Autokast Ltd

ISO 9001 : 2015 Certified Company
RDSO Approved Class 'A' Foundry

TENDER DOCUMENT

SITE CLEARING, INSTALLATION, TESTING AND COMMISSIONING OF GRID TIED GROUND MOUNTED SOLAR PV POWER PLANT IN THE LAND OWNED BY AUTOKAST LTD WITH AN INSTALLED CAPACITY OF 2.0 MWp

SN Puram Post, NH 66,
Cherthala, Alappuzha
Kerala 688582

September 2021

Autokast Ltd
(A Government of Kerala Undertaking)
ISO 9001 : 2015 Certified Company
RDSO Approved Class 'A' Foundry
SN Puram Post, NH 66, Cherthala, Alappuzha, Kerala-688582
Email: autokastoffice@gmail.com, Contact No: 0478-2864961 to 64

No : AKL.PROJ.21.SC/SOLAR PANEL Date: 25.09.2021

NOTICE INVITING E-TENDER

Online tenders are invited for the**" SITE CLEARING, INSTALLATION, TESTING AND COMMISSIONING OF GRID TIED GROUND MOUNTED SOLAR PV POWER PLANT IN THE LAND OWNED BY AUTOKAST LTD WITH AN INSTALLED CAPACITY OF 2.0 MWp".** The tender is invited in two cover system from the registered and eligible firms through e-procurement portal of Government of Kerala (https://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.

Name of Work	SITE CLEARING, INSTALLATION, TESTING AND COMMISSIONING OF GRID TIED GROUND MOUNTED SOLAR PV POWER PLANT IN THE LAND OWNED BY AUTOKAST LTD WITH AN INSTALLED CAPACITY OF 2.0 MWp
Ref No	AKL.PROJ.21.SC/SOLAR PANEL
Estimated Cost	Rs. 1000 Lakhs
Cost of tender documents	Rs. 10,000.00
EMD	Rs. 2,00,000.00
Tender Publishing Date	25.09.2021, 5:00pm
Last date of receipt of tender	08.10.2021, 5:00pm
Date of Opening of Tender	12.10.2021, 11:00am
Contact Details	autokastoffice@gmail.com
For more details visit	https://etenders.kerala.gov.in

Sd/-

Managing Director

GENERAL TERMS AND CONDITIONS

1. ONLINE BIDDER REGISTRATION PROCESS:

1.1 Bidders should have a Class II 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 0471-2577088/188/388 / through email: etendershelp@kerala.gov.in or helpetender@gmail.comfor assistance in this regard.**

2. ONLINE TENDER PROCESS:

The tender process shall consist of the following stages:

2.1 **Downloading of tender document**: Tender document will be available for free download on www.etenders.kerala.gov.in. However, tender document fees if any shall be payable at the time of bid submission as stipulated in this tender document.

2.2 **Publishing of Corrigendum**: All corrigendum's, whatsoever [if any applicable] shall be published on www.etenders.kerala.gov.in and shall not be available elsewhere.

2.3 **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**.

2.4 **Opening of Technical Bid and Bidder short-listing**: The technical bids will be opened, evaluated and shortlisted as per the eligibility and technical qualifications. All documents in support of technical qualifications shall be submitted (online). Failure to submit the documents online will attract disqualification. Bids shortlisted by this process will be taken up for opening the financial bid.

2.5 <u>Opening of Financial Bids</u>: Bids of the qualified bidder's shall only be considered for opening and evaluation of the financial bid on the date and time mentioned in critical date's section.

3. <u>DOCUMENTS COMPRISING BID</u>:

3.1 <u>(a) The First Stage</u> – Part 1 Pre-Qualification cum Technical Bid with Commercial terms without price bid

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

1. GST certificate.
2. Payment Terms duly signed and sealed
3. Techno Commercial offer. [Your terms and conditions against our terms without indicating the price details].
4. Technical Deviation Statement (Annexure IV)
5. Eligibility Criteria (Annexure V)
6 Technical Summary
7. Technical Specifications
8. Annexure IA- Bidder Basic Details
9. Annexure IB – Letter of submission
10. Annexue III – Banking Details along with cancelled copy of cheque
11. Annexure VII – Non Blacklist Declaration form

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

3.1 <u>(B)The second Stage</u>

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

<u>Note</u>: 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.

Fixed price: ***<u>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</u>***

***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)

The Bidder shall pay, a tender document fee of Rs. 10,000.00 and Earnest Money Deposit or Bid Security of Rs. 200,000.00 The Bid security is required to protect the purchaser against risk of Bidder's conduct, which would warrant the forfeiture of security.

Online Payment modes: The tender document fees and EMD can be paid in the following manner through e-Payment facility provided by the e-Procurement system

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 e-Procurement 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 (Erstwhile Thane Janata Sahakari 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	ShamraoVitthal Co-operative Bank
8	Corporation Bank	28	South Indian Bank
9	Cosmos Bank	29	State Bank of India
10	Deutsche Bank	30	Syndicate Bank
11	Development Credit Bank	31	UCO Bank
12	Dhanalaxmi Bank	32	Union Bank of India
13	Federal Bank	33	UPPCL
14	HDFC Bank	34	Vijaya Bank
15	ICICI Bank	35	Axis Bank
16	Indian Overseas Bank		
17	JantaSahakari Bank		
18	Jammu & Kashmir Bank		
19	Karur Vysya Bank		
20	Kotak Bank		

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

a) *SBI Account Holders*shall click ***SBI*** option to with its Net Banking Facility., where bidder can enter their internet banking credentials and transfer the Tender Fee and EMD amount.

b) *Other Bank Account Holders* may click ***Other Banks*** 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/-*

Any transaction charges levied while using any of the above modes of online payment has be borne by the bidder. The supplier/contractor's bid will be evaluated only if payment status against bidder is showing "Success" during bid opening.

5 SUBMISSION PROCESS:

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.

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.

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.

6VALIDITY

6.1 The tender offer shall be kept valid for acceptance for a period of 6 months from the date of opening of offers. The offers with lower validity period are liable for rejection.

6.2 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 BLACKLIST

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 Autokast Limited and EMD shall be forfeited against any losses incurred by Autokast.

9 BIDDERS LOCATION

9.1 The tenderers are requested to furnish the exact location of their office with detailed postal address and pin code, telephone and fax nos. etc. in their tenders.

9.2 All communication shall be made to the registered email of the bidder in the e-tendering systems and AUTOKAST LIMITED shall not be responsible for non-receipt or delay of any such communication.

10 CORRUPT AND FRAUDLENT PRACTICES

Autokast Limited 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 Autokast Limited 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 Autokast.

11 CONFLICT OF INTEREST

11.1 The service Provider(s) is required to provide professional, objective, and impartial services, at all times holding Autokast Limited‟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 Autokast Limited any situation of actual or potential conflict that impacts its capacity to serve

12 CONFIDENTIALITY

12.1 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 Autokast Limited 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.

12.2 Any attempt by the agency (ies) or anyone on behalf of the Suppliers to influence improperly Autokast Limited 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.

12.3 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 Autokast Limited on any matter related to the selection process, it should do so only in writing.

12.4 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.

12.5 Proposals must be direct, concise, and complete. Autokast Limited 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.

12.6 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, Autokast Limited 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 ELIGIBILITY CRITERIA

15.1 GENERAL ELIGIBILTY CRITERIA

15.1.1 '**Bidder**' should be a Government/Govt accredited agency for execution of Renewable Energy Systems for submitting the Bid. The accreditation letter must be submitted along with the bid.

15.1.2 The Bidder should not be under any liquidation court receivership or similar proceedings on due date of submission of bid.

15.1.3 Any kind of Technical or Financial JV/Consortium is not allowed under this Tender Document.

15.2 TECHNICAL ELIGIBILTY CRITERIA

15.2.1 The Bidder should have installed & commissioned at least 4 MWp aggregate capacities of rooftop/ground mounted solar plants in India.

15.2.2 Further, for becoming eligible for participating in the bid, the bidder shall have installed a minimum single ground mount solar plant of 1 MWp capacity in Kerala.

15.2.3 The list of plants for which installation is completed and energization certificate have been received from Electrical Inspectorate will only be considered for evaluating eligibility criteria. Commissioning certificate/Sanction for Energisation from Electrical Inspectorate/Grid Connectivity Certificate from KSEB and Work order / Contract /Agreement/ from the Client/Owner shall be submitted in support of above. Contact details of the respective customers shall be enclosed as prescribed in the PQ questionnaire.

15.2.4 Further, these plants should have been completed on time as per the stipulated time in the work order and EOT (Extension of Time) shall not have been availed.

15.3 **FINANCIAL ELIGIBILITY CRITERIA**

15.3.1 **NET WORTH**

The average net worth in the 3 financial years preceding the bid opening date shall be positive.

15.3.2 **ANNUAL TURNOVER**

The bidder shall have an average annual turnover equal to or more than Rupees 15.0 Crores for the last three financial years immediately preceding the bid opening date. Also, the bidder must have SP1B or higher CREDIT rating for Solar.

15.3.3 The bidders shall submit audited financial statements in support of their financial capability.

15.3.4 For the purposes of meeting financial requirements, only unconsolidated audited annual accounts shall be used. However, audited consolidated annual accounts of the Bidder may be used for the purpose of financial requirements provided, the Bidder has at least fifty one percent (51%) equity in each company whose accounts are merged in the audited consolidated accounts and provided further that the financial capability of such companies (of which accounts are being merged in the consolidated accounts) shall not be considered again for the purpose of evaluation of the Bid.

15.3.5 Bidders shall furnish documentary evidence duly certified by Authorized Signatory and the Statutory Auditor / Practicing Chartered Accountant of the Bidding Company in support of their financial capability.

15.3.6 **SOLVENCY**

The Bidder should provide a solvency certificate to the tune of Rs. 10 Crores from a Scheduled Bank. The Solvency certificate shall be within 6 months prior to tender date.

