall be hot dip galvanized to its full length in accordance with IS: 5624 /1367 with minimum coating thickness of 610 g/sqm.
- Fastening bolts & nuts shall be hot dip galvanized with a minimum coating thickness of 305 g/sqm.

I. UNIT WEIGHTS OF MATERIALS:

- PCC - 24 kN/cum
- RCC - 25 kN/cum
- Structural Steel - 78.5 kN/cum
- Cold formed Steel - 78.5 kN/cum

J. LIVE LOADS:

Live Loads shall be 0.75kN/sqm as per IS 875 (Part -2) 1987 for Canopy structure along with Solar PV panels loads.

K. DEAD LOADS:

Dead loads of EV charger and LT panel shall be considered for foundation design.

L. WIND LOADS

- Basic wind speed shall be 39m/s as per IS: 875(Part -3) 2015
- Risk Coeff. K1 = As per Clause 6.3.1
  K2 = As per Clause 6.3.2
  K3 = As per Clause 6.3.3
  K4 = As per Clause 6.3.4
- Other factors as per IS: 875 (Part -3) 2015 for Buildings

M. EARTHQUAKE FORCES:

- Seismic Zone shall be Zone III as per IS 1893(Part -1) 2005
- Importance Factor = 1.5 for EV charging Canopy structure

N. LOAD COMBINATION WITH LOAD FACTORS:

Load combinations with Partial safety factors for limit state of design is considered as per IS: 456-2000, IS: 800-2007 & IS: 1893-2005.

O. DESIGN PARAMETERS

General design parameters considered are as follows:

- Clear cover for concrete (As per IS: 456-2000)
- Footing = 50 mm
- Column/Pedestal = 40 mm
- Foundation shall be designed for critical load combination load reference with
- IS: 1904 / IS: 1080 / IS: 2950.
- Columns are designed for Axial/bending for critical load combination using standard/ In-house programs.
- The structures shall be detailed as per IS 800, IS: 13920 & SP: 34.

P. STRUCTURAL ANALYSIS – Canopy Structure

The Canopy Structure shall be analyzed using STAAD Pro./relevant software.

Q. STRUCTURAL DESIGN

The structural member's viz., Structural steel members, Columns & Footings shall be designed for the most critical forces using Limit State Design method of IS 800 and IS 456 respectively.

32.2 TECHNICAL DETAILS OF ELECTRICAL WORKS:

All the electrical HT & LT works required to be done as part of the service line for the EVCS must be in compliance with norms set forth by the Electrical Inspectorate and the utility KSEBL.

A. Earth protection system for charging stations:

i. Co-ordination of various protective devices shall be required.
ii. All EV charging stations shall be provided with an earth continuity monitoring system that disconnects the supply in the event that the earthing connection to the vehicle becomes ineffective.
iii. Earthing of all EV charging stations shall be TN system as per IS 732.
iv. Detection of the electrical continuity by the protective conductor: A protective earth conductor shall be provided to establish an equipotential connection between the earth terminal of the supply and the conductive parts of the vehicle. The protective conductor shall be of sufficient rating to satisfy the requirements of IEC 60364-5-54.

B. Requirement to prevent fire for EVs Charging Stations:

Firefighting system for EVs Charging Stations shall be as per relevant provisions of CEA (Measures Relating to safety and Electric Supply) Regulations 2010.

i. Enclosure of charging stations shall be made of fire-retardant material with self-extinguishing property and free from Halogen.
ii. Fire detection, alarm and control system shall be provided as per relevant IS.

C. Testing of EVs charging stations

i. All apparatus of EV Charging Station shall have the insulation resistance value as stipulated in the relevant IEC 61851-1.
ii. Any testing as specified in the manufacturer's instructions for the RCD and the EV charging station.

33. LABELLING OF EV PCS

The PCS shall be labeled with ANERT logo on the front panel of Canopy. The logo will be furnished to the successful bidder before the issue of delivery instructions. The

logo shall be of vinyl sticker type. Further the platform for vehicle shall be painted indicating the electric vehicle parking space with symbols/ logos as shown below:

Inside of the shelter painting/name board shall be made to indicate the "Bay" numbering for each parking space. Example: Bay - 1, Bay - 2 etc.

34. INSURANCE

35.1 The power plant must be insured at every stage of operation – from Material dispatch, storage, completion of installation and till 5 years after commissioning. The insurance coverage on handing over of the system must include all conditions of **Standard Fire and Special Perils Policy (Material Damage)**.

35.2 The insurance premium for the 5 years of warranty is to be paid by the bidder. Only the system components are to be insured. On handing over of the system, the original insurance policy is to be handed over to the authorised person at the site of installation and a copy to ANERT District Office. The annual premium payment receipt must be handed to the authorised person at the site of installation.

FORMAT FOR COVERING LETTER

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

Sir,

I/We hereby 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 & Renewable Energy Research and Technology (ANERT), at the rates quoted against each item.