16 TECHNICAL SUBMITTAL

16.1 The bidder shall mandatorily submit the following documents along with his bid:

16.1.1 Single Line diagram of the proposed solar power plant

16.1.2 Tentative Plant Layout showing location of components

16.1.3 Simulation reports using a standard software such as PV Syst/Helioscope. Simulation reports shall be made using the PV Modules and Inverters proposed to be supplied for this project. If the bidder is proposing more than one make, reports for all possible combinations of the offered components shall be submitted.

16.1.4 A brief write up of the proposed grid connectivity procedure showing the type of PPA/agreement with Utility.

16.1.5 Drawings of the proposed Module Mounting Structure (MMS) with STAAD reports to prove that the same is designed to withstand wind speed of 150km/h.

16.1.6 Guaranteed Technical Particulars of the following components:

16.1.6.1 SPV Module

16.1.6.2 Power Conditioning Unit

16.1.6.3 Step-Up transformer

16.1.6.4 String Monitoring Unit

16.1.6.5 Module Mounting Structure

17 FACTORY ACCEPTANCE TESTING (FAT)

The following materials shall be dispatched to site from respective factories only after conducting Factory Acceptance Testing (FAT) at the manufacturers factory.

17.1 Solar PV Modules

17.2 Module Mounting Structure

17.3 Grid Tie Inverter

18 PAYMENT TERMS

18.1 The amount quoted for the Site clearance will be adjusted against the final bill amount for the Installation, testing and commissioning of grid Tied Ground Mounted Solar PV Power Plant in the land owned by Autokast Ltd with an installed capacity of 2.0 MWp

18.2 No advance payment will be made.

18.3 15% of the total contract value will be released against delivery and acceptance of Module Mounting Structure (MMS) at site.

18.4 25% of the total contract value will be released against delivery and acceptance of Solar PV Modules at site. The quantity of PV Modules shall be as per the approved design.

18.5 10% of the total contract value will be released against delivery of Power Conditioning Units (Inverters) at site.

18.6 20% of the total contract value shall be released against completion of installation of Solar PV Modules.

18.7 20% of the contract value will be released against completion of installation in all respects.

18.8 Balance 10% of the contract value will be released upon successful testing, commissioning and grid connectivity of the solar power plant.

19 RIGHT TO TERMINATE THE PROCESS

19.1 AUTOKAST reserves the right to terminate the tender process at any time and withoutassigning any reason. The Purchaser makes no commitments, express or implied, that thisprocess will result in a business transaction with anyone. The Purchaser will not be liablein any way to any person in case of termination of this Bid process except that if the EMD has been received from the Bidder prior to such termination, the EMD will be returned(without any interest) as promptly as possible to the respective Bidders.

19.2 FORCE MAJEURE

Any delay due to Force Majeure will not be attributable to the bidder. Force Majeure events shall mean one or more of the following acts or events

Acts of God or events beyond the reasonable control of the affected party whichcould not reasonably have been expected to occur; exceptionally adverse weather conditions; lightning, earthquake, cyclone, flood, volcanic eruptions, land slide or fire;Radioactive contamination or ironizing radiation; strikes or boycotts (other than those involving the service providers or its Employees/ representatives or attributable to any act or omission of any of them), interrupting service of the project for a period exceeding a continuous seven days; an act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, riot, embargo, insurrection, terrorist or military action, civil commotion or politically motivated sabotage

which prevents rendering of services by the service provider for a period exceeding a continuous seven days.

20 DISQUALIFICATION

The Proposal is liable to be disqualified in, inter alia, any of the following cases or in case the Bidder fails to meet the bidding requirements as indicated in this tender:

20.1 Proposal not submitted in accordance with the terms, procedure and formats prescribed in this document or treated as non-conforming proposal;

20.2 During validity of the Proposal, or its extended period, if any, the Bidder increases its quoted prices;

20.3 The Bidder's Proposal is conditional and has deviations from the terms & conditions of tender.

20.4 The Proposal is received in incomplete form

20.5 The Proposal is received after the due date and time

20.6 The Proposal is not accompanied by all the requisite documents

20.7 . The information submitted in the Technical Proposal is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the contract (no matter at what stage) or during the tenure of the contract including the extension period, if any

20.8 The Commercial Proposal is enclosed within the technical Proposal or other Proposal

20.9 The Bidder tries to influence the proposal evaluation process by unlawful/corrupt/ fraudulent means at any point of time during the Bid process;

20.10 In case any one party submits multiple proposals or if common interests are found in two or more Bidders, the Bidders are likely to be disqualified, unless additional Proposals/Bids are withdrawn upon notice immediately.

21 SPECIAL CONDITIONS

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

21.2 The tenders will be opened 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.

21.3 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.

21.4 During the tender evaluation, Autokast Limited may seek more clarifications/details from any or all of the tenderers, if felt necessary.

21.5 The price bids of the tenderers, which submitted the required documents only will be opened and the work will be awarded based on the evaluation after fulfilling all the requirements.

21.6 Valid test certificate of the model offered / sub-components as per the technical specification provided in this tender document, shall be issued by MNRE or NABL accredited labs should be enclosed.

21.7 If more than one model with different sub-components (such as battery, modules or LED luminaire) are offered for the price quoted, test certificates of the components (as per technical specifications provided in this tender document) should be submitted. Supplies shall be limited to only the model(s) offered to and approved by Autokast Limited.

21.8 If found essential, Autokast Limited 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.

21.9 Total system warranty (including luminary and battery) should be 5 years from date of Commissioning.

21.10 Autokast Limited reserves the right to increase / decrease the final quantity to be ordered without changing the unit price offered by the bidder.

21.11 **The rate quoted should be all inclusive of clearing of the site, delivery of materials at the locations to be specified, and the cost of materials and labour for the civil works, installation and commissioning, warranties, GST and all other expenses.**

21.12 The site located for installing the Solar Power Plant is having 355 Nos Acasia trees spread in around 8.85 acres. The value quoted in the installation should be after considering the value of 355 Nos Acasia trees and it should be quoted separately.

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

21.14 The evaluation of the price bid will be based on the of all-inclusive amount quoted by the bidder.

22 INSURANCE

22.1 All equipment, machinery, works etc which are furnished, installed, constructed and handed over/to be handed over to the AKL under this contract for the completion of project shall be insured by the Contractor for the period of contract i.e. for 5 years. The entire cost on account of this shall be borne by the Contractor. Losses or damage if occurred to such machinery, equipment and work shall be made good at the risk of Contractor. It shall be the responsibility of the contractor to maintain adequate insurance coverage at all times.

22.2 The machinery, equipment and other valuable material of the contractor at work site shall be insured by the Contractor so that any loss or damage due to force majeure situation can be taken up by the contractor with the insurance companies for getting their claims. AKL will not give any financial assistance on this account.

22.3 All the personnel employed/engaged by the contractor shall have adequate insurance coverage. Any claim due to mishap accidence or otherwise to personnel/equipment shall be taken up by the contractor, directly with the insurance company. AKL will not have any liability in this respect whatsoever.

22.4 The contractor, without limiting AKL's obligations and responsibilities shall insure.

A. The work together with materials and plant to the full replacement cost and third party liability at site.

B. An additional sum of 15% of such replacement cost to cover additional cost and incidental to the rectification of loss or damage including professional fees and cost of demolishing and removing any part of works and of removing debris of whatsoever nature, and

C. The contractor's equipment and other things brought to site for a sum sufficient to provide for their replacement at the site.

D. The insurance against third party liability at site shall be ensured before commencing the execution of work against any damage or loss or injury which may occur to the equipment being shifted/installed or to any property or person (including property and employees of the employer) by or arising out of the execution of works or temporary works in carrying out of the contract. The insurance coverage shall be revalidated till the certification of project.

21.5 The insurances under item A and B shall be in the joint names of Contractor and AKL and shall cover

i. AKL and the Contractor against all losses or damage from whatsoever cause arising from the start of work at the site until the date of issue of the relevant taking over certificate in respect of the work or any section or part thereof as the case may be , and

ii. The Contractor for his liability:

1. During the defects liability period for loss or damage arising from a cause occurring prior to the commencement of defect liability period.

2. For loss or damage caused by the Contractor in the course of any operations carried out by him under the terms of the contract and

3. For loss or damage caused by the Contractor in the course of any operation carried out by him during execution of works to the neighboring habitats, life and property in an area of 200 meters around the boundary of the site.

21.6 If the Contractor fails to effect in force the insurances referred to the above clauses or any other insurance which he may be required to effect under the terms of the contract, then and in any such date, the AKL may effect and keep in

force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the AKL as aforesaid from any amounts due or which may be become due to the Contractor or recover the same as a debt due from the Contractor.

23 WORK COMMENCEMENT, PERIOD OF COMPLETION AND DATE OF COMMISSIONING

23.1 The Contractor shall complete the implementation in all respect within 9 months from the official date of commencement of work which shall be on or before 10 days from the date of executing Agreement.

23.2 The site in as is where is condition shall be handed over to the Contractor by the official in charge within 10 days from the date of execution of Agreement. All the works stipulated under the scope of the Contract shall be completed in all respects, supplies made service provided and final cleaning up done and required testing shall be completed and commissioned before the expiry of the time of completion thus worked out, unless the time of completion is postponed and period of completion is extended by a written letter from the Agreement Authority.

23,3 All commissioning test shall be conducted by the contractor in presence of AKL Officers delegated by the official in charge and the approvals will be given only if the same is satisfactory.

23.4 The date of commissioning shall be the date on which the solar plant is synchronized into AKL grid after obtaining clearance from all statutory bodies and after conducting necessary grid interacting tests and measurements by the AKL found satisfactory. The official in charge should issue a certificate indicating the date of commissioning and an authorization certificate/commissioning report after the successful synchronization and commissioning of the plant with the grid after proving the performance ratio as detailed in tender document specification issued in this respect.

23.5 On completion of all works stipulated in the scope of work and after testing and commissioning of the project and if there are no obligations to arise out of the contract, the Engineer in charge shall furnish a certificate to the contractor to the effect that all works are completed satisfactorily and no works remains incomplete as per the terms of the contract. The issue of this certificate does not relieve the contractor from the obligations during the defect liability period and the execution of operation and maintenance for 5 years.

23. 6 The installation shall be satisfactory with the appropriate authorities and necessary rectifications if any proposed against the defects shall be done based

on the inspection in line with the tender conditions. The contractor shall also prepare and handover the as built drawing, operational manuals and maintenance manuals of the plant after completion of the project.

24 PRICE ESCALATION DUE TO EXTENSION OF COMPLETION DATE

The contractor shall not claim any price escalation in case the completion period is extended for any reason, including litigation or force majeure conditions.

25 LIQUIDATED DAMAGE:

25.1 Any delay in commissioning a project will adversely affect the total planning which in turn will affect the State and the public exchequer. Hence for any damage or loss caused to the AKL due to the failure from the part of the contractor in completing the work in all respects within the stipulated period of completion, the contractor shall compensate for the same. The liquidated damages (not as penalty) is to be realized at the end of the period of completion. The maximum amount of Liquidated Damages shall be limited to 10% of the accepted Contract amount. The rate of Liquidated Damages shall be 1% of accepted Contract amount per week of delay subject to a maximum of 10% accepted contract.

25.2 Penalty imposed, if any, shall be deducted from the amount of Liquidated Damages. If the delay prolongs in excess of 200 days from the agreed date of completion as per the original agreement the work is liable to be terminated and balance works to be completed will be arranged at the risk and cost of the contractor as per tender document.

25.3 As per the tender document and corrigendum, the contractor shall be liable to pay Liquidated Damages for lower generation as below:

25.4 If the plant outage is due to component failure or lack of maintenance and unless it is rectified within 7 days from the date of intimation to the contractor, the contractor is liable for LD. The monetary compensation for the plant outage days shall be computed as 4 units per KWp/Day multiplied by the approved average annual energy purchase cost of that year and will be deducted from the payments to the contractor till the same is rectified.

26 PERFORMANCE SECURITY DEPOSIT:

26.1 The performance security deposit is governed by Tender document.

26.2 The Contractor shall submit a Bank Guarantee for an amount equal to

10% of the total contract amount rounded off to the higher multiple of Rs 1000/ - i.e INR ……/- (rupees…….. Only) as the Performance security deposit at the time of execution of agreement. Failure of the successful bidder to submit the required Performance Guarantee shall constitute sufficient grounds for termination of Contract & forfeiting the EMD.

26.3 In order to cover the liabilities under the contract and to ensure sufficient guarantee to cover all possible liabilities pertaining to defects, short falls, remedial measures arising out of poor workmanship, materials, loss, excess amount, risk and cost of Contractor in case of alternate arrangements and any type of dues to the AKL, the Performance Security deposit for the Contract shall be collected and retained from the Contractor.

26.4 The Bank Guarantee shall be initially valid from the signing of contract and for a period of 2 years and be kept renewed from time to time till the end of defect liability period including O & M. The performance security BG will be released in equal installments each year after demonstration of desired

performance ratio (AC) during the defect liability period. The performance ratio (AC) will be calculated based on data from pyranometer/ Meteonorm/ Pyrheliometer data. No Interest shall be paid by AKL at any stage of contract on this Performance Security Deposit.

26.5 The performance ratio (AC) can be checked at any time in between if deemed necessary by the Official in charge. If any unusual degradation is noticed in the PR, the contractor shall attend and rectify the same within 24 hours on intimation. If not the performance security deposit will be forfeited.

27 AGREEMENT:

27.1

A contract agreement has to be executed by the contractor within 15 days from the date of issue of this LOA, in the prescribed format in Annexure II of this document, in Kerala State Government stamp paper worth INR …… (Rupees ……..only), along with the performance security deposit at the Office of Autokast Ltd, on a date and time to be mutually agreed.

27.2 The contractor shall provide the original contract agreement and Bank

Guarantee in lieu of Performance security deposit, appropriate power of Attorney in original and other requisite documents for signing of the contract. All the documents cited in Clause No. 36 of this document will form part of the agreement. Power of Attorney shall be ·in stamp paper attested by a registered Notary Public. Failure of the Contractor to comply with the above requirement shall constitute sufficient grounds for cancellation of award of contract and to re-arrange the Work including re-bidding at t he risk and cost of the Contractor. If due to the default of the Bidder / Contractor to furnish requisite Performance Security deposit, execute Contract Agreement or to take possession of the site and execute the Work with proper diligence, the Work will be arranged otherwise by Official -in-Charge at the risk and cost of the Contractor and if any loss to AKL results due to this, the same will be recovered from the Contractor. Recoveries on this or on any other account will be made from the sum that may be due to the Contractor on this or any other subsisting contracts or under the Revenue Recovery Act or otherwise as t he AKL may decide.

28 CONSTRUCTION PROGRAMME:

28.1 Within 15 days from the date of award, the contractor shall submit a programme showing the general method, arrangements, order and, timing for all the activities involved in the work in a systematic manner based on planning technique and tool like PERT/ CPM in M S (Projects) and GANTT chart indicating the critical events/ paths and mile stones to AKL for approval.

28.2 The contractor shall carryout the works in accordance with this programme and as approved by AKL, and complete them in all respects to the full satisfaction of AKL. Any change to the approved work plan due to unavoidable circumstances shall be made only with the prior approval of AKL.

29 PAYMENT AUTHORITY AND ENGINEER-IN-CHARGE:

29.1 The detail of Official-in -Charge is furnished below for the proper monitoring of the project.

Location of the Project	Official - in - Charge	Total Capacity (MWp)	Ele. Circle

110 KV Substation Autokast Limited SN Puram Post , Cherthala	Asst . Manager (Electrical) ; Autokast Limited	2.0	

29.2 The official- In- charge may delegate powers to subordinate officers in respect of execution of work such as Site supervision of electrical works and arrangements for interconnection facility Technical support and supervision.

29.3 The contractor shall submit bills in Triplicate to the Official in Charge with all supporting documents as specified in the bid document for preliminary audit. Measurement, check measurement and other certifications of the bills shall be done by the respective Engineers, along with necessary Invoices and other mandatory documents, after preliminary audit, shall be forwarded to the Official in Charge of each location. The work order and bill details shall be submitted, and the bill shall be audited and passed. The duly certified and audited bills for payment are to Managing Director, Autokast Ltd

29.4 The Official in charge shall verify the bill and with due approval from competent authority will make payment directly to the contractor through e payment and intimate the payment details to the concerned. The Official-in-Charge shall inform the status and details of payment effected to the agreement authority.

30 MANUFACTURING SCHEDULE :

30.1 Contractor shall specify all basic design details, including details of the PV modules and the support structures, inverters, cables, integration and power evacuation details with existing power system, with appropriate diagram and drawings. The drawings along with detailed structure design and material selected as per the relevant standards, all guaranteed technical particulars, details of each Items, make, model number and specification conforming to relevant standards, entire drawings, detailed valid test reports, list of O&M spares for major materials, detailed Bill of materials and Priced Bill of Quantities in respect of materials/ equipments and works for the entire Project shall be submitted within 15 days of order confirmation.

30.2 All materials and equipments required for successful completion and commissioning of the project must be included. The design details and other accessories should adhere to and match with the technical specification and as per the Guaranteed Technical Particulars offered by you.

30.3 The Contractor shall submit all the appropriate diagram and drawings to the agreement authority for approval. Also specifications of major items such as PV modules, inverters, module mounting structures etc shall be submitted to the Agreement authority for approval. Approvals for Layout of Power Plant Installation shall be provided by the Official-in-Charge in prior to the submission of all the drawings.

30.4 For the goods supplied from outside the purchaser's country, the supplier shall be entirely responsible for all taxes, duties, stamp duties, license fees, and other such levies Imposed outside the purchaser' s country. The contractor shall provide all MAFS (Manufacturer's Authorization Forms) for all the components specified in the bid within 15 days and before executing the Contract Agreement.

31 OPERATION AND MAINTENANCE (O&M):

31.1 The Contractor shall be responsible for Operation and maintenance of the plant at for the first 5 years from the date of commissioning. The date of commissioning is described under clause no.8 of this LoA.

31.2 The scope of the contractor be, including but not limited to,

31.2.1 Cleaning of module surface on regular basis as and when required.

31.2.2 Normal and preventive maintenance of the plant.

31.2.3 The contractor is responsible for supply of all spare parts, repairs/ replacement of any defective equipment(s) at his own cost as required from time to time during the O&M period.

31.2.4 The O&M of the project during this period shall cover the tools and tackles, spare parts, any consumables, and any systems such as modules, inverter, PCU, remote monitoring etc. required for proper functioning of the SPV system as a whole.

31.2.5 During the comprehensive O&M period, the contactor shall at his cost maintain the spares for minimizing system outage due to time required in getting replacements of defective part(s) of equipment from the manufacturer. The contractor has to use the mandatory spare(s) available at site for replacing defective part(s) of equipment for minimizing system outage temporarily and top up the quantity of spares so that the required quantity of spares shall be made available at site at all the times and same shall be handed over at the end of O&M period.

31.2.6 The solar plant should be maintained shadow free. The tree branches if any causing hindrance to the shadow free operation of solar plant shall be cut and removed under the supervision of our official.

31.2.7 Adequate training should be given to personnel identified by the AKL for Daily Monitoring information like solar energy generated, net meter readings etc.

31.3 lf the contractor fails to prove the desired Performance ratio as prescribed in the technical specification of volume 1 during any of the consecutive years the annual O&M period will be extended to that time period till the desired Performance ratio as per technical specification is attained.

31.4 A maintenance record is to be maintained by the operator/Official. in-Charge to record the regular maintenance work carried out as well as any breakdown maintenance along with the date of maintenance reasons for the breakdowns steps have taken to attend the breakdown duration of the breakdown etc. Contractor shall submit monthly reports to the Engineer in charge, Agreement authority on the energy generation and operating conditions of the solar plant.

32 ANNUAL MAINTENANCE CONTRACT (AMC):

The plant shall then be handed over to AKL at the end of 5 years. After 5 years from the date of commissioning, the contractor may be asked to execute AMC for another 3 years on mutual agreement at mutually agreed price. The EPC contractor shall execute the AMC agreement as preconditions stipulated at that time.