I am/We are remitting herewith the required amount of Rs. ..... towards the cost of e-tender and Earnest Money Deposit by electronic payment vide transaction No ..... dtd.....

Yours faithfully,

Place:

Date:

Signature

Name

Designation

(Office Seal)

FORMAT A – UNDERTAKING FOR NO BLACKLISTING & NO BANNING

(To be provided on Rs.200 Non-Judicial Stamp paper. In Case of JV the following format is to be provided by Each Member of the Joint Venture on their respective letterhead, signed by respective authorized Signatory along with Authorized Signatory for which POA is attached with Bid))

Undertaking for No Blacklisting & No Banning

To

The CEO
ANERT

Sub: Design, Supply, Installation, Testing, Commissioning and Maintenance of Public Electric Vehicle Charging Station for devotees during the festive season on ad-hoc basis at Nilakkal Parking Ground, Sabarimala, Kerala

I / We hereby declare that presently our Company/Limited Liability Partnership/ Partnership Firm/ Sole Proprietorship is having unblemished record and is not declared ineligible for corrupt/fraudulent practices by any State/Central Government/PSU on the date of Bid Submission.

I / We further declare that presently our Company/Limited Liability Partnership/ Partnership Firm/ Sole Proprietorship is not blacklisted and not declared ineligible for reasons other than corrupt/fraudulent practices by any State/Central Government/PSU on the date of Bid Submission.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, our security may be forfeited in full and the tender if any to the extent accepted may be cancelled.

(Signature & Seal of Authorized Signatory for which POA attached)

Name of Authorized Signatory:

Designation:

Date:

Place:

FORMAT B – CERTIFICATE OF BIDDER'S FINANCIAL QUALIFICATION

(On Letterhead of the respective entity for which the below details are provided.)

Financial Qualification Certificate

(Rupees in Lakhs)

S/N	Financial parameters	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
1.	**Net Worth**					
a)	Paid up Capital					
b)	Free Reserves and Surplus*					
c)	Misc expenses to the extent not written off					
	Net Worth (a+b-c)					
2.	**Annual Turnover ****					

** Free Reserve and Surplus shall be Exclusive of Revaluation Reserve, written back of Depreciation Provision and Amalgamation.*

*** Annual total Income/ turnover as incorporated in the Profit and Loss Account excluding non-recurring income, i.e., sale of fixed asset etc.*

It is certified that all the figures are based on audited accounts read with auditors report and Notes to Accounts etc.

(Signature & Seal of Authorized Signatory
Name of Authorized Signatory:
Designation:
Date:
Place:

Certifying Chartered Accountant:
Name of Firm:
UDIN No:
Date:
Place:

Note:

1. *In addition to above certificate from Chartered Accountant, Bidder is required to submit Firm's Annual Audit Report, Balance sheet, Profit & Loss and Income Tax Returns / CA certificate for last Five years i.e., F.Y: 2015-16, 2016-17, 2017-18, 2018-19 & 2019-20.*

ANNEXURE A – SUMMARY OF BID QUALIFICATION REQUIREMENTS

(To be filled in by the bidder)

<table>
<tr><td>1.</td><td>Name of the bidder</td><td colspan="6"></td></tr>
<tr><td>2.</td><td>Address in full</td><td colspan="6"></td></tr>
<tr><td>3.</td><td>Contact Details
Mobile
: Land
Phone Fax
Email</td><td colspan="6"></td></tr>
<tr><td>4.</td><td>Name and Designation of the authorised signatory</td><td colspan="6"></td></tr>
<tr><td>5.</td><td>Whether the bidder is a bonafide manufacturer/ integrator of the item tendered (Yes/No)?</td><td colspan="6"></td></tr>
<tr><td>6.</td><td>Details of EMD submitted along with the bid in favour of CEO ANERT</td><td colspan="6"></td></tr>
<tr><td rowspan="3">7.</td><td rowspan="3">Total number and Aggregate capacity of EVCS
(Proof to be enclosed)</td><td>Year / Criteria</td><td>2018</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td></tr>
<tr><td>Number of systems</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Capacity (kW)</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>8.</td><td>Annual turnover of the firm during last five years (Rs.)
(Proof to be enclosed)</td><td colspan="6">2022-23 .....
2021-22 .....
2020-21 .....
2019-20 .....
2018-19 .....</td></tr>
</table>

9.	No. of service centres /Authorised service providers in Kerala (Proof to be enclosed)	
10.	Whether Bidder was/is De-barred by ANERT (Yes/No)? If ' Yes' period of De-Barring:	
11.	Agreement submitted (Yes/ No)?	

Documentary evidence for the bid qualification requirements are submitted along with this document and the details furnished above are true and correct.