33 PERFORMANCE & WARRANTY:

33.1 The mechanical structures, electrical works and overall workmanship of the solar power plant must be warranted for a minimum of 10 years. PV modules used in solar power plant must be warranted for output wattage, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.

33.2 The PV Power Plant should be designed and simulated with the offered quality components by the bidder (PV Modules, inverters etc.) so as to obtain the minimum capacity of 2.0 MWp. The electrical degradation of power generated shall not exceed 5% of the minimum rated power over the 5 year period and not more than 10% after ten years.

33.3 EPC Contractor shall ensure the performance ratio as per the specification in this regard.

34 GENERATION ASSESSMENT

34.1 The performance ratio (AC) shall range from 75-80. Performance ratio test as per lEC61724 will be carried out at site by the EPC contractor in presence of officials from AKL. This is mandatory for commissioning and handing over the plant. lf the contractor fails to prove the desired performance ratio at the time of completion and during any of the consecutive years of defect liability period he will be given a second chance to demonstrate the PR in another 7 days. Still if it is not achieved, the same shall be demonstrated in another 7 days and still if it is not achieved, EPC contractor shall improve the quality of the plant by replacement of components with all suitable modification requirements on balance of systems at his own cost to achieve the performance ratio.

34.2 Operation and maintenance charges shall be released at the end of each year based on the Performance ratio(AC) as mentioned above.

35 HANDING OVER:

The plant shall be handed over to AKL Ltd in the best working condition at the end of 3 year after commissioning with the following conditions,

35.1 Required Performance ratio shall be achieved and proved.

35.2 After providing basic training to the employer personnel with the concurrence of the site Engineer in Charge.

35.3 Handing over of all items and materials with required tools and minimum spares as specified in Annexure VI.

35.4 The contractor shall provide the tools specified below with the required number of spare. The list ensuring sufficient number of spares shall be approved by the agreement authority. AKL will carry out operation of the plant after taking over of the plant. lf required, spares during life period shall be arranged by the contractor after Guarantee period at the cost of AKL.

35.5 Any component found defective/inefficient/worn out shall be rectified/ replaced/ made good at contractor's cost before handing over the system to the AKL. ln order to ensure longevity & safety of the core equipment and optimum performance of the system the Contractor should use only genuine spares of high quality standards. Contractor has to maintain the Ground mounted SPV plant till the end of the contract period of five years.

35.6 The Contractor shall hand over the complete system and shall transfer all Guarantees and warrantees of the different components of the project to AKL.

36 CONTRACT DOCUMENTS:

36.1 Agreement executed in Kerala Government Stamp paper

36.2 Letter of Award (duly signed and seal affixed on all pages)

36.3 Correspondences between the AKL and the selected bidder included in the Agreement.

36.4 Special Conditions of Contract.

36.5 Conditions of Contract.

36.6 Technical specifications.

36.7 Accepted Schedule of Technical Particulars and construction programme & Manufacturer

36.8 Authorization form of component.

36.9 Accepted Schedule of Prices

36.10 General Bid conditions

36.11 Instructions to bidders.

36.12 Information to bidders.

36.13 Detailed Structural Drawings including approved drawing issued from time to time.

36.14 Approved List of spares that will be supplied

36.15 .All volume of bid with Tender No…….. along with clarifications related documents issued by the Tendering Authority.

36.16 Response (proposal) of M/s……... including the Bid, Clarification documents and the accepted rate submitted.

37 . **ACKNOWLEDGMENT BY THE CONTRACTOR:**

37.1 This Letter of Award is issued subject to the documents referred above and terms and conditions contained therein. You will also be deemed to be fully aware of AKL 's General conditions of contract which is applicable to this contract also and ignorance of these conditions will not exempt you from your liability to abide by the same.

37.2 lf there is any contradiction/conflict between the tender documents and LoA, conditions in the LOA will prevail.

37.3 The documents specified in Cl.AUSE 27 and CLAUSE 29 shall be submitted. within 15 days from the date of issue of this LOA.

37.4 A copy of the LoA attached is to be returned immediately duly signed and seal affixed on all pages as a token of acceptance and for incorporation in the Contract Agreement preferably within 15 days in any case from the date of issue of this Letter of award.

38 LABOUR LAWS AND SAFETY REGULATIONS

38.1 Labour Laws:-

38.1.1 Labour below the age of 18 years shall not be employed on the work. The contractor shall not pay less than what is specified by the law to labourers engaged by him on the work. The contractor shall, at his own expenses, comply with all labour laws and the owner shall not be responsible for any

recovery/penalty imposed by the representative authorities for violating the labour laws.

38.1.2 The contractor is covered under the contract labour (Regulation & Abolition) Act, he shall obtain a license from the licensing authority (i.e. the Office of Labour Commissioner), by payment of the necessary prescribed fee and deposit, if any, before starting the work. The contractor shall furnish to the consult/owner, the details of the workers employed on the works. The contractor shall comply with the provisions of the existing rules and regulations relating to labour laws.

38.1.3 The consultant shall on a report having been made by an inspecting officer as defined in contract labour (Regulation and Abolition) Act, 1980, have the power to deduct front the amount due to the contractor any sum required or estimated to be required for making good the losses suffered by a worker or workers by the reasons of non-fulfillment of the conditions of the contract for the benefit of the workers ,or if deductions made from his or their wages which are not justified by the terms of contract or non-observance of the said regulations.

38.2 Minor accident on duty:-

38.2.1 For cases of minor accident on duty not covered tinder compensation by insurance, the contractor shall have to compensate the affected person by reimbursing this medical expenses against submission of actual expenditure document. The absence fioir duty, if tames places, due to such accident shall be considered as special leave and full payment shall have to be made for duration of such absence.

38.3 Provident fund:-

38.3.1 It shall be solely the contractor's responsibility to complete all provident fund formalities as per statutory regulations.

38.4 Safer and protection:-

38.4.1 The contract shall adhere to safe construction practice and guard against hazardous and unsafe working conditions.While carrying out the work the contractor should provide for; Safety of personnel engaged in the construction. Protection and safety of' works and materials during their progress. Sanitary and hygenic conditions of working and living for his workers, as required by the consultant.

38.5 Use of Safety Gadgets

38.5.1 The contractor shall have to ensure availability and use of al1 desire safety gadgets like safety belts, helmets, goggles, hand gloves etc.

38.6 Unsafe working condition:-

38.6.1 If any activity is found to be progressing without proper and complete safety measures(including use of safety gadgets) being implemented, the contract may be asked to stop the work unless he fulfi lls the desired safety norms. Such delays shall not be allowed to be considered for extension in duration of the allotted time period.

38.7 First Aid

38.7.1 The contractor shall provide first aid facilities for his employees and those of his sub-contractors. The requisite first aid box and medicines should always be available at work s ite.

38.8 Contractor's Barricades:

38.8.1 The contractor shall erect and maintain barricades required in connection with his operations to guard or protect. Excavations, Hoisting areas & Areas adjudges hazardous by the contractor's or consultant's representatives. Charged electrical panels & Owner's existing property liable to get damaged by contractors operation. The contractor shall take precautions to prevent any riotous or unlawful behavior by his workers, for the preservation of peace and protection of inhabitants and the security of pro erty in the neighborhood of the work.

38.9 Details of work execution:-

38.9.1 The work shall be done in such a manner so as to clear work front availability for other agencies working at side. Finish of work shall be as per drawings & details given by owner/consultant. 1n general the complete work is to be done as Indian standard and esthetical norms as specified and detailed in tender.

38.10 Site:

38.10.1 The site is located at SN.Puram, Cherthala, Alappuzha, Kerala The contractor shall be responsible tor the movement of his men, material and equipment at no extra cost.

38.11 Electricity & Water:-

38.11.1 Electricity & Water shall be charged as per actual consumption or as mutually agreed.

38.12 Contractor's scope of supply

38.12.1 All materials required for executing the jobs specified in the bill of quantities, inclusive ot all tools, tackles, scaffolding, consumables & testing equipments shall be procured and supplied by the contractor at his own cost accept for any items specified as owner supplied.

38.13 Recovery from the contractor:-

38.13.1 If the contractor or his employees damage or destroy the property of the owner, then the same shall be replaced /refunded by the contractor , otherwise the expenses may be recovered from his bill or security deposit. All compensation & recoveries to be made as per terms of the contract shall be deducted Thom the contractor's bill or security deposit.

38.14 Fortfeiture of security deposit:-

38.14.1 Whenever any claim against the contractor is to be recovered then the same may be made front the security deposit. If the contractor abandons the work or leaves the work incomplete, then the owner/ consultant has the right to forfeit the security deposit.

38.15 Special Instructions:-

38.15.1 All materials to be used in execution of pr'oject shall be first class quality, I.S.I. marked and shall be approved by owner/consultant before its application.

38.15.2 The contractor shall arrange necessary labour and transportation to facilitate testing of samples/materials

38.15.3 The work should be carried out in truly professional manner, neatly finished with proper line,level&plumb. Cleanliness and finishing of the job is of utmost importance Hence the job should be done most carefully with I est workmanship. For all finishing jobs samples should be approved from the consultant before completely executing the worth.

38.15.4 The owner should be informed immediately for any discrepancy specifications and instructions in the execution of thejob at site before actual execution of particular item having discrepancy.

38.15.5 Any item found to be having been executed with poor workmanship or materials of inferior quality then the contractor shall have to rectify/ reconstruct the work as specified by owner/consultant. No extra charge will be admissible in such case. If contractors fails to do So, the owner/consultant is reserved the right to rectlfy/ reconstruct it through some other agency at the expenses of contractor.

38.15.6 The schedule of activities as submitted by the contractor shall have to be strictly adhered to and regular progress reports shall have to be submitted by the contractor giving all details for monitoring of the schedule.

38.15.7 The contractor shall take charge of site and if site clearance is involved, he shall attend to it. (If such type of unforeseen and unavoidable situation occurs, in that case actual labour employed for such job shall be paid including ovei heads and profit).

38.15.8 Special care is to be tal‹en for cleanliness of the site. After the end of day's work the site should be cleaned immediately.

38.15.9 The contractor shall have to co-operate with the agencies executing other works in the same area.

38.15.10 Whilc executing the work, the contractor shall ensure safety and security of the property of the owner so as to avoid theft

For Autokast Ltd

MANAGING DIRECTOR IN CHARGE

SCOPE OF WORK

Subject: Site clearing, Installation, testing and commissioning of grid Tied Ground Mounted Solar PV Power Plant of Autokast Ltd in the land owned by Autokast Ltd with an installed capacity of 2.0 MWp – reg

Autokast is planning to install a Ground Mounted 2 MW Solar Power Plant for its Captive Power consumptions in the factory premises at SN Puram, Cherthala with design as per site conditions, including Operation Maintenance of the Plant for the first 5 years from the date of commissioning.

The contract shall be strictly in accordance with the provisions contained in the bid documents and its addendums. This tender documents and its addendums will form part of the tender document.

PART - A

Site Clearing including cutting and stacking of Acacia Trees and ground leveling in the proposed land owned by M/s. Autokast Ltd to suit for the Solar Power Plant installation, as per details separately attached in the Technical Specification.

The net cost of wood removed from the above site shall be set off against the power plant cost.

PART – B

Installation of 2 MW Solar Power Plant

The work includes planning, investigation, survey, design, engineering, manufacture/procurement , manufacturer's quality assurance, shop testing (including type testing where specified/required), transportation, handling and storage, erection including all civil/structural work, electrical and general works, piping , cabling, instrumentation, installation, testing and commissioning, training , services, permits and insurance at all stages on composite supply basis to install the Grid Tied Ground Mounted Solar Photovoltaic Plant at Cherthala in the land owned by Autokast Ltd with an installed capacity of 2.0 MWp and handing over the SPV Plant to Autokast to its full satisfaction after proving the performance ratio (AC) within a period of 7 consecutive days after commissioning and at the end of each year upto 5 years after commissioning . Performance

ratio (PC) shall be proved within a period of 7 consecutive days at the end of each year for release of O&M charges. The performance ratio (AC) of the Solar Plant shall range from 75-80% for first 5 years from the date of commissioning. Operation and maintenance charges shall be released at the end of each year.

The contractor shall be responsible for obtaining consents, clearance, including Electrical Inspectorate sanction, permit and approval from appropriate authorities and Autokast Ltd for grid connection.

The generated output power from the Solar Panels at low voltage shall be stepped upto 11 KV and shall be grid tied to the grid infrastructure nearest to the location as directed by official in charge of the project.

Any material of works which have not been specifically mentioned in the specifications/schedule but which are found necessary and essential for the proper fulfillment of the contract during execution will also form part of the work. This shall also deem to be covered by the rates and prices quoted for the work and no additional payment will be made to the contractor for such unspecified but essential work elements.

The installations shall be satisfactory with the appropriate authorities/project monitoring in line with the tender conditions. Sign boards in accordance with the specification for the projects have to be provided in the project location indicating the name of the project, name of implementation agency and capacity. The sign board should be put iup immediately when the plant is commissioned.

All statutory approvals/permissions related to installation of the solar power plant and carrying out its operation and maintenance (O&M) as may be required under applicable law/rules shall be obtained by the contractor. All fees for such statutory approvals for installation, commissioning and operation and maintenance for first 5 years from the date of commissioning shall be borne by the contractor.

1. Drawings and documents

The design documents to be submitted by the contractor will include but not limited to:

a. DC cable size calculation
b. DC cable specification
c. DC cable schedule, voltage drop and power loss calculation
d. String monitoring unit specification
e. DC earthing & pit calculation
f. Surge Arrestors for AC & DC
g. Lightning protection details/ specification

h. All technical specification of AC components
i. Cable schedules

Contractor shall furnish the following drawings under this contract and obtain approvals.

i. Shadow analysis of the location
ii. General arrangement and dimensional layout
iii. Schematic drawing showing the SPV panels, Power conditioning Unit (s)/ inverter, Junction Boxes , AC and DC Distribution Boards, meters, transformers etc .
iv. Layout of solar PV Array and Single line diagram and Cable Trench layout if any.
v. Mounting structure drawing
vi. Structural drawing along with foundation details for the structure.
vii. Bill of material for complete SPV plant covering all the components and associated accessories.
viii. Sizes and specification of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be furnished
ix. PVSyst simulation report of the combination offered PV modules with the offered inverters shall be furnished to the agreement authority for approval.

The drawings along with detailed structure design and material selected and their standards shall be submitted to agreement authority for approval before starting the execution work. The work will be carried out as per the approved design.

The contractor shall provide necessary drawings and documents required by statutory authorities and obtain the approval before taking up erection.

2. Quality Assurance and Inspection/ Acceptance tests:

Strict compliance with the approved and proven & established quality assurance systems and procedures during the different stages of the project starting from sizing, selection of make, storage (at site) , during erection, testing and commissioning have to be ensured by the contractor.

PV modules should have valid qualification test certificate as per IEC 61215 and IEC 61730 - 1&2 and IEC 61701. The Inverters should comply with applicable IEC/ equivalent BIS standard for efficiency measurements and environmental tests, safety standards and characteristics of the utility interface (Parallel operation) as per

standard codes IEC 61683 and IEC 60068 2 (1 ,2 ,14, 30) and IEC 62109-182 and IEC 61727 respectively. Inverter shall be provided with protection against islanding of Grid as per IEEE 1 547/ UL1 741/ 62116 to isolate it from the grid in case of no supply, under voltage and over voltage conditions so that in no case there is any chance of accident. The module mounting structure shall be as per latest BIS 2062 and galvanization of mounting structure shall be in compliance of BIS 4759.(amended up to date)/ I52629.

The type test certificates shall be verified by AKL while conducting factory inspection tests. The contractor shall furnish detailed quality procedures for the major components for approval prior to the Factory inspection call. The agreement authority will provide the approvals regarding the test to be conducted during the inspect ion.

The following minimum tests shall be conducted during the Factory inspection:

- For PV modules:
    1. Visual Inspection
    2. Dimensional Check
    3. Insulation Resistance
    4. Leakage Current
    5. Electrical Test(with sun simulator)
    6. RFI D verification
    7. Electro luminous tests
    8. Robustness of termination

- For inverter s:
    1. Visual inspection
    2. Dimensional and Power Wiring check.
    3. Auxiliary functional check.
    4. Fan direction of rotation, On-Off control, etc
    5. Functionality test of relays
    6. Command checks
    7. Protection function checks .
    8. AC under voltage, AC over voltage, AC under frequency, AC over frequency
    9. Load tests simulation 25%, 50%, 70% and 100%
    10. Load test performed at variable MPPT voltage @100% load on the specified voltage range.
    11. Over temperature, ground fault simulation

- For transformer:
  1. Visual inspection
  2. Routine test as per IS-202 6

- For Module mounting structures:
1. Visual inspection
2. Dimensional Inspection
3. Functional fitment

The contractor shall submit letters of inspection calls sufficiently in advance specifying the date and venue of inspection to the agreement authority through official-in-Charge. All the major components should undergo factory inspection tests.

The agreement authority shall arrange inspection of material/equipment and upon satisfactory completion of the Inspection and tests; the Material Despatch Clearance Certificate will be issued.

The test and Inspection shall be done in accordance with the relevant standards and the Manufacturer's standard before the delivery to site as well as after the erection and commission at site.

All acceptance and routine tests of equipment as per the specification and relevant standards shall be carried out by the contractor. Agreement authority or authorized officials may undertake the quality checks during the manufacturing stages also.
Functional testing and erection of equipments shall be carried out by the contractor in presence of AKL officers delegated by the Engineer-in- Charge and the approvals will be given only if the same is satisfactory.

Official-in-Charge shall conduct visual Inspection Including dimensional checks, verification of serial numbers, RFID reading of PV modules etc for the Site Acceptance of the delivered materials based on the BOM. Any materials or work found to be defective or which does not meet the requirements of the specification will be rejected and shall be replaced at contractor's cost.

4. **Review and Progress report:**

The contractor shall submit monthly progress report to Official-in-Charge and all concerned

Personnel in connection with this order.

Monthly Review Meeting shall be held in the office of the Official -in charge, between AKL and Contractor to monitor the progress of the works and review the plans for remaining works and to deal with matters that would rise in accordance with the early warning procedure.

The Official - in -Charge will co-ordinate and monitor all activities of the project. These progress report formats may be changed as and when required by AKL.

The contractor shall produce an updated Activity Schedule within 14 days of being instructed by the AKL.

5. Technical parameters for getting grid connectivity:

Harmonic current injections from a plant shall not exceed the limits specified in IEEE 519 as per CEA technical standard for connectivity of the distributed generation resources.

The limits for harmonics on AC side shall as follows:

a) Total Voltage harmonic Distortion as per IEEE-519 2014

b) Individual Voltage harmonics Distortion as per IEEE-519 2014

c) Total Current harmonic Distortion as per lEEE-519 2014

d) Output frequency = 50Hz +/- 0.5Hz

a. Photovoltaic system should not inject DC power more than 0.5% of full rated output at the interconnection point or 1% of rated inverter output current into distribution system under any operating conditions.

b. Operation of Photovoltaic system shouldn't cause voltage flicker in excess of the limits stated in IEC 61000 or other equivalent Indian standards, if any.

c. While the output of the inverter is greater than 50%, a lagging power factor of greater than 0.9 shall be maintained.

d. The Photovoltaic system in the event of voltage or frequency variations must island/disconnect itself within IEC standard on stipulated period.

e. The voltage-operating window should minimize nuisance tripping and should be under

Operating range of 80% to 110% of the nominal connected voltage beyond a clearing time of 2 seconds, the Photovoltaic system must isolate itself from the grid.

f. When the Distribution system frequency deviates outside the specified conditions (50.5 Hz on upper side and 47.5 Hz on lower side up to 0.2 sec), the Photovoltaic system shouldn't energize the grid and should shift to silent mode.