Signature
of authorised signatory

Name

Designation

Date:

(office seal)

ANNEXURE B - AGREEMENT

ARTICLES OF AGREEMENT executed on this the . . . . . day of . . . . Two thousand and . . . .between the **Agency for New & Renewable Energy Research and Technology** (hereinafter referred to as **ANERT**) of the one part and Sri . . . . (Name and Address of the tenderer) hereinafter referred to as "the Bounden") of the other part.

WHEREAS in response to the Notification No. . . . . dated . . . . the bounden has submitted to ANERT a e-tender for the ***Design, Supply, Installation, Testing, Commissioning and Maintenance of Public Electric Vehicle Charging Station for devotees during the festive season on ad-hoc basis at Nilakkal Parking Ground, Sabarimala, Kerala*** specified therein subject to the terms and conditions contained in the said e-tender.

AND WHEREAS the bounden has furnished to ANERT a sum of Rs. . . . . .. as Earnest Money Deposit for execution of an agreement undertaking the due fulfilment of the contract in case his e-tender is accepted by ANERT. NOW THESE PRESENTS WITNESS and it is hereby mutually agreed as follows: -

In case the e-tender submitted by the bounden is accepted by ANERT and the contract for . . . . is awarded to the bounden, the bounden shall within Fifteen days of acceptance of this e-tender, execute an agreement with ANERT incorporating all the terms and conditions under which ANERT accepts this e-tender.

In case the bounden fails to execute the agreement as aforesaid incorporating the terms and conditions governing the contract, ANERT shall have power and authority to recover from the bounden any loss or damage caused to ANERT by such breach as may be determined by ANERT by appropriating the moneys inclusive of Earnest Money deposited

by the bounden and if the Earnest Money is found to be inadequate the deficit amount may be recovered from the bounden and his properties movable and immovable in the manner hereinafter contained.

All sums found due to ANERT under or by virtue of this agreement shall be recoverable from the bounden and his properties movable and immovable under the provisions of the Revenue Recovery Act for the time being in force as though such sums are arrears of land revenue and in such other manner as ANERT may deem fit.

In witness whereof Sri . . . . . (Name and Designation) for and on behalf of the Agency for New & Renewable Energy Research & Technology and Sri . . . . the bounden have hereunto set their hands the day and year shown against their respective signature.

Signed by Sri	Signed by Sri . . . . .
(Date)	(Date) . . . .
in the presence of witnesses	in the presence of witnesses
1.	1.
2.	2.

ANNEXURE C – BIDDER'S TECHNICAL INFORMATION SUMMARY (EVCS)

TECHNICAL PARTICULARS OF COMPONENTS

Technical information to be provided			
Sl. No.	**Brief Description**	**Name and address of the manufacturer/ Make/ Description**	**Standards to which it complies as per test certificate**
1	**CCS – 120 kW (2 x 60 kW)**		
	• Test certificate No: • Date of Test certificate and validity • Date of interoperability certificate from ARAI • Lab from which test certificate is obtained: • Copy of test certificate enclosed (Yes/No)?		
3	Any other equipment required to complete the installation		

- Bidders are to clearly mention the name and address of the manufacturer of each component quoted by them.
- Also attach test certificates in full of relevant equipment. Attach the above information in this format & upload as additional attachments in cover 2
- Bidder must submit valid test certificates of charging station equipment offered. Bids without valid IEC test certificates will be rejected.

Signature
of authorised signatory

Name

Designation

Date:

(office seal)

ANNEXURE D – DECLARATION BY THE BIDDER

e-Tender Notification No: ....., dtd …….. for Design, Supply, Installation, Testing, Commissioning and Maintenance of Public Electric Vehicle Charging Station for devotees during the festive season on ad-hoc basis at Nilakkal Parking Ground, Sabarimala, Kerala

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 13 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 5 percent of the Contract Price for the due performance of the Contract;
5. We are not participating, as Bidders, in more than one Bid in this bidding process;
6. Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by the ANERT or Government of Kerala;
7. 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.
8. Our firm has obtained the certifications from MNRE or NABL approved Test laboratories that the goods and services are satisfying the technical criteria specified in the bid.

Signature

Date

Name

ANNEXURE E – DECLARATION OF RELATIONSHIP WITH ANERT EMPLOYEE

(to be signed and submitted by the bidder along with the bid)

Tender Notification No.: ……..
Design, Supply, Installation, Testing, Commissioning and Maintenance of Public Electric Vehicle Charging Station for devotees during the festive season on ad-hoc basis at Nilakkal Parking Ground, Sabarimala, Kerala

To

The CEO
ANERT

Name of the ANERT employee with Designation:

Name of the bidder related to the employee:

This is to put on record that Shri/Smt …….. currently working as …….. in ANERT is related to ……., who is the bidder in the bid. We are aware of the Anti-corruption policy of ANERT and will observe the highest standards during the procurement and the execution of contract and shall retain from corrupt, fraudulent, collusive or coercive practices on competing for the contract.

Signature

Name

Date