6. Operation and Maintenance (O&M):

The Contractor shall be responsible for Operation and maintenance of the plant at for the first 5 years from the date of commissioning. The date of commissioning is described under clause no.8 of this LoA.

The scope of the contractor be, including but not limited to,

i. Cleaning of module surface on regular basis as and when required.

ii. Normal and preventive maintenance of the plant.

iii. The contractor is responsible for supply of all spare parts, repairs/ replacement of any defective equipment(s) at his own cost as required from time to time during the O&M period.

iv. The O&M of the project during this period shall cover the tools and tackles, spare parts, any consumables, and any systems such as modules, inverter, PCU, remote monitoring etc. required for proper functioning of the SPV system as a whole.

v. During the comprehensive O&M period, the contactor shall at his cost maintain the spares for minimizing system outage due to time required in getting replacements of defective part(s) of equipment from the manufacturer. The contractor has to use the mandatory spare(s) available at site for replacing defective part(s) of equipment for minimizing system outage temporarily and top up the quantity of spares so that the required quantity of spares shall be made available at site at all the times and same shall be handed over at the end of O&M period.

vi. The solar plant should be maintained shadow free. The tree branches if any causing hindrance to the shadow free operation of solar plant shall be cut and removed under the supervision of our official.

vii. Adequate training should be given to personnel identified by the AKL for Daily Monitoring information like solar energy generated, net meter readings etc.

lf the contractor fails to prove the desired Performance ratio (AC) as per clause 2.2.3 of volume 1 during any of the consecutive years the annual O&M period will be extended to that time period till the desired Performance ratio as per clause 2.2.3 is attained.

A maintenance record is to be maintained by the operator/Official. in-Charge to record the regular maintenance work carried out as well as any breakdown maintenance along with the date of maintenance reasons for the breakdowns steps have taken to attend the breakdown duration of the breakdown etc. Contractor shall submit monthly reports to the Engineer in charge, Agreement authority on the energy generation and operating conditions of the solar plant.

24. **Annual Maintenance Contract (AMC):**

The plant shall then be handed over to AKL at the end of 5 years. After 5 years from the date of commissioning, the contractor may be asked to execute AMC for another 5 years on mutual agreement at mutually agreed price. The EPC contractor shall execute the AMC agreement as preconditions stipulated at that time.

TECHNICAL SPECIFICATIONS

PART – A

A total of 355 Nos Acasia Trees spread over 8.85 Acres. The table below shows the Estimation of 355 Nos Acasia trees spread over 8 acres in Autokast Limited premises.

Sl. No	Perimeter range	No of trees	Average Perimeter (in meters)
A	0.30 to 0.50m(12”-19”)	11	0.40 m
B	0.51 to 0.80m(20” – 31”)	145	0.65 m
C	0.81 to 1.20m(31” – 47”)	199	1.00 m

Refer to the following image/site image to get to know the geographical area where the Acasia trees are located which needs to be cleared for mounting the Solar Power Plant.

Site Details

Location: Autokast Ltd, Cherthala, Alappuzha

Latitude	**9.637002**
Longitude	**76.332234**

PART - B

1 Photovoltaic Modules

1.1 Standards and Codes

Photovoltaic Modules shall comply with the specified edition of the following standards and codes.

IEC 61215-1:2016 Ed.1	Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test
IEC 61215-1-1:2016 Ed.1	Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-1: Special requirements for
IEC 61730-1:2016 Ed.2	Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction
IEC 61730-2:2016 Ed.2	Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing
IEC 61701:2011 Ed.2	Salt mist corrosion testing of photovoltaic (PV) modules (Applicable for coastal and marine environment)
IEC 62716:2013 Ed.1	Photovoltaic (PV) modules - Ammonia corrosion testing (if applicable)
IEC TS 62804-1:2015 Ed.1	Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation - Part 1: Crystalline silicon (under conditions of 85oC/85% RH
IS 14286 :2010(R2015)	Crystalline silicon terrestrial photovoltaic (PV) modules - design qualification and type approval
As per the Solar Photovoltaics, Systems, Devices and Components Goods (Requirements for Compulsory Registration) Order, 2017, PV Modules used in the grid connected solar power projects shall be registered with BIS and bear the Standard Mark as notified by the Bureau of Indian Standards. Further, PV Modules should have been included in the ALMM list as per MNRE Approved Models and Manufacturers of Solar Photovoltaic Modules (Requirements for Compulsory Registration) Order, 2019.	

1.2 Technical Requirements

Parameter	Specification
Cell/ Module Technology	Mono-crystalline PERC

Module Efficiency	≥ 19%
Rated power at STC	No negative tolerance is allowed
Temperature co-efficient of power	Not less than -0.40%/°C
Application Class as per IEC 61730	Class II

1.3 Supplier Qualification Criteria

The PV Module Supplier should have supplied minimum 5 GW capacity globally or

300 MW in India in the past 5 years. Supplier should have supplied minimum 5MWp modules to Kerala. The manufacturer should have been operational in India for a minimum of 10 Years.

1.4 Component Specifications

1.4.1 The PV Modules glass panel shall be:

(i) Modules, with minimum of 2 mm glass thickness.

(ii) The glass used shall have transmittance of above 90%.

1.4.2 The encapsulant used for the PV modules should be polyolefin based, UV resistant and PID resistant in nature. No yellowing of the encapsulant with prolonged exposure shall occur. The encapsulant shall have the following properties.

Parameter	Value
Gel content	> 75%
Transmittance	>90%
Volume resistivity	> 1×1015 Ω.cm
Peeling strength with glass	> 40 N/cm

1.4.3 The sealant used for edge sealing of PV modules shall have excellent moisture

ingress protection with good electrical insulation (Break down voltage >15 kV/mm)

and with good adhesion strength. Edge tapes for sealing are not allowed.

1.4.4 The module frame shall be made of anodized Aluminium, which shall be electrically

& Chemically compatible with the structural material used for

mounting the modules. It is required to have provision for earthing to connect it to the earthing grid. The anodization thickness shall not be less than 15 microns.

1.4.5 The material used for junction box shall be UV resistant to avoid degradation during module life. The degree of protection of the junction box shall be at least IP67. Minimum three number of bypass diodes and two number of IEC 62852/EN 50521 certified MC4 compatible connectors with appropriate length of IEC 62930/EN 50618 certified 4 sq.mm copper cable shall be provided. The cable length shall be in accordance with the PV Module wiring strategy and adequate to ensure that the cable bending radius standard is not exceeded.

1.5 Warranty

1.5.1 PV modules must be warranted with linear degradation rate of power output except for first year (maximum 3% including LID) and shall guarantee 80% of the initial rated power output at the end of 30 years.

1.5.2 The modules shall be warranted, against all material/ manufacturing defects and workmanship for minimum of 10 years from the date of supply.

1.5.3 The above warranties shall be backed by third party insurance.

2 Solar and DC Cables

2.1 Standards and Codes

Cable	From	To	Conductor/ Insulation	Voltage Rating	Applicable Standard
Solar Cable*	Module	SMU	Copper/ XLPO	1.1 kV DC/ 1.5 kV DC	IEC 62930/ EN 50618/
DC Cable	SMU	PCU	Copper or Aluminium/ XLPE	1.1 kV DC/ 1.5 kV DC	IS 7098 Part I for 1.1 kV/ IS 7098 Part II for 1.5 kV
* Cable used for module interconnection shall also be referred as solar cable.					

2.2 Solar cable outer sheath shall be flame retardant, UV resistant and black in colour.

Solar cable with positive polarity should have marking of red line on black outer sheath.

2.3 DC cables shall be single core, armoured, Flame Retardant Low

smoke (FRLS), PVC outer sheath conforming to IS 7098-I. DC cable with positive polarity should have marking of red line on black outer sheath.

2.4 In addition to manufacturer's identification on cables as per relevant standard, following marking shall also be provided over outer sheath.

(i) Cable size and voltage grade

(ii) Word 'FRNC/ FRLS' (as applicable) at every metre

(iii) Sequential marking of length of the cable in metres at every metre

2.5 Cables shall be sized based on the following considerations: (i) Rated current of module

(ii) Total power loss in the cables (Modules to Inverter) shall be limited to 1.5 %. The Contractor shall provide power loss calculations in excel sheet. (iii) Short circuit withstand capability

(iv) De-rating factors according to laying pattern

2.6 Warranty

The cables (Solar and DC) shall be warranted against all material/ manufacturing defects and workmanship for minimum of 1 (one) year from the date of supply.

2.7 Tests

Type test, routine test and acceptance tests requirements shall be as per IEC 62930/EN 50618 for solar cables and IS 7098-1 for DC cables.

2.8 Installation

2.8.1 Cable installation shall be as per IS 1255.

2.8.2 Only terminal cable joints shall be accepted. No cable joint to join two cable ends shall be accepted.

2.8.3 Solar cables shall be provided with UV resistant printed ferrules and DC cables shall be provided with punched/ embossed

aluminium tags. The marking shall be done with good quality letter and numbers of proper size so that the cables can be identified easily.

2.8.4 Cable terminations shall be made with properly crimped lugs and passed through cable glands at the entry & exit point of the cubicles. Bimetallic lugs shall be used for connecting Cu bus bar and Al cables or vice-versa.

2.8.5 Solar cables, wherever exposed to direct sunlight and buried underground, shall be laid through Double Wall Corrugated (DWC) HDPE conduits. The size of the conduit or pipe shall be selected on the basis of 40% fill criteria.

2.8.6 Solar cables shall be aesthetically tied to Module Mounting Structure using UVresistant cable-ties suitable for outdoor application.

2.8.7 A.C and D.C cables shall be kept in separate trenches. The horizontal and vertical clearances between power and communication cable shall not be less than 300mm. (AC Cables shall be of XLPE class)

2.8.8 Cable Sealing System

Modular multi-diameter cable sealing system consisting of frames, blocks and accessories shall be installed where the underground and over ground cables enter or leave LCR/MCR/BESS enclosures. Cable sealing system shall consist of multi- diameter type peel-able blocks of different sizes to suit the various cables. It should be simple, easy and quick to assemble & re-assemble the cable sealing system. Solid blocks shall not be used on frame. Frames & stay-plate material shall be of galvanized steel and for compression, single piece wedge with galvanized steel bolts shall be used. 30% spare blocks on the frame shall be provided for expansion in future. Cable sealing system should have been tested for fire/ water /smoke

tightness.

3 Power Conditioning Unit

3.1 Standards and Codes

Power Conditioning Unit (PCU) shall comply with the specified edition of the following standards and codes.

Standard	Description
IEC 61683 Ed. 1	Photovoltaic systems - Power conditioners - Procedure for measuring efficiency
IEC 62109-1 Ed. 1	Safety of power converters for use in photovoltaic power systems - Part 1: General requirements
IEC 62109-2 Ed. 1	Safety of power converters for use in photovoltaic power systems - Part 2: Particular requirements for
IEC 61000-6-2 Ed. 2	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial
IEC 61000-6-4 Ed. 2.1	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial
IEC 62116 Ed. 2	Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention
IEC 60068-2-1:2007	Environmental testing - Part 2-1: Tests - Test A: Cold
IEC 60068-2-2:2007	Environmental testing - Part 2-2: Tests - Test B: Dry heat
IEC 60068-2-14:2009	Environmental testing - Part 2-14: Tests - Test N: Change of temperature
IEC 60068-2-30:2005	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)
CEA Technical Standards for Connectivity to the Grid Regulations 2007 with 2013	
As per the Solar Photovoltaics, Systems, Devices and Components Goods (Requirements for Compulsory Registration) Order, 2017, Inverters used in the grid connected solar power projects shall be registered with BIS and bear the Standard Mark as notified by the Bureau of Indian Standards.	

3.2 Supplier Qualification Criteria

The Inverter Supplier should have supplied minimum 5 GW capacity globally or 1 GW in India in the past 5 years. The supplier should have after sales service facility in Kerala.

3.3 Technical Requirements

Parameter	Specification
Rated AC power	As per design
Maximum AC Output Power	2 MVA (From all string inverter used)
Maximum input voltage	1500 V
Rated AC output voltage	As per design
Tolerance on rated AC output voltage	+/-10%
Rated frequency	50 Hz
Operating frequency range	47.5 Hz to 52 Hz
Power factor control range	0.9 lag to 0.9 lead
European efficiency	Minimum 98%
Maximum loss in Sleep Mode	0.05% of rated AC power
Total Harmonic Distortion	Less than 3% at 100% load
Degree of protection	Central Inverter – IP 20 (Indoor)/IP 54 (Outdoor), String Inverter – IP 65

* In the case of using string inverters, then specify capacities of each string inverters separately.

3.4 Performance Ratio(PR)

Performance Ratio Test Procedure

PR-Provisional Acceptance Test Verification Procedure

i. The Performance Ratio(PR)test aims at the comparison of the actual PV plant energy production with the guaranteed value for a limited operation time of the PV plant of 30consecutive days.

ii. After Commissioning of the Plant and after receiving all the satisfactory results regarding the correct operation of the plant, there will be continuous monitoring of the performance for 30days. This monitoring will be performed on the site under the presence of the Employer /EIC.

iii. The final tests to prove the guaranteed performance parameters shall be conducted at site by the Contractor in presence of the Employer/EIC. The Contractor's commissioning/start-up Engineer shall make the plant ready to conduct such tests. The Performance Guarantee Tests(PG tests) shall be commenced, within a period of one (1) month after successful Commissioning. Any extension of time beyond the above one(1)month shall be mutually agreed upon. These tests shall be binding on both the parties to the contract to determine compliance of the equipment with the guaranteed performance parameters.

iv. The test will consist of guaranteeing the correct operation of plant over 30 days, by the way of the efficiency rate (performance ratio) based on the reading of the energy produced and delivered to the grid and the average incident solar radiation.

v. The Efficiency or performance ratio (PR) of the PV Plant is calculated as follows (according to IEC61724).

$$\text{Performance Ratio(PR)} = \{YA/YR\}*[1-\alpha^* (TCellavg.-TCell)]$$

Where;

YA = Final PV system yield (representing the number of hours that the system would need to operate at its rated output power PNom to contribute the same energy to the grid as was monitored)

Or YA=Eac/ PNom

YR = Reference yield (representing the number of hours during which the solar radiation would need to beat STC irradiance levels in order to contribute the same incident energy as was monitored)

Or YR=IRSite/IRSTC

Eac= AC energy injected into the grid during a clearly specified amount of time(kWh)

PNom = Installed nominal peak power of modules (Flash test rating at STC) (kWp)

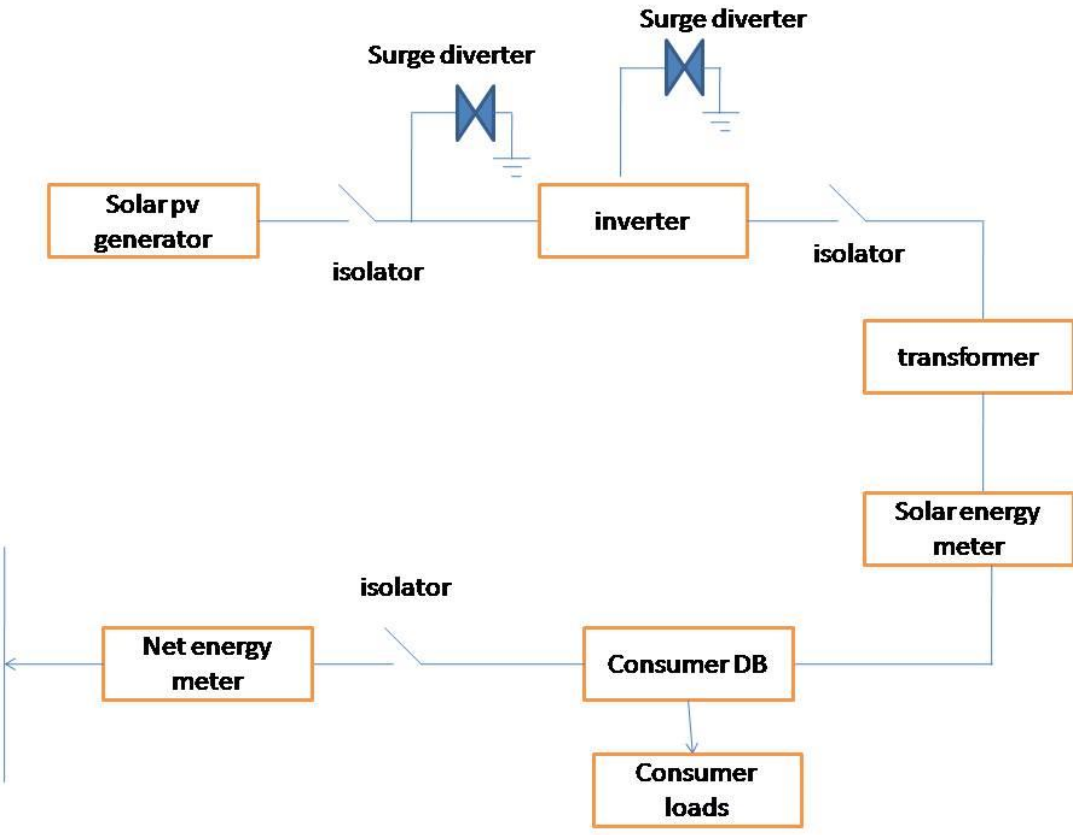
IRSite = Irradiation on the module plane of array during a clearly specified amount of time (measured with a pyrometer installed on the array plane)(kWh/sq. m)

IRSTC = Irradiance at STC (kW/ sq. m)
Tcellavg= Average cell/ module temperature(oC)

α = Temperature coefficient of power(negative in sign) corresponds to the installed Module (%/oC)

The performance ratio (AC) shall range from 0.75-0.80. Performance ratio test as per lEC61724 will be carried out at site by the EPC contractor in presence of officials from AKL. This is mandatory for commissioning and handing over the plant

Line Diagram of required Power Plant are as follows.


Surge diverter
Surge diverter
Solar pv generator
isolator
inverter
isolator
transformer
Solar energy meter
isolator
Net energy meter
Consumer DB
Consumer loads

ANNXURE – I A

SUMMARY OF BIDDER INFORMATION

(To be filled by the Bidder in Letter Head)

1	Name of the bidder	
2	Address in full	
3	Contact Details	
	Mobile, Land Phone Fax	
	Email	
4	Name and Designation of the authorised signatory	
5	GST Registration Details	
6	PAN	
7	Whether the bidder is a bonafide manufacturer/ integrator of the item tendered (Yes/No)?	
8	Details of EMD submitted along with the bid	
9	Total no. of similar projects carried out by the Bidder (proof to be enclosed)	
10	Annual turnover of the firm during last three years (Rs.)	
	(Proof to be enclosed)	
	2020-21 ……..	
	2019-20	
	2018-19	
	2017-18	
11	No. of service centres /Authorized service providers in Kerala	
	(Proof to be enclosed)	
12	Whether Bidder was/is De-barred by Autokast Limited (Yes/No)?	
	If ' Yes' period of De-Barring:	
13	Agreement submitted (Yes/ No)?	
14	Test certificates corresponding to the samples are submitted	
	(Yes/No)?	

Signature of Authorised Signatory

Name

Designation

Date:

(Office Seal)

ANNEXURE - I B

LETTER OF SUBMISSION OF TENDER

[to be submitted by manufacturers]

Ref No: Date :

To
The Managing Director
M/s Autokast Limited
S.N.Puram PO
Alappuzha - Kerala
[Tender inviting Authority]

Sir,

Tender No :
Equipment Name :

Having examined the tender document relating to the supply of Equipment comprising of the Tender Notice, conditions of Contract Specifications etc.. and having understood the provisions and requirements relating to the work having conducted a thorough study of the job, location of the site, transportation and communication facilities and all other factors governing the work I,/We hereby submit our offer for the execution of the proposed work in accordance with the terms and conditions and within the time period specified in the tender document at the rates quoted by me/ us in the accompanying Price Bid. I/We agree to keep the tender open for 120 days [120[from the date of opening thereof and not to make any modifications in its terms and conditions.

l. We……..,.....[name] declare that we are the original manufacturers/supplier of the quoted equipments having registered office at ..[full address with telephone number/fax number & email ID and Website], and having factories/office at.....

2. | /We undertake to do all extra works/supply extra quantities of items which may be assigned to us as part of this contract, at the rate quoted in the tender document.

3. If after the tender document is accepted I/We fail to commence the execution of the work within 30 days after the tender document is accepted we agree that the owner shall have full authority to forfeit the EMD amount.

4. No company or firm or individual have been authorized to bid, negotiate and conclude the contract in regard to this business against this specific tender.

5. We hereby declare that we are willing to provide guarantee/warranty and after sales service during the period of warranty /CMC/ AMC/as per the above tender.

6. We also hereby declare that we have the capacity to manufacture/supply, install and commission the quantity of the equipments tendered within the stipulated time.

7. I/We confirm having deposited EMD of Rs. ……..... (Rupees……) by demand draft/Bank Guarantee No……dated……drawn on……Bank Branch…….. Attached here to

8. l/We further confirm that:

8.1.1.l/We have successfully supplied and commissioned various machine tools [name.....] and I/We have vast experience in handling large works ofthis nature.
8.2.1 I/We have sufficient qualified manpower and necessary materials and equipments to execute the work efficiently.

8.3. The quoted rates shall be valid up to the completion of the work.

8.41 /We further confirm that all chapters of the tender documents have been read, understood and signed and there is no deviation/ discrepancy except the specially mentioned deviation statement enclosed with the tender.

8.5 I/ We hereby declare that I/ We shall treat the tender documents and other records connected with the work as secret/confidential documents and shall not communicate the information derived there from to any person other than a person to whom I/We am/are otherwise to communicate the same or use the information in any manner prejudicial to the safety of the state

Date Signature of the Tenderer

Address

(Office Seal)

ANNEXURE - II
AGREEMENT

ARTICLES OF AGREEMENT executed on this the . . . . day of . . . . Two thousand and . . . . . ……between the **AUTOKAST LTD, S.N.Puram.P.O, CHERTHALA 688 582 ALAPPUZHA , KERALA** 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 AUTOKAST LTD an e-tender for **SITE CLEARING, INSTALLATION, TESTING AND COMMISSIONING OF GRID TIED GROUND MOUNTED SOLAR PV POWER PLANT IN THE LAND OWNED BY AUTOKAST LTD WITH AN INSTALLED CAPACITY OF 2.0 MWp**" specified therein subject to the terms and conditions contained in the said e-tender.

AND WHEREAS the bounden has furnished to AUTOKAST LTD 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 AUTOKAST LTD. NOW THESE PRESENTS WITNESS and it is hereby mutually agreed as follows: -

In case the e-tender submitted by the bounden is accepted by AUTOKAST LTD 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 AUTOKAST LTD incorporating all the terms and conditions under which AUTOKAST LTD accepts this e-tender.

In case the bounden fails to execute the agreement as aforesaid incorporating the terms and conditions governing the contract, AUTOKAST LTD shall have power and authority to recover from the bounden any loss or damage caused to AUTOKAST LTD by such breach as may be determined by AUTOKAST LTD 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 maybe recovered from the bounden and his properties movable and immovable in the manner hereinafter contained.

All sums found due to AUTOKAST LTD 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 AUTOKAST LTD may deem fit.

In witness whereof Sri . . . . . (Name and Designation) for and on behalf of the Autokast Ltd and Sri . . . . the bounden have hereunto set their hands the day and year shown against their respective signature.

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

1.

2.

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

1.

2.

ANNEXURE - III

BANKING DETAILS OF THE BIDDER

(To be filled by the Bidder in Letter Head)

Particulars	Details
Bidder Name	
Office Address	
Name of Bank	
Bank Address	
Account Number	
Type of Account (Current/Savings or Cash Credit)	
Branch name of the Bank	
IFSC code of the Bank Branch	
MICR Code of the Bank Branch	
IHSC code of the Bank Branch for RTGS transfers	
IHSC code of the Bank Branch for NEFT transfers	
SWIFT Code	

I, hereby declare that the particulars given above are correct and complete. If the transaction is delayed or not effected at all reasons of incomplete or incorrect information, I would not hold the user institution responsible.

Authorised Signatory

Name

Designation

Date

(Office Seal)

ANNEXURE - IV

DEVIATION STATEMENT

(To be filled by the Bidder in Letter Head)

Sl. No	Page No	Item No/ Clause No	Item/Clause Description as per Tender	Deviation asked by Bidder	Reason for asking Deviation

Authorised Signatory

Name

Designation

Date

(Office Seal)

ANNEXURE – V

ELIGIBILITY DECLARATION FORMAT

(To be filled by Bidder in Letter Head)

SL. No:	Eligibility Criteria	Proof	Complied (Yes / No)	Proof submitted (Yes / No)
1	The bidder must be a company registered in India under the Companies Act 1956/2013. The bidder should also be registered with GSTN (Supporting documents with GSTN number.)	Year of Incorporation - GSTN Number - Registered Office City – Registered Office Address -		
2	The bidder may be either an OEM or an Authorized Partner or System Integrator of the OEM (Original Equipment Manufacturer) whose product they are proposing. In case the OEM does not deal directly then an OEM may bid through their Authorized Service Partners or System Integrator. (Manufacturers Authorization letter from OEM in favor of Bidder	OEM Name		
3	The OEM/Bidder should have a minimum annual turnover of at least Rs. 1500 lakhs in each of the last two financial years (i.e. 2018-19, 2019-20 & 2020-21). The OEM/Bidder should have made net profit in last financial year (i.e. 2020-21). - Audited Balance Sheet of the last three financial.	Certified / Audited P & L and Balance Sheets for last 3 financial years	2020-21: 2019-20: 2018-19: 2017-18:	
4	The bidder should have minimum 5 years of experience in similar work	Self – Declaration and Work Order copies to be submitted		
5	The bidder should not have been blacklisted by Government, any govt. department, PSU or any other institutions	(Self-declaration. Template available in Annexure-VII).		
6	Bidder should have all necessary licenses, permissions, consents, NOCs, approvals as required under law for carrying out its business	Copy of relevant Documents to be submitted		

Authorised Signatory

Name

Designation

Date

(Office Seal)

ANNEXURE VI

LIST OF TOOLS AND SPARES

Sl No	Tools
1	Spanner Set
2	Small Cable Cutter
3	nose pliers
4	Wire strippers
5	Nut drivers
6	Screw driver
7	Knife
8	Electric tester
9	Clamp meter-ac- dc clamp-on meterAC/DC multimeter (AC&DC 1OO0V)

Sl No	Spares
1	PV modules
2	Junction Boxes
3	Fuse and fuse holder
4	MOVS /arrestors
5	MCBS
6	DC connectors
7	DC cables
8	DC SPD
9	Nuts and bolts
10	Diodes
11	Different Clamps for MMS

Authorised Signatory

Date:

(Office Seal)

ANNEXURE -VII

NON BLACKLIST DECLARATION FORM

(To be filled by Bidder in Letter Head)

Date:

To

The Managing Director
Autokast Ltd,
S.N.Puram.P.O,Cherthala,
Alappuzha, Kerala-688582

Dear Sir,

Sub: Non Blacklist Declaration by *<Bidder Name>* for Tender No……Dated…….

We <Bidder Name> having our registered office at *<Bidder Address>*are an established and reputed company, do hereby declare and confirm that we and our proposed product OEM are not currently blacklisted by any Central/State Govt. or any other institutions.

<Bidder Name>

<Authorized Signatory>

Name:

Designation:

Note: This letter of authority should be on the letterhead of the Bidder and should be signed by a person competent and having the power of attorney to bind the Bidder. It should be included by the bidder in its bid.

ANNEXURE – VIII

PRICE BID

Validate Print Help

Item Rate BoQ

Tender Inviting Authority: AUTOKAST LIMITED

Name of Work: SITE CLEARING INSTALLATION TESTING AND COMMISSIONING OF GRID TIED GROUND MOUNTED SOLAR PANEL OF CAPACITY 2 MWp

Contract No: AKL.PROJ.21.SC/ SOLAR PANEL dated 23.09.2021

Name of the Bidder/ Bidding Firm / Company :	

PRICE SCHEDULE

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	NUMBER	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate in Rs. P	BASIC RATE for 1 MT in Figures To be entered by the Bidder Rs. P	GST amount for total order quantity	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
1	2	4	5	6	13	15	53	54	55
1	CUTTING STACKING AND SITE CLEARANCE OF ACACIA TREES IN OUR COMPANY PREMISES								
1.01	Cut down the Acacia trees marked at the land at Autokast premises, removal of branches, leaves and roots of the trees, surrounding shrubs and clearing the site and transporting the wood and dispose all waste materials outside the company etc. Complete all as per the direction from the company. [NOTE : THE GST PERCENTAGE MENTIONED IN THE SHEET IS APPROXIMATE ONLY. ACTUAL MAY VARY AND BILLING WILL BE DONE AGAINST THE APPLICABLE GST PERCENTAGE]	355.000	NOS				0.00	0.00	INR Zero Only
2	INSTALLATION TESTING AND COMMISSIONING OF GRID TIED GROUND MOUNTED SOLAR PANEL OF CAPACITY 2 MWp								
2.01	INSTALLATION TESTING AND COMMISSIONING OF GRID TIED GROUND MOUNTED SOLAR PANEL OF CAPACITY 2 MWp ALL AS PER THE DETAILED SPECS ATTACHED IN THE TENDER DOCUMENT	1.000	WORK				0.00	0.00	INR Zero Only
Total in Figures							0.00	0.00	INR Zero Only
Quoted Rate in Words		INR Zero Only